Distinguished Colleagues, Dear Friends,

*It is a great honor as well as a pleasure for me to welcome you at the **3rd** Annual Congress on Update in Cardiology and Cardiovascular Surgery which is organized by Heart and Health Foundation of Turkey, between **November 28th and December 2nd 2007, in Antalya, Turkey.***

Extremely positive feedback after the 2005 Congress has been encouraging for us to continue our efforts in organizing this congress today and in the future.

Admission of more than 750 abstracts to our congress not only honored us, also clearly proved that the "concept of our congress" has been well received. We are also proud of the quality of the abstracts that has been sent to the Congress not only by Turkish Cardiologists and Cardiovascular Surgeons but also by many other foreign countries.

ISMICS 2007 Winter Workshop and ISCP 2007 Annual Congress, which are separately important scientific events, will be held in conjunction with our annual congress as the most exciting part of this year's scientific program.

*This year we will also have 13 courses (including **Hands On LVAD Course, Basic and Advanced Echocardiography Courses, Perfusion Course and Hands on Cardiac Morphology Courses)** the details of which can be found in the scientific program.*

As you may know Antalya is the most popular tourist resort of Turkey located by the Mediterranean Sea Coast, rich with historical sites like TERMESSOS. I believe this maybe a nice opportunity for you to visit these interesting areas as well.

The scientific platform, the collegial atmosphere and the historical and natural beauty of the venue show adequate evidence for choosing the 3rd Congress on Update in Cardiology and Cardiovascular Surgery to send your valuable works and to attend.

We look forward to welcoming you personally.

With best regards,

Prof.Öztekin Oto MD, FESC, FACC
President of the Congress
Local Organizing Chair ISMICS Winter Workshop 2007

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ORAL PRESENTATIONS

NOVEL MODALITIES IN CORONARY BYPASS SURGERY

INT-01 - THE RESULTS OF SECONDARY CORONARY PREVENTION IN PATIENTS FOLLOWING BYPASS SURGERY

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Patients following bypass revascularization are at high risk for development of further coronary events. Ongoing atherosclerotic process may result in occlusion and stenosis of bypass grafts and native coronary arteries. Therefore, strategy of secondary coronary prevention is very important in such a category of patients. 387 patients (349 male, 38 female, mean age 57 ± 6.9 years) undergoing coronary artery bypass grafting (CABG) were enrolled in the study. Duration of the follow-up was 828 ± 93 days. The primary end points were cardiac mortality rate and recurrent coronary events. The secondary end points were health-related quality of life, rehospitalization, repeat revascularization, low-density lipoprotein cholesterol (LDL-C) levels, left ventricular ejection fraction (LVEF) and prescribed drugs. Cardiac mortality rate was 2.06%, recurrent coronary events were observed in 3.87% patients. Rehospitalization was registered in 3.35% of cases, repeat revascularization – in 0.77% patients. Quality of life evaluation showed statistically significant improvement in almost all parameters. At the end of the follow-up target levels of LDL-C (less than 100 mg/dl) were obtained in 74% of cases. There was significant increase in LVEF ($p<0.05$). The first line agents after CABG were aspirin and statins. Aspirin use was almost universal, 96% of patients received it. The use of statins was high enough — 84%. According to our data on the basis of preventive strategies the mid-term results of CABG are satisfactory. The maintenance of results of CABG by the efforts of secondary coronary prevention is not less important than namely myocardial revascularization. Further follow-up is ongoing.

INT-02 - MINIMALLY INVASIVE OFF PUMP CORONARY ARTERY BYPASS GRAFTING WITH INFERIOR J SHAPED MINISTERNOTOMY AND HIGH THORACIC EPIDURAL ANESTHESIA IN HIGH RISK PATIENTS: A SINGLE CENTER EXPERIENCE

Del Giglio Mauro, Dellamore Andrea, Pagliaro Marco, Calvi Simone, Fedeli Corrado, Aquino Tommaso, Magnano Diego, Tripodi Alberto, Albertini Alberto, Noera Giorgio, Zussa Claudio, Lamarra Mauro
Department of Cardiovascular Surgery, Villa Maria Cecilia Hospital, Cotignola, Lugo (RA), Italy

BACKGROUND: To expand the benefit of the minimally invasive coronary artery bypass (MIDCAB) to high risk patients with multivessels or unprotected left main coronary artery disease, a hybrid procedure combining surgical revascularizzation of the left anterior descending (LAD) and/or digonal branch with interventional procedures for additional coronary lesions has been recently introduced. In selective cases the MIDCAB with J-ministernotomy could be performed also in awake patients using high thoracic epidural anesthesia.
MATERIALS-METHODS: Between January 2006 to March 2007, 15 off-pump coronary artery bypass grafting with inferior J-shaped ministernotomy were performed in our department. Patient selection criteria included the presence of isolated LAD disease, unprotected left main stenosis, and/or multivessel coronary disease associated to severe comorbidities as COPD, renal or liver insufficiency, severe peripheral vasculopaty, severe calcifications of the ascending aorta, Euro Score >6. Exclusion criteria included severe obesity, dilatative cardiomiopathy, associated valvulopaties, small (<1mm) and diffusely calcified coronary arteries. The mean age was 75 years (range 67-84 years), 10 male, 5 female. Four patients had unprotected left main stenosis (ULMS), 8 had isolated LAD stenosis, and 3 had multivessel coronary disease. Four patients had preoperative intraaortic balloon pump (IABP) because of EF < 35%. Eight of these patients were operated in urgency because of unstable angina or anatomy. In eleven patients we performed one graft between the left internal thoracic artery (LITA) and the LAD, in four patients we performed two sequential anastomosis with the LITA to the first diagonal branch and then to the LAD. Ten patients undergoing surgery with high thoracic epidural anesthesia, five of these patients were awake.
RESULTS: The in-hospital mortality was 0%. Two patients had rethoracotomy for bleeding. Neither complications were reported. The mean intensive care unit stay was 13 hours, and the mean hospital stay was 9 days. The patients with ULMS have been completely revascularized with coronary angioplasty one week after surgery without complications, the LITA grafts patency was 100% in these patients. After a mean follow-up time of 5,2 mounths (range 1-14) one patient died because of respiratory and renal insufficiency eight days after coronary angioplasty..
CONCLUSION: The present and literature data demostrate the feasibility and safety of MIDCAB with inferior J-shaped ministernotomy expecially in case of association with high thoracic epidural anesthesia in high risk patients for convenctional surgery or extensive coronary angioplasty. Integrated revascularization treatment plans provide minimally invasive options for high risk patients with ULMS or multivessel coronary disease. This approach may be accomplished with low mortality, low morbidity and excellent angiographic LITA patency. Because of the small number of patients, additional studies will be important in evaluating the effectiveness and the long term follow-up of this approach.

INT-03 - IMPACT OF ENDOSCOPIC VERSUS MINIMALLY INVASIVE VEIN HARVESTING ON MORBIDITY OF CORONARY ARTERY BYPASS SURGERY. ONE-YEAR FOLLOW-UP OF PROSPECTIVE TRIAL

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[2]Institute of Medical Biophysics,Palacky University Faculty of Medicine, Olomouc, Czech Republic

BACKGROUND: We sought to compare the impact of endoscopic and minimally invasive great saphenous vein harvesting on patients´ morbidity after coronary artery bypass grafting.
METHODS: From February 2004 to September 2006, 120 patients underwent minimally invasive vein harvesting and consequently, 180 patients endoscopic vein harvest for coronary artery bypass grafting. Patients were evaluated prospectively for wound-healing disturbances, residual leg edema, pain intensity and saphenous neuropathy on 7th post-operative day, 3-month and 1-year after the surgery.
RESULTS: Both harvesting techniques were associated with low incidence of wound-healing disturbances, nevertheless, endoscopic vein harvesting was associated with significantly lower incidence of residual edema (13% vs. 28%, p<0.05), (6% vs. 19%, p<0.001), pain (9% vs. 20%, p<0.05), (6% vs.10%, p<0.05) and saphenous neuropathy (7% vs. 23%, p<0.001) (3% vs. 14%, p<0.001) during the follow-up on 7th post-operative day as well as 3 months after surgery, respectively. Likewise, significantly lower incidence of neurological disturbances was associated with endoscopic vein harvesting during 1-year follow-up (2% vs. 8%, p<0.05). Mean harvesting time (40.6+-15.5 vs. 43.9+-10.2 min, p=0.09), conversion rate (3% vs. 2%, p=0.71) and injury per conduit (0.3+-0.2 vs. 0.3+-0.1, p=0.91) were comparable in both groups.
CONCLUSIONS: Endoscopic vein harvest seems to be superior to minimally invasive vein harvesting in terms of significant reduction of residual leg edema, pain intensity and particularly saphenous neuropathy. Impact on mortality reduction was proved in the post-operative, mid-term as well as long-term follow-up.

INT-04 - DOES LESS PROCEDURE SCORE OVER TRADITIONAL BYPASS SURGERY?

Gaur Ashish, Singh Mahesh, Dhareshwar Jayesh, Rath Pradyot, Rudrappa Rajnikanth, Vanzara Sunil, Panda Ramakanta
Asian Heart Institute and Research Centre, Mumbai

BACKGROUND: Lower end sternal splitting has been used as one of the minimally invasive approaches for coronary artery bypass grafting.its advantage over midcab is the ability to perform multi vessel grafting (lad,dg,ramus and pda).An added advantage apart from cosmesis is minimal post operative pain and early functional recovery.We evaluated our experience with the less procedure and report the early results.
METHODS: From jan 2005 to october 2006 68 patients underwent less procedure at our institute.the skin incision was 2.5 to 3 inches long with the sternal split only in the lower half.The manubrium was left intact and left side of sterno manubrial junction was usually dislocated for aditional exposure.The vessels grafted were: Only LAD in 18 patients,lad and diagonal in 46, LAD, DG and ramus in 2 cases and one patient had grafting of LAD,DG and RCA using both ita s.the mean age was 55 years and mean lv ef was 45%.
RESULTS: There were no hospital mortalities.blood transfusion was required in 13 patients. 30 patients were extubated in operating room. The mean icu stay was 18 hours and the mean hospital stay was 5 days. One patient had superficial sternal wound infection and none had any sternal dehiscence. All patients are doing well after a mean follow up of 10 months.
CONCLUSION: It is technically feasible for grafting the lad,dg,ramus and even the rca by less procedure.Its advantages are early extubation,less icu stay,early discharge,less transfusion, less pain killer requirement and better cosmesis. We feel with more experience this technique can be used more frequently for multivessel grafting.

INT-05 - THE ENDOSCOPIC VERSUS TRADITIONAL OPEN SAPHENOUS VEIN HARVEST: THE EFFECTS ON POSTOPERATIVE OUTCOMES

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King Faisal Heart Institute, King Faisal Specialist Hospital& Research Center, Riyadh-Kingdom of Saudi Arabia

BACKGROUND: Wound complications associated with long incisions used to harvest the saphenous vein for coronary artery bypass grafting (CABG) is well documented. A minimally invasive technique has been developed to reduce these morbidities.
METHODS: Our objectives were to compare the results of 50 patients undergoing elective coronary artery bypass grafting using endoscopic vein harvesting technique (EVH) with an equivalent retrospective group whom traditional open vein harvesting technique (TVH) was used, also to compare the histological properties of the saphenous veins harvested conventionally and endoscopically.
RESULTS: Patients characteristic and demographics were similar in both groups. Time need to close the leg was significantly reduced in the EVH group (7.2 vs 44 minutes; P<0.001). There was no difference in the time need to prepare the vein in both the EVH and TVH groups (40 vs 45.1 minutes). Overall wound complications was significantly reduced in EVH group compared with the TVH group (0% vs 6% P<0.001). Postoperative leg pain, mobilization and over all patient satisfaction were also significantly improved in the EVH group. Blinded histological assessment of the harvested vein (n=20) showed no evidence of any damaged to the specimens in either group.
CONCLUSION: Endoscopic vein harvest offered improved patients outcomes in term of wound healing and reduce postoperative pain compared with the open vein harvest technique and does not prolong the operative time nor compromise the vein quality.

INT-06 - COMPLETE MYOCARDIAL REVASCULARIZATION USING ARTERIAL GRAFTS IN OCTOGENARIAN PATIENTS

Rudzinski Pawel, Piatek Jacek, Gaweda Boguslaw, Filip Grzegorz, Myrdko Tomasz, Wrobel Krzysztof, Wierzbicki Karol, Sadowski Jerzy
Department of Cardiovascular Surgery & Transplantology Jagiellonian University, John Paul II Hospital, Krakow, Poland

INTRODUCTION: Civilizational development (increase in welfare and impovement of life conditions) causes aging of societies in development countries. Demographical analysis Eurostat prognoses increase in population of people above 65 years in western european countries from 15.2% in 1995r to 19.5% in 2020 year.
Analysis of patency results in 10 years of observation showes superiority of arterial grafts in comparison to venous ones.
There are about 2500 patients operated annualy in the Cardiovascular Surgery and Transplantology Department in Cracow. CABG are performed in about 1600 patients.
In last period we observe higher proportion of patients above 70 years old (1995-97 100 pts – 7% of CABG, and in 2002 200 pts – 30% of CABG).
OBJECTIVE: Assessment of early results of total arterial revascularization (TAMR) in the patients older than 70 years.
MATERIAL-METHODS: Comparative analysis of two patient groups undergoing coronary artery bypass surgery. Group **I** – 50 patients who underwent TAMR and group **II**- 50 patients who underwent conventional technique (LITA + SVG). All the patients were operated using cardiopulmonary bypass, in normothermia, using blood cardioplegia.
RESULTS: In TAMR group all the patients survived. 3 patients had postoperative low cardiac output syndrome demanding the use of inotropic agents and intraaortic contrapulsation was inserted. None of the patients had any organ complications.
CONCLUSION: Early results (mortality, numer of complications) in TAMR group (i.e. patients with higher operative risk) show that TAMR procedure as a safe method with good long-term graft function, although the great surgical experience is needed.

INT-07 - THE COST OF CORONARY ARTERY BYPASS GRAFTING IN IRAN

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INTRODUCTION: The economic analysis of medical practices is a relatively young discipline. Economic evaluations aim to assist clinical decisions and provide a rational basis for policy. The aim of this study was to describe the costs of coronary artery bypass grafting (CABG) performed on elective patients from hospitalization till discharge in university hospitals of Iran.
METHOD AND MATERIALS: In this descriptive study, we randomly reviewed 23 medical records of patients admitted to our University Hospital for elective CABG. Emergency patients, those with other associated heart conditions, and re-do patients were excluded from the study. The cost of CABG was categorized into four categories:
1) Staff of operation room (surgeon, anesthesiologist, perfusionist, scrub nurses, etc.)
2) Drugs, complementary tests (laboratory tests, electrocardiogram, echocardiogram, x-rays, etc.), and consumptive materials (needles, syringes, gloves, gauze, etc.)
3) Room and ward costs including ICU ward
4) Costs of staff other than operation room (nurse. All costs were converted into United Stated Dollar (USD).
RESULTS: There were 11 male and 12 female patients with mean (SD) age 58.4 (10.4) years. The mean (standard deviation SD) number of grafts was 2.7 (0.6). The mean (SD) total cost of CABG operation was 5947.5 (1647.8) USD with the minimum of 3372.6 US$ and maximum of 9640 USD. Of this, 51.4% was related to the staff of operation room, 30.3% to the drugs, complementary tests, and consumptive materials, 5.8% to room and ward costs, and 12.3% to the cost of staff other than operation room.
CONCLUSION: The highest average costs were related to the staff of operation room. Compared with western countries, the CABG cost is relatively low in Iran. One reason for low obtained costs is this fact that majority of CABG procedures are carried out in university hospitals and these centers are funded by the government.

INT-08 - MYOCARDIAL REVASCULARIZATION IN PATIENTS WITH SEVERE LEFT VENTRICULAR DYSFUNCTIOM

Mohammed Fakhry Mutaz Ibraheem Kamal[1], Alasady Najih Mustafa[1], Almashadani Mohammed Salim[1], Alnaser Firas Fakhry[1]
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[2]Prince Hamza Hospital, Amman Jordan

OBJECTIVES: the study is to allow evaluation of the safety and the efficacy of coronary artey surgery in patients with advanced left ventricular dysfunction,also to exam the operative risk,compared preoperative versus post operativeejection fractions and determined long term survival.
METHODS: this study consisted of 55 patients with severe left ventricular dysfunction who underwentCABG at ibn albitar hospital for cardiac surgery over aperiod of 2 years(2001-2003). Their ejection fraction was between18%and30%,ages ranged between30 71 years. there were 48 males and 7 females. The preoperative ejection fraction was determined by echocardiography and left ventriculography. Twenty five patients had a standrized surgical technique using a cardiopulmonary bypasswith a systemic hypothermia where as 30 patients had surgery on beating heart. Intra aortic balloon pumpwas used intraoperatively and prophylacticly.
RESULTS: In this study there were 37 diabetic patients,hypertention took place in 26 patients while hyperlipedemia was found in 34 patients. the commenest blood group wasB+ve (16) patients. The number of grafts were 109 with amean of 1.98grafts per patient. All patients had LAD grft,6 patients of whom had saphenous vein graft to LAD. Complications took place in different forms,hospital mortality took place in 1 patient(1.98 %)due to intractable arrythmias. Follow up periods betwween4months and 24 months,nearly all patients were rendered angina free or minimally symptomatic and ejection fraction increased substantially from 8-15% post operatively.
CONCLUSIONS: Specific conclusions were emphesized regarding the safety of operation,long term survival,improvement in the ventricular function and the quality of life. The internal mammary artery can safely be utelised as aconduit.

INT-09 - SURGICAL VENTRICULAR RESTORATION (SVR)

Abukhudair W., Elnazeer O., Ahmed W., Shaibi K., Ajam A., Ashmeg A.
King Fahd Armed Forces Hospital, Saudi Arabia

OBJECTIVES: To evaluate our early experience, at one year follow up, with SVR as therapy for a subset of patients with ischemic cardiomyopathy.
BACKGROUND: Ischemic cardiomyopathy poses a challenging problem to the cardiologist and cardiac surgeons. Following myocardial infraction, 20% of patients develop ventricular dilation and congestive heart failure (CHF) even with early reperfusion therapy. This is due to "ventricular remodeling" process that results in the loss of the normal elliptical shape of the ventricle and CHF. Ventricular volume reduction, and shape restoration surgery has recently become an available option for this subset of patients.
We prospectively examined the early outcome of SVR in our institution.
METHODS: Thirty prospective post anterior myocardial infraction patients underwent SVR with concomitant CABG /or mitral valve repair are presented.
RESULTS: The mean age was 50.6 (+ 5.1) years. All patients were males. The mean left ventricular ejection fraction was 23 % ± 6.0. Sixteen patients had SVR with concomitant CABG. Nine patients had mitral valve repair as well. One patient had an isolated SVR and one patient had CABG, SVR, mitral valve repair and tricuspid valve repair. Two patients did not undergo the surgery due to the pre-op mortality of one and intra-operative change of decision to CABG alone for the other; these were excluded. The average number of grafts was 2 + 0.63. At one year follow up, the NYHA class has improved from 3.3 (+ 0.8) to 1.8 + 0.4, and. The left ventricular ejection fraction improved from 23 + 6.16 to 41.o8 + 6.8.The left ventricular end systolic volume index(LVESVI) has improve from 82.8 ± 15 to 42.6±9. The post-op ventilation period was 40 hours (+ 1.9) and the mean length of stay was 12.8 (+ 4.7) days. Intra aortic balloon pump (IABP) and Levosimendan were used in all patients. The mortality was one patient.
CONCLUSION: In our preliminary group, SVR may afford significant improvement of symptoms, ejection fraction and left ventricular volumes, and that the procedure can be performed safely. Further studies are needed to define the patients best served with the procedure.

DISEASES OF AORTA AND PERIPHERAL VESSELS: SURGICAL OPTIONS

INT-10 - THE USE OF EPIDURAL ANALGESIA AND INTRAVENOUS ILOPROST IN PATIENTS WITH PERIPHERAL ARTERIAL DISEASE

Baysal Ayse, Dagsali Sabri
Dr. Siyami Ersek Thoracic and Cardiovascular Research and Training Hospital, Istanbul, Turkey

INTRODUCTION: The goal is to investigate the effects of intravenous iloprost with or without epidural analgesia in patients with periperal arterial disease.
MATERIAL-METHODS: 102 patients were divided into two groups as group 1(n= 62), metabolic syndrome, MS (+) and group 2 (n= 40), MS (-).Group 1a and 2a ((MS (+),n= 32 and MS (-),n= 20) received only intravenous iloprost while group 1b and 2b received epidural and iloprost (MS (+),n = 30 and MS (-),n= 20). The data compared include walking distance without pain, plasma fasting glucose and lipid profile, body mass index, arterial blood pressure, and wound healing. In group 1, intravenous iloprost treatment for fifteen days and for group 2, intravenous iloprost for ten days followed by epidural bupivacaine and fentanyl.
FINDINGS: The addition of epidural analgesia to iloprost treatment increased the walking distance without pain in MS (+) from 12 ± 0.40 to 20 ± 1.5 and in MS (-) from 20 ± 1.2 to 25 ± 1.3 ($p < 0.05$), but significantly better than iloprost only treated patients, in group 1 13 ± 0.5 to 15 ± 0.6 and in group 2, 20 ± 0.0.6 to 22 ± 0.7 ($p > 0.05$) after 25 days of treatment ($p = 0.02$). The wound healing, pain at rest were significantly better too.
RESULTS: Epidural analgesia in addition to iloprost shows significant improvements in walking distance without pain, wound healing and pain at rest parameters more than iloprost only treated group in patients with or without metabolic syndrome.

INT-11 - ENDOVASCULAR TREATMENT OF AORTIC TRAUMATIC RUPTURE, SIX YEARS EXPERIENCE

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OBJECTIVE: Short and mid term results evaluation of endovascular management of traumatic aortic isthmic ruptures.
PATIENTS AND METHOD : Between 2001 and 2007, 10 patients (7 males; mean age 43 years) underwent an endovascular treatment of an acute aortic rupture.
Eight procedures were emergent with 3 hemodynamic instability.The Glasgow scales were ranged from 3 to 11. Associated traumas were severe brain, liver and pelvic bone injuries. All procedures were performed with a TEE per-operative monitoring. The mean number of deployed stent graft was 1.1 per patient. We used 1 AneuRX and 9 Medtronic endografts.
RESULTS: In 9 patients, the stent graft deployment was successful. One patient experienced a distal migration of the deployed stent graft. One laparotomy was necessary to remove the migrated graft through the abdominal aorta. All patients survived their traumatic isthmic rupture. During the mean follow-up of 36 months (3 to 73) we deplore 1 death not related to the aorta. The mean intensive care unit stay was 177 hours (24 to 696 hours). The mean hospital stay was 11 days (8 to 43 days).
CONCLUSIONS: The short and mid term results of endovascular treatment of acute traumatic aortic isthmic rupture are encouraging and are favourably compare to the surgical approach. More experience is needed to define the optimal timing of the treatment.

INT-12 - THORACIC AORTIC ENDOGRAFTING IN THE OCTOGENERIANS

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OBJECTIVE: Thoracic aortic endografting has emerged in recent years as a viable alternative to standard open surgical repair to treat various thoracic aortic pathologies. Octagenarians often are denied treatment due to the perceived increased procedural risk associated with surgery. A review of our single-site experience using the Gore TAG endoprosthesis was conducted to evaluate if octagenarians were at any additional procedural risk with respect to thoracic aortic endografting to manage various aortic pathologies.
METHODS: Between February 2000 to July 2006, a total of 276 consecutive patients with a mean age of 69 years (range from 23-91), underwent thoracic endoluminal graft (ELG) repair for various thoracic aortic pathologies. 50 (18.1%, 50/276) patients were octogenarians, 31 males to 19 females (1.6:1, M: F) with a mean age of 84 (84± 2.7) years. Indications for intervention included: atherosclerotic aneurysms 26 (26/50, 52%), acute and chronic dissections 11(11/50, 22%), penetrating aortic ulcers 8(8/50, 16%) and contained ruptures 5(5/50, 10%).
RESULTS: All patients were able to receive the device with no intraoperative deaths. Thirty day mortality was 8% (4/50) with an overall mortality of 30% (15/50) over a follow-up period of 5 years. Mean hospital stay was 4.7 days ± 3.6 days with a mean follow up of 661 days. Of the four perioperative deaths, three were attributed to cardiac complications (MI, cardiac arrest, and retrograde dissection with the fourth cause of death unknown). Three (3/50, 6%) endoleaks were seen at 1-month: two Type I (1 proximal, 1 distal) endoleaks and one Type 3 interdevice junction endoleak. Two patients suffered an endoleak during the follow-up period (1 Type I proximal, 1 Type II) representing an overall endoleak complication rate of 10% (5/50) over 5 years. One patient had a re-intevention within 30 days of the endograft procedure due to retrograde filling of the aneurysm sac by a covered left subclavian artery. An endoleak repair rate of 6% was seen in follow-up with three patients undergoing five procedures to treat their endoleaks.
CONCLUSION: Our data suggests that thoracic aortic endografting is technically safe in octogenarians with acceptable outcomes. With new endovascular methods to treat aortic pathologies available, age plays less of a surgical risk.

INT-13 - MID-TERM RESULTS OF ARCH RECONSTRUCTION IN ACUTE TYPE A AORTIC DISSECTION

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OBJECTIVE: The purpose of this study was to evaluate the operative and mid-term follow-up results of arch reconstruction in patients that had Stanford type A acute aortic dissection.
METHODS: From 1995 to July 2006, 230 patients underwent surgery for a Stanford Type A acute aortic dissection. Among them, 28 (12.2%) patients underwent arch reconstruction except hemi-arch replacement. The mean age of the patients was 54 ± 12 (range: 30–77) years. All of the patients except for one underwent emergent surgery. All of the patients except for one had an intimal tear in the aortic arch. Arch vessels were anastomosed with a single graft in 17 patients, with two grafts in 8 patients, and with three grafts in 3 patients. Combined surgeries were performed in 11 patients, including the Bentall operation (3 patients), aortic valve sparing root replacement (1 patient), coronary artery bypass grafting (2 patients), and other operations. Selective cerebral perfusion was performed in 25 patients with a mean duration of 69.7 ± 34.2 (range: 37–133) minutes and the mean cerebral ischemic time was 32.5 ± 18.7 (range: 4–74) minutes.
RESULTS: One patient (3.6%) with low leg malperfusion preoperatively died due to multi-organ failure. Other complications were as follows: bleeding (8 patients), delirium (5 patients), cerebral infarct (1 patient), subdural hemorrhage (1 patient), and paraplegia (1 patient). The median hospital stay was 14 (range: 8–47) days. All of the patients received follow-up with a mean duration of 26 ± 20 (range: 2 –66) months. Among 21 patients that had a descending aortic dissection, 18 patients underwent follow-up CT angiography. In 12 patients (66.7%), the false lumen completely disappeared or was limited in the abdominal aorta. During the follow-up period, the descending thoracic and/or abdominal aorta was replaced in 3 patients after 3, 11, and 27 months, respectively, without event.
CONCLUSION: Arch reconstruction may be performed with relatively low operative mortality and morbidity. The remnant dissection flap can be partially or completely obliterated frequently, and secondary surgeries may be performed safely. Arch reconstruction should be performed actively in selected patients.

INT-14 - INTERACTIVE HOME TELEHEALTH: IS AN AVAILABLE TOOL IN THE PLANNING OF THE CAROTID ENDARTERECTOMY AS ONE DAY SURGERY?

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BACKGROUND: To prove feasibility and safety of a protocol for early and protected discharge, one day after carotid endarterectomy (CEA), using a system of telemedicine (TMD) monitoring.
METHODS: Among 147 patients operated for 163 CEAs, we selected a group (A) of patients that we discharged on the first postoperative day. An electronic blood pressure manometer, a videophone, Amlodipine, and a customer satisfaction questionnaire were given to everyone group A patient. With a video communication program linked to the web, we monitored every 4 hours for 2 days surgical wound, blood pressure, heart frequency, and the conditions of the patients. Patients excluded from group A were discharged in the second post-operative day.
RESULTS: No differences regarding demographic characteristics, risk factors, carotid lesions, operative time, postoperative complications, and blood loss. No laterocervical haematoma developed. Three hypertensive crises were treated successfully in the group A. From the questionnaire a feeling of insecurity at discharge emerges in both groups and rapidly resolved. The overall cost of video connections was 25.39 +/- 0.25 Euros per patient.
CONCLUSION: CEA can be safely done as one day surgery using a TMD monitoring system. Our protocol permits early discharge, with increased safety, thus leading to a reduction of hospital costs.

INT-15 - LIMB WASHOUT WITH CELL SAVER TO PREVENT MYONEPHROPATHIC METABOLIC SYNDROME IN TREATMENT OF ACUTE LOWER LIMBS ISCHAEMIA

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OBJECTIVES: To evaluate the effectiveness and the safeness of limb washout with a cell saver to reduce the risk of myonephropathic metabolic syndrome after embolectomy in patients with acute ischemia of lower limbs. Late emobolectomy is considered a high life-risk procedure because of the release of myoglobin, potassium and free acid radicals, from the ischaemic limb after revascularization. Hemodialysis and ultrafiltration have not shown a real possibility to remove myoglobin from the patient's blood, so the incidence of post-operative oligo-anuria is very high.
METHODS: During the last two years five patients with severe late ischaemia of lower limbs were operated on with a regular periferal embolectomy. In one case the embolism was bilateral. In all cases we performed a limb washout taking slowly about one litre of venous blood out of the common femoral vein at the reperfusion time and after the cell saver procedure (Electa Dideco) we reinfused only the red cells.
RESULTS: We took blood sample intraoperatively from the femoral vein and the others after any twelve hours. In the second sample the serum myoglobin level was in average 50% reduced and after two days practically normal. Potassium and diuresis were quite normal, no acidosis and no significant impairment of renal function was found.
CONCLUSION: The limb washout with a cell saver is se and effective for the prevention of hyperkalemia and removal of myoglobin and unknown moderate molecular weight pathogenic substances to prevent myonephropathic metabolic syndrome.

INT-16 - THE PREVALENCE OF CAROTID ARTERY DISEASE IN IRANIAN CANDIDATES OF CORONARY ARTERY BYPASS GRAFTING

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INTRODUCTION: Patients with concomitant carotid artery stenosis and coronary artery disease are at risk of developing serious neurological events such as stroke in the pre and post coronary artery bypass grafting (CABG) operation period. The preoperative diagnosis and proper management of carotid artery disease is important in clinical practice.
METHODS-MATERIALS: In this study, 352 CABG candidates with no symptoms of cerebral ischemia were preoperatively evaluated for presence of carotid artery disease by color Doppler ultrasonography with a linear probe at 7.5 MHz (Hitachi 525, Japan, Model 2003).The common carotid, carotid bifurcation, and internal and external carotid arteries were evaluated for an increase in intima-media thickness (IMT) >1 mm, arterial wall plaque, and presence of stenosis and its grade according to the Nicoladis guideline.
RESULTS: The mean (SD) age of patients was 67.5 (8.6) (range: 29–84) years and 144 (41%) were female and 208 (59 %) were male. Carotid Doppler was normal in 144 (41%) patients; whereas in the remaining 208 patients (59%), at least one pathological finding (increased IMT, plaque, and stenosis) was observed. An increase in IMT was observed in 79 (22.5%) patients (72 cases bilaterally and 7 cases unilaterally). Totally, 220 atherosclerotic plaques were found that in 114 (32.4%) patients, this finding was in their right and in 106 (30.1%) patients in their left carotid artery. Characteristics of these plaques are presented in Table 1. Sixty three patients (17.9%) had bilateral stenosis and 89 (25.2%) cases had stenosis in one side. Severity of carotid stenosis in the right and left carotid arteries are shown in Table 2.
CONCLUSION: A considerable amount of CABG candidates had carotid artery disease. The frequency of carotid stenosis in was similar to western reports. Carotid Doppler study in CABG candidates is of value and non invasive in identifying the subgroup of patients who are at increased risk of postoperative stroke. Prophylactic intervention may reduce the occurrence of neurological events in the perioperative period, especially in those who have critical (>= 70%) carotid artery stenosis.

Table 1. Characteristics of the right and left carotid artery plaques.

		plaque nature		plaque type		plaque site		
	fibrous	calcified	fibro- calcified	linear	circumferential	carotid bulb	origin of internal carotid	ulcer
Right carotid artery	36	22	55	70	44	53	61	1
Left carotid artery	37	20	49	64	42	43	63	0

Table 2. Severity of observed stenoses in the right and left carotid arteries

	< 50 %	50-59%	60-69%	>= 70%	Occlusion	Total
Right carotid artery	95 (85.5%)	4 (3.6%)	5 (4.5%)	7 (6.4%)	0	111
Left carotid artery	86 (82.7%)	5 (4.8%)	5 (4.8%)	6 (5.8%)	2 (1.9%)	104

INT-17 - OUR EXPERIENCE WITH SURGICAL TREATMENT OF PULMONARY EMBOLISM

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BACKROUND: In about 10% of patients with massive acute pulmonary embolism urgent surgical intervention is necessary. In this group of patients prompt diagnosis and surgical treatment is connected with acceptable mortality. Aim of the study was to asses the results of surgical treatment of this group of patients operated on in our clinic.
MATERIAL-METHODS: We reviewed our experience with early open pulmonary embolectomy in patients with acute massive pulmonary embolism. Retrospective review of charts of 20 (15M, 5W) pts undergoing pulmonary embolectomy from January 2001 to March 2007 was performed. The patient's age ranged from 22 to 71 (mean 52). In all pts the diagnosis was confirmed by CT. Half of the patients was operated in cardiogenic shock, mean time from the onset of symptoms to the operation was 2 days (12 hours - 5 days). Main symptoms were: dyspnea (20 pts), syncope (4 pts), cardiac arrest (1 pt), hemophtysis (1pt). History for lower leg thrombophlebitis was positve in 8 pts. Patients underwent open pulmonary embolectomy using cardiopulmonary bypass (CPB) in general hypothermia, using crystalloid or blood cardioplegia. Mean aortic cross clamp time was 35 minutes (14-73 min.). Mean CPB time was 72 (22-145 min.).
RESULTS: Early postoperative period was complicated in 6 patients (30%) by low cardiac output syndrome and 3 (15%) patients died (1M and 2W). The mean stay in Intensive Care Unit was 84 hours; mean time of respiratorotherapy was 34 hours. There was no major bleeding requiring reoperation.
CONCLUSION: Early open pulmonary embolectomy using cardiopulmonary bypass is an acceptable form of treatment for acute massive pulmonary embolism. Spiral computerized tomography is an important diagnostic tool for diagnosis and prompt implementation of surgical treatment.

WHERE TO GO IN VALVULAR SURGERY ?

INT-18 - MINIMALLY INVASIVE AORTIC VALVE REPLACEMENT: INITIAL EXPERIENCE

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BACKGROUND: Minimally invasive cardiac surgery has become increasingly popular during the past years, however, is more established in mitral valve surgery. Minimally invasive aortic valve replacement is reported in few publications, mainly performing partial upper sternotomy. We report our initial results in establishing a minimally invasive aortic valve program using an anterolateral minithoracotomy.
MATERIAL AND METHODS: From Oct 2006 to May 2007, a total of 18 patients with isolated aortic valve disease without coronary stenosis at angiography were screened by MS-CT.
RESULTS: In MS-CT, 6 patients (33.3%) showed a contraindication to a minimal invasive procedure (aortic dilatation in 4, aortic arch sclerosis in 2 patients) and had to undergo conventional aortic valve replacement and aortic reduction using median sternotomy. Twelve patients (66.7%) underwent successful minimally invasive aortic valve replacement by anterolateral minithoracotomy. Mean age at surgery was 71 ± 6.6 years. Mean aortic crossclamp time was 99 ± 13 min, cardiopulmonary bypass time was 170 ± 19 min, and total operating time was 296 ± 38 min. Median postoperative ICU stay was 19 hours, median ventilation time was 12 hours and median hospital stay was 5 days. One patient had to undergo revision for bleeding at the 6th postoperative day, one patient showed local dissection at the aortic arch without any further relevance at follow-up.
CONCLUSION: Minimally invasive aortic valve replacement is an optimal procedure for isolated aortic valve replacement. However, one out of 3 patients shows a contraindication to this procedure due to aortic dilatation or severe aortic sclerosis.

INT-19 - RESULTS OF ANNULAR RECONSTRUCTION WITH A PERICARDIAL PATCH IN ACTIVE INFECTIVE ENDOCARDITIS

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OBJECTIVES: To determine the mid-term results of annular reconstruction with a pericardial patch in active infective endocarditis, cases were retrospectively reviewed.
METHODS: From Oct. 1995 to Feb. 2007, 57 surgeries were performed in 56 patients that had active infective endocarditis. The mean age of the patients was 48.3 ± 16.9 (range: 13–75) years. The NYHA functional class was either III or IV in 25 cases (43.9%) and prosthetic valve endocarditis was present in 17 cases (29.8%). A preoperative cerebral complication was present in 22 cases (38.6%). The median time of preoperative antibiotic treatment was 8 days. A bovine pericardium was used in 52 cases, an autologous pericardium in 3 cases, and both in 2 cases. The aortic annulus was reconstructed in 18 cases, the aortic annulus was reconstructed plus aorto-mitral continuity was performed in 13 cases, the aortic annulus plus mitral annulus were reconstructed plus aorto-mitral continuity was performed in 3 cases, the mitral annulus was reconstructed in 21 cases, the tricuspid annulus was reconstructed in 1 case, and the entire cardiac skeleton was reconstructed in one case. Valves were replaced with a mechanical valve in 35 cases, a bioprosthetic valve in 18 cases, a homograft in 2 cases, and both a homograft and bioprosthesis in one patient.
RESULTS: There was one 30-day mortality and two in-hospital deaths. The postoperative complications were as follows: re-operation due to bleeding in 2 cases (3.5%), mediastinitis in 1 case (1.8%), a complete atrioventricular block in 5 cases (8.8%), and cerebral hemorrhage in 6 cases (10.5%). All patients except for 4 cases (93.0%) received follow-up up with a mean duration of 45.1 ± 32.6 (range: 2–138) months. There were two late deaths at 3, and 8 months. Endocarditis recurred in five patients. Redo-surgery was performed in four patients due to endocarditis recurrence for 3 cases at 2, 3, and 29 months and a pseudoaneurysm for one case at 1 month. Including early death, the 2-year event-free survival was 81.5 ± 5.4%.
CONCLUSIONS: Annular reconstruction using the pericardium in active infective endocarditis can be performed safely and may reduce recurrence.

INT-20 - AORTIC VALVE REPLACEMENT WITH UPPER J SHAPED MINISTERNOTOMY: COULD BE THE STANDARD SURGICAL APPROACH TO AORTIC VALVE DISEASE?

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OBJECTIVE: Ministernotomy is an alternative approach to median sternotomy in aortic valve replacement. In literature the advantages of this minimal invasive approach are still under investigation. We report our experience in 100 consecutive patients, and we analyzed the postoperative outcomes in order to evaluate the real benefits of this minimally invasive approach.
MATERIALS-METHODS: Between January 2006 to March 2007, 100 patients underwent aortic valve replacement with J-shaped ministernotomy using standard cardiopulmonary by-pass. The data were collected retrospectively. The mean age was 75 years, 40 male, 60 female. 87 patients had aortic valve stenosis, 13 patients had aortic valve regurgitation. The mean Euro-Score was 7,5±3,6. All the data are compared with the results obtained in an homogeneous number of patients that underwent aortic valve replacement with the standard complete sternotomy during the same periode.
RESULTS: The mean aortic cross clamping time was 56,3 minutes and the mean extracorporeal circulation time was 68,2. The mean intensive care unit stay was 1,6±1,4 days, and the mean ventilation time was 7,4±4,3 hours. The hospital stay was 7,3±2,3 days. The in hospital mortality was 2,1% (2/93 patients). The rate of conversion in total sternotomy was 0%. Two patients required a revision for bleeding, nor revisions for sternal dehiscence were necessary.
CONCLUSION: The J shaped ministernotomy can be performed with a very low levels of morbidity and mortality. The results are comparable with patients that underwent aortic replacement with the standard complete sternotomy. In our experience the patients underwent aortic valve replacement with J shaped ministernotomy had less bleeding complication, a shorter ventilation time, intensive care unit and hospital stay compared with patients operated with the standard approach. Our results for minimally invasive surgery suggest the usefulness of that approach for isolated aortic valve replacement. The J shaped ministernotomy does not compromise surgical exposure and reduce the surgical trauma with excellent results.

INT-21 - LAPAROSCOPIC TRANSABDOMINAL APPROACH FOR AORTIC VALVE IMPLANTATION

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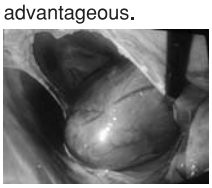
BACKGROUND: Percutaneous aortic valve implantation is an alternative for high-risk surgical candidates. The antegrade, trans-apical approach may have advantages over retrograde or transseptal techniques due to simplified route to delivery and the avoidance of arterial anatomy or pathology. Aortic valve implantation via a mini-thoracotomy and left ventricular apical puncture has been described. We propose a novel transabdominal, transdiaphragmatic modification to transapical aortic valve delivery using laparoscopic instruments. We describe our initial in vivo animal and human cadaver experience with this technique.
METHODS: The apex of the left ventricle was exposed in four swine and one human cadaver. Laparoscopic ports were introduced into the abdomen, and access to the mediastinum was obtained through the diaphragm. A hemostatic purse-string suture was applied laparoscopically to the beating left ventricle. It was possible to insert a 10mm glass rod into the LVOT through the purse-string suture.
RESULTS: The apices of the hearts were easily exposed in all cases through the diaphragm. The mean time required to expose the LV apex once laparoscopic ports were placed was 20 minutes. The pleural cavities were not entered. Direct visualization of the intrapericardial anatomy was possible using the laparoscope while the heart continued to beat.
CONCLUSION: The left ventricular outflow tract can be reliably accessed and instrumented through a laparoscopic, transabdominal, transdiaphragmatic approach. This technique may facilitate the trans-apical deployment of an aortic valve in circumstances where the avoidance of throractomy might be advantageous.



Laparoscopic apex exposure. Laparoscopic view of the left ventricular apex as seen from the abdominal cavity after a window has been created in the diaphragm.

INT-22 - SIZING THE PROSTHESIS TO TREAT VALVULAR INSUFFICIENCY IN SUPRACORONARY REPLACEMENT OF THE AORTA

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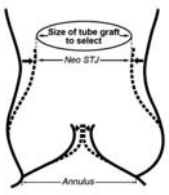
Isolated aneurysmatic dilatation of the ascending aorta often involves the sinotubular junction (STJ), which results in valvular incompetence even if the leaflets are structurally intact. The dislocated commissures can be readjusted by various methods.The essential part of this operation is the choice of the appropriate sized prosthesis necessary for restoring competence of the valve.
Previously used geometric principles are derived from anatomical studies. The authors describe a new transesophageal echo–controlled intraoperative technique, to determine the appropriate size of the neo-STJ.
The dynamic remodeling is carried out on beating heart - at closed aorta -, which besides notable time-sparing may reflect more the function then the anatomy of the root.The method significantly reduces the cross clamp time, and provides reliable informations of the aortic root under pressure conditions.
The STJ reduction may be applicable very effectively with a simple callipered-silk strap in carefully selected cases where the aortic regurgitation is proven to be caused by the radial expansion of the commissural distances.



INT-23 - MID-TERM RESULTS OF MODIFIED MAZE PROCEDURE FOR CHRONIC ATRIAL FIBRILLATION IN PATIENTS WITH MITRAL VALVE DISEASE

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OBJECTIVE: We have performed a mini-maze procedure and LA procedure for eliminating chronic atrial fibrillation associated mitral valve disease. This study evaluates the results of 24±15 months mean follow-up and reports the outcome.
METHODS: From March 2003 to September 2006, 42 patients were enrolled in this study. Patients were divided into two groups (mini-maze procedure; n=19, LA procedure; n=23). Electrocardiogram and echocardiogram were performed immediately, 1 week, after 6 months postoperatively. RESULTS: The mean age (50.4±8.8 vs. 50.8±9.8 years), preoperative left atrial size (5.9±0.8 vs. 5.6±0.7 cm), mean pulmonary artery pressure (37±16 vs. 40±8 mmHg), mean left atrial pressure (19±2 vs. 20±4 mmHg), NYHA functional class (2.4±0.4 vs. 2.3±0.3), duration of AF (4.0±3.8 vs. 4.1±3.1 year) and left ventricular ejection fraction (51±7% vs. 49±9%) were similar between the groups. There was no operative mortality or morbidity associated with this procedures, during follow-up. There are no significant difference in aortic cross-clamp times (133±24 vs. 127±27 min). At 7 days postoperatively sinus conversion rate were 79% vs. 78% and after 6 months follow up sinus rhythm maintenance rate were 84% vs. 78% between mini-maze procedure and LA procedure group, respectively. The left atrial size was reduced and left ventricular ejection fraction was improved in both groups during follow-up, but there were no significant between each group.
CONCLUSIONS: The modified maze procedure such as mini-maze and LA procedure are effective surgical option in treating chronic atrial fibrillation in patients with mitral valve disease in terms of sinus conversion.

INT-24 - CLINICAL RESULTS FROM STENTLESS AORTIC VALVE REPLACEMENT

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BACKGROUND: Mechanical either biologic prosthesis have some disadvantages such are continuous anticoagulation therapy, lost Valsalva sinuses influence on blood flow, or middle pressure gradient. With this study we evaluated clinical results of stentless 3leaflets pericardial patch in patients undergoing aortic valve replacement.
METHODS: We created this stentless valve using bowine/equine pericardium, replacing valve cusps on aortic fibrous ring of patient.The ring of patient's aorta was used as guide for sizing this valve.Leaflets are implanted separately; using continuous sutures with 2 supported stitches at newly created commisurae,without a stent or sowing ring.Patients with aortic valvular stenosis have been included. Intraoperative and postoperative TEE was performed for every created valve.
RESULTS: 30pts with aortic valvular disease (25 with aortic stenosis, 4 with aortic insufficiency and 1 with bicuspid aortic valve) had been included in study. Intraoperative TEE showed aortic morphology similar as normal,dp/dt ratio was 0.08, equal opening and closing time, average valve gradient was 8.Middle aorta cross clamping time was 51min, and bypass time 72min.4 patients got a aortocoronary bypass in combination (2.3grafts per pts)Average extubating time was 7,8h.Significant bleeding was noted in 4pts(1with/3without surgical ethyology).Pts have been treated with aspirin 0.1mg/day and simvastatin.1 patient developed middle aortic regitation. Mortality rate was 6.7% (2pts). Follow up period 1-12 months.
CONCLUSIONS: Real stentless aortic valve bio prosthesis is with a close morphology and haemodynamic parameters as a normal valve.Patients have good prognosis, with apropiate haemodynamic response on physical stress.

INT-25 - MINIMAL ACCESS CARDIAC SURGERY

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INRODUCTION: Minimal access surgery is amarriage of modern technology and surgical innovation which aima to accomplish surgical therapeutic goals with minimal somatic and psychological trauma.we present 24 patients who had cardiac surgery through a mini – anterolateral thoracotmy.
PATINTS AND METHOS: Patients were selected according to the disease, and the bmi.mainly patients with mitral valve disease, tricuspid valve and asd are chosen for this approach. A mbi of < 27 was a criterion.all patients signed an informed consent. The suggical techniche involved a right anterolaterl thoracotomy of 6 cm incision length and a femero – femoral bypass with or without aortic cross clamp.
RESULTS: Twenty four patients were included in this study.the mean age was 39 years (range 17 – 78). The male female ratio was 1:1.twenty one patient had mitral valve disease, two patients had mital and tricuspid valve disease. And one patient had an asd.rheumatic heart disease was the patology in 57% of mitral valve disease group, and four % had a myxomatous mitral valve.The average preoperative lvef was 55.7 %(±7) and the average body weight was 64.7 kg (±12).
The premorbid conditions included dm in one patiet, epilepsy in one patient and pulmonary hypertension in 3 patients.
The bypass time was 170.8 min (±40) and the cross clamp time was 108min (range 45 – 168). Patients were ventilated for 3 – 72 hours. The average blood loss in the first 24 hours was 284 mls (±403).one patient needed prbc transfusion.
One patient needed convertion to full sternotomy due to ischemia resulting from circumflex artery occlusion that needed bypass grafting. Two patients developed superficial pseudomonas groin waund infection. The one year mortality rate was zero.
CONCLUSION: Minithoracotomy is a usefull approach for a large number of valve diseases. It is associated with redused hospital stay and great patient satisfaction

INT-26 - THE EFFECT OF GAIN IN TOTAL BODY WATER ON HAEMOGLOBIN CONCENTRATION AND BODY WEIGHT FOLLOWING CARDIAC SURGERY

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BACKGROUND: Haemodilution contributes to a low post-haemoglobin concentration in cardiac surgery patients. An assessment of the degree of haemodilution could contribute to the avoidance of red cell transfusion when such an act is based simply on a haemoglobin 'transfusion trigger'. We have recorded post-operative change in total body water along with body weight to assess the impact of haemodilution on haemoglobin concentration.
METHODS: Total body water, measured by bio-electrical impedance analysis, haemoglobin and body weight were measured pre-operatively and on the 1st, 3rd, 5th and 10th post-operative days. The percentage peri-operative change in all three variables was used to examine the paired associations.
RESULTS: Total body water and body weight underwent a fall from day 1, with both variables significantly associated up until day 10. Haemoglobin rose steadily from day 1 to day 10. This rise was associated with falling total body water and body weight until day 5, but not from day 5 to day 10.
CONCLUSION: Following cardiac surgery, an individual's fluid state should be considered in determining a patient's need for red cell transfusion. Monitoring body weight provides a simple estimate. Such an approach may reduce the incidence of unnecessary and potentially counterproductive transfusion in cardiac surgery patients.

HOT ISSUES IN THORACIC AND CARDIOVASCULAR SURGERY

INT-27 - PREOPERATIVE PREDICTORS OF PROLONGED MECHANICAL VENTILATION (>48HRS)AFTER OPCAB AORTA NO-TOUCH (π-CIRCUIT TECHNIQUE)

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OBJECTIVE: To identify parameters associated with prolonged (>48 hrs) mechanical ventilation after OPCAB in our patient population.
MATERIALS-METHODS: From 02/2001 to 11/2005, we operated on 1359 patients and performed isolated coronary revascularization with the π-circuit technique, consisting of: 1) beating heart, 2) OPCAB 3) aorta non-touch 4) use of composite grafts 5) arterial revascularization. Patients needing prolonged mechanical ventilation (39 patients, Group A) were compared to patients extubated early post-op (1320 patients, Group B). Data were analyzed using chi-square, Fisher's exact test and Cox's regression model.
RESULTS: Group A patiens were older (68.43±10.03 vs 64.74±9.85, p<0.02). There were more octogenarians among them (6.5% vs 2.7%, p=0.09). Patients with transient ischemic attacks (TIAs) pre-op were likelier to belong to Group A (13.0% vs 2.7%, p<0.02, OR 5.41, 95% CI 1.54-19.05) as were patients with frank stroke (9.8% vs 2.7%, p<0.02, OR:3.96, 95% CI 1.33-11.72). Most strongly associated with prolonged ventilation was pre-operative intra-aortic balloon pump insertion (22.6% vs 2.5%, p<0.0005, OR: 11. 95% CI 4.20-29.69). Unexpectedly COPD was not associated with post-op prolonged ventilation (4.4% vs 2.8%, p=NS), neither was obesity (3.1% vs 2.8%, p=NS).
CONCLUSION: After OPCAB aorta non-touch technique most patients are extubated in the first 48 hrs after the operation. A small subgroup (2.9%) remains, with patients necessitating prolonged mechanical ventilation. Multivariate analysis shows the best predictors for this to be: Age (probability increasing by 4% with each year of advancing age), pre-op IABP (11.9 times more likely), TIA (5.4 times) and frank stroke (4.8 times).

INT-28 - IS THE MYOCARDIAL ENZYME RELEASE IN TOTALLY ENDOSCOPIC CABG ON THE ARRESTED HEART TOLERABLE?

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BACKGROUND: Robotic totally endoscopic CABG (TECAB) enables CABG without sternotomy or thoracotomy. However longer CPB and aortic endoocclusion times are currently required compared with standard CABG operations. We investigated if longer operation times affect myocardial enzyme release or postoperative course.
METHODS: 85 patients, aged 58(31-76) years, underwent TECAB on the arrested heart using the da Vinci™ telemanipulator and remote access perfusion via the femoral vessels (ESTECH™ or HEARTPORT™). The operations intended were LIMA-LAD/Dg (n=74), RIMA-RCA (n=2), double vessel LIMA-OM/Cx and RIMA-LAD (n=8),and double vessel LIMA-LAD and SVG-RCA (n=1). TECAB duration was 254(178-710) minutes, cardiopulmonary bypass time was 114 (57-428) minutes, and aortic endoocclusion time 65 (28-230) minutes.
RESULTS: The postoperative ventilation time was 8 (0-278) hours, the ICUstay 20 (11-389) hours. The postoperative stay was 6 (4-22) days and we observed no hospital death in this series. 45% of the patients had an increased postoperative peak CKMB level, 75% an increased Troponin T level. Postoperative peak CK-MB levels significantly increased with: TECAB duration (r=0.588, p<0.001), CPB time (r=0.521, p<0.001), aortic endoocclusion time (r=0.400, p<0.001), and translated into moderately prolonged ICUstay (r=0.432, p<0.001), and ventilation time (r=0.517, p<0.001). CK-MB levels were not associated with gender, age, or EuroSCORE. The postoperative left ventricular ejection fraction (LVEF) did not differ significantly from preoperative LVEF.
CONCLUSION: Myocardial protection can well be established in AHTECAB operations. An influence of increased myocardial enzyme release on postoperative ventilation time and ICU stay is detectable, but does not translate into an early mortality or a decrease in LVEF.

INT-29 - PENETRATING AORTIC ULCER: AN EMERGING PATHOLOGY. EXPERIENCE OF A SINGLE-CENTER

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OBJECTIVE: Penetrating atherosclerotic ulcer (PAU) generally occurs in elderly patients with systemic atherosclerosis. We reviewed our experience of treatment of PAU in thoracic, thoracoabdominal and abdominal aorta.
METHODS: Between May 2005 and May 2007, 10 patients (7 men, mean age 76 years; range 68 to 82) with PAU of the aortic arch (N=2), thoracic aorta (N=3), thoracoabdominal aorta (N=3), and abdominal aorta (N=2) were treated. 5 patients were symptomatic: 2 had aortic rupture. All cases were studied with CT-scan both in preoperative period and follow-up (mean 13 months; range 1-26).
RESULTS: 2 cases underwent open-surgical repair: one in emergency. Stent-grafts (SG) (Thoracic=6) were deployed in 8 cases via femoral access. PAU exclusion was performed by a hybrid procedure in 2 cases (stent-graft deployment after aortic arch debranching in one case and visceral aorta in the other). Primary technical success was 100%. The patients were discharged a median of 12 days. 3 patients required intensive care unit stay. Follow-up CT-scan revealed no leakage, no graft-migration, no neurological deficit, no pseudoaneurysms, no infection and patency of all revascularized vessels in 9 cases. No post-operative mortality in "open" surgical patients. One patient died after endovascular reintervention to treat aortoesophageal fistula 6 months after first SG placement. Average renal function remained unchanged during surveillance.
CONCLUSIONS: In our experience, endovascular and "open" surgical repair of PAU appear both safe and feasible techniques with different indications and initial results could be satisfactory, considering the severity of pathology. More patients and longer follow-up are needed.

INT-30 - SAFETY AND UTILITY OF PLEURX CATHETERS FOR THE MANAGEMENT OF PLEURAL EFFUSIONS

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OBJECTIVES: Chronic and malignant pleural effusions subject patients to prolonged hospitalization and multiple interventions. We have analyzed the indication and utility of a chronic indwelling pleural catheter (Pleurex drain) for these distressing conditions.
METHODS: From January 2000 through July 2006,125 consecutive patients with malignant and/or chronic recurrent pleural effusion who were treated with the insertion of a chronic small indwelling catheter were retrospectively reviewed at our centre. Information was also collected from GP surgeries.
RESULTS: 80 males and 45 females with a mean age of 65 years (20-92) underwent the procedure. 98 patients had performance status of zero or one.One hundred and nineteen patients (95%) had confirmed malignant pleural effusions. 104 patients had multiple aspirations or chest drain insertion for the initial management of their effusions. Local anaesthetic was used in 41 patients (32.8%) and video-assisted thoracoscopy was utilized in 77 patients (61.6%). There were no catheter related deaths, no emergency operations, and no major bleeding episodes. Seventy-nine patients (63.2%) with a pleural catheter had no morbidity. Failure of the catheter occurred in 11 patients (8.8%) and surgical emphysema was the commonest complication seen (7 patients, 5.6%). Post-operative length of hospital stay was 2 days in the majority of cases. The mean duration of the catheter use was 88 days (1-434) and 23 patients still have the catheter in-situ.
CONCLUSIONS: Our results showed the use of a pleurex catheter for chronic and malignant pleural effusions to be efficient, straight forward, and associated with minimal morbidity and high success rate.

INT-31 - SURGERY ON HYDATID CYST OF THE HEART,THE OUTCOME

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OBJECTIVES: The purpose of this study was to determine the surgical outcomes in patients with cardiac hydatid cysts.

BACKGROUND: Hydatid cyst of echinococcus was known in ancient times and still endemic in many countries.fifty to seventy percent(50-70%)may infest the liver.while(20-50%)are pulmonary hydatid cysts, only (10-15%) could be found in other tissues.however primary cardiac hydatidcystsare rare, including intracavitary lesions or those involving the pericardium,and surgical treatment is indicated as soon as diagnosis is achieved,an operation is urgent in impending or actual rupture of the cyst.
METHODS: fifteen patients with hydatid cyst of the heart over aperiod of 6 years in ibn albitar center for cardiac surgery were studied regarding their age and sex disterbution,the site of hydatid cyst of the heart with other extra cardiac location,clinical presentation,modalities of diagnosis,surgical approach,post operative complication,the surgical outcome and their hospital stay.
RESULTS: fifteen patients with ages ranging between14-42 years,having cardiac hydatid cyst,underwent accurate diagnosis and urgent proceeding for surgery. Male to female ratio2/1 and the commenest blood group was a+ve in 9 patients the duration of diagnosis ranged between2 months up to13 years, with amean of 24 months. hospital mortalitywas 0% andno cardiac hydatid cyst recurrance with afollow up period between 3 months up to 3 years.
CONCLUSION: diagnosis with carefuland urgent removal of hydatid cyst of the heart cardiopulmonary bypass with hypothermic cardioplegia with gentle handling is the treatment of choice, and avoidance of recurrance.

INT-32 - ROUTINE USE OF THE π-CIRCUIT TECHNIQUE FOR CORONARY REDO'S: EARLY OUTCOME AND MIDTERM FOLLOW UP

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OBJECTIVE: Off pump redo CABG may decrease the morbidity/mortality associated with the redo procedure. The off pump variant with no aortic manipulation may further decrease morbidity/mortality. The aim of the study is to evaluate the feasibility/effectiveness of OPCABG with no aortic manipulation as the method of choice for patients (pts) requiring redo bypass.
METHODS: From 2/2001 to 11/2005 1359 pts underwent OPCABG with no aortic manipulation and use of the π-circuit. 1281 pts(Group A) underwent primary CABG and 78 pts had a redo(Group B).The groups were compared for pre-op, intraoperative and postoperative variables with Fisher's exact, Chi-Square test, Kaplan-Mayer method and Cox regression analysis.
RESULTS: The groups were comparable with regard to age, emergency status of the operation, age>80 yrs, and comorbidities.There were more pre-operative IABPs in the redo group (P<0.001). Cholesterol levels were lower. There were fewer sequential and distal anastomoses, fewer arterial grafts from the LIMA, fewer anastomoses on the anterior/lateral walls (P<0.005). Post-op there were fewer arrhythmias in redo patients (P<0.028).The groups were comparable regarding length of stay, stroke, sternal wound infections, cognitive disturbances, post-op IABP, re-operation (bleeding/MI). There were 21 in-hospital deaths (1.5%). There was no significant difference in in-hospital mortality between the groups. There was no difference in all cause-mortality but cardiac death was more frequent in the primary CABG group (P<0.002);follow-up period was from 7-64months.
CONCLUSIONS: In redo cases, OPCABG with no aortic manipulation is a safe procedure that can be performed as procedure of choice with minimal mortality and morbidity.

INT-33 - SELF EXPANDABLE STENTS FOR OESOPHAGEAL PERFORATIONS: A TEN YEAR EXPERIENCE!

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Iatrogenic, spontaneous or traumatic oesophageal perforations continue to be a common cause of acute mediastinitis, potentially life threatening with very high morbidity and if diagnosis is delayed high mortality. The treatment of these lesions remains controversial. We have analysed our experience during the past ten years with the use of self expandable stents. Providing an alternative to surgical repair with low morbidity and mortality.
METHODS: Data was reviewed retrospectively on 31 consecutive patients between June 1997 and June 2007 who were treated for iatrogenic, spontaneous and traumatic perforations of the oesophagus with self expandable stents. Perforation occlusion was confirmed by oesophagogram. Twenty-eight post stent insertion variables were identified for each patient including 6 week follow-up and overall survival at 30 days
RESULTS: The mean age of the patients was 74 years (range 16 – 91).Out of the total 19 patients (61%) had had a previous diagnosis of malignant disease and of these 2 (7%) had oesophageal tumour erosion. Twelve patients (39%) had benign disease.
Mean stay in intensive care was less than 24 hours. Twenty-two patients (71%) had drainage procedures: 15 (68%) chest drain only and the rest having open procedures. All stents were placed endoscopically utilizing general anaesthesia and the median time from perforation to stent insertion was less than 24 hours (range less 24 hours to 13 days).Of the patients with benign disease five (16%) had spontaneous perforations, one (3%) suffered traumatic rupture and the rest were iatrogenic perforations. The most frequent complication was stent migration which occurred in 5 patients (16%). In five patients (16%) the stent was removed with excellent results after follow up oesophagogram. There were eight deaths, an overall mortality rate of 26 % related to age, and delay in treatment.
CONCLUSION: When combined with adequate mediastinal drainage oesophageal stenting represents a good alternative to the difficult treatment of acute and delayed perforations of the intrathoracic oesophagus. Rapid leak occlusion reduces the delay of oral nutrition, time in intensive care and length of hospital stay.

INT-34 - DOES STOPPING AMIODARONE AFTER SUCCESSFUL TREATMENT OF ATRIAL FIBRILLATION POST CARDIAC SURGERY INCREASE THE RISK OF RECURRENCE?

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BACKGROUND: Atrial fibrillation post-cardiac surgery is common and can complicate the postoperative recovery. Amiodarone is a frequently used drug for cardiversion. There are two ways of treating AF with amiodarone. Some believe only in-hospital use until cardiversion whilst others continue it for several weeks and stop it in outpatient clinic. Inadvertent long-term administration of the drug could be harmful.
AIM: Our null hypothesis was to determine whether continuing Amiodarone for 6 weeks, would decrease the incidence of recurrence of atrial fibrillation and AF related symptoms.
MATERIAL-METHODS: We reviewed the notes, ECG and clinic letters of 292 patients who developed postoperative atrial fibrillation from January 2005- April 2007. Of these, 27 died post operatively. Remaining 265 patients were divided in to two groups: Group one (n=180) discharged on Amiodarone and group two (n=85) with no amiodarone.
Presence of symptoms of palpitation, TIA, PE, DVT and readmission for AF was recorded. Normal sinus rhythm was confirmed either with an ECG or examination by a member of our cardiothoracic team.
RESULTS: The results are summarised in table.1. Categorical variables were compared using the chi-square test as appropriate. The analysis did not show any statistically significant difference (p value= 0.57) between the two groups.
CONCLUSION: Long-term treatment of patients with Amiodarone should be reconsidered, as it may not be as effective as previously thought in preventing symptoms and recurrence of atrial fibrillation after cardiac surgery. We also observed surprisingly high number of neurological events, which will need further investigation.
Table 1. The results of the observations

	Number	Af recurrence		palpitation	TIA		Stroke		PE
Amiodarone	180	n=15 8%	Cabg=9 Valve=4 Cabg+valve=2	n=26 14.5%	n=4 2%	Cabg=1 Valve=2 cabg+valve=1	n=4 2%	Cabg=2 Valve=1 Dissection=1	n=1 Valve=1
No Amiodarone	85	n=9 10%	Cabg=5 Valve=3 ASD=1	n=8 9.5%	n=2 2%	Cabg=1 Valve=1	n=2 2%	Cabg=1 Cabg+valve =1	

TIA= Transient ischaemic Attack PE= Pulmonary embolism

INT-35 - PLASMA LEVEL OF BRAIN NATRIURETIC PEPTIDE AS A PREDICTOR OF POSTOPERATIVE ATRIAL FIBRILLATION IN PATIENTS UNDERGOING OPEN HEART SURGERY

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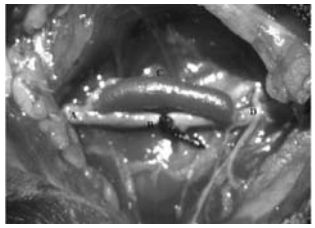
BACKGROUND: The aim of this study is to evaluate the potential usefulness of BNP level as a predictor of the occurrence of postoperative(postop) AF and to assess the relating BNP level with onset of AF and restoration of sinus rhythm.
MATERIAL-METHOD: 82 patients without history of atrial arrhythmia had undergone cardiac surgery for 1 year were studied. Their records were reviewed and postop EKGs were checked daily for AF until the time of discharge.
RESULTS: Patients were divided into two groups based on developed postop AF. Postoperative AF was developed in 26 patients (31.7%). There was no significant statistical difference in age, sex distribution, preop left ventricle ejection fraction, hypertension, left ventricular hypertrophy, or use of beta blockers between no postop AF and postop AF group. More patients in the AF group had undergone valve surgery (23 % versus 77 %, p=0.002). Preop left atrium size was significantly larger in AF patients(43.8±10.3mm versus 49.8±11.5mm, p=0.029). Preop plasma BNP levels were higher in the postop AF patients (144.1±20.8pg/ml versus 267.5±68pg/ml, p=0.034). In the postop AF group, plasma BNP level was the highest on the 3rd postop day. The postop AF developed to most patients within 3rd postop day, restored sinus rhythm within 7th postop day.
CONCLUSION: An elevated plasma BNP levels may lead to the occurrence of postop AF in patients undergoing cardiac surgery. The patients who have high risk of postop AF should be considered for aggressive prophylactic antiarrhythmic therapy.

MOLECULAR BASIS AND EXPERIMENTAL MODELS FOR CARDIOVASCULAR DISEASES I

OP-003



Figur 1: It is shown the image of completed anastomosis of juguler vein graft to common carotis artery. A: Proximal carotis artery B: Carotis artery between two anasthomosis C: Juguler vein graft D: Distal carotis artery

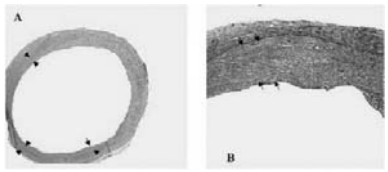


Figure 2:Histologic evaluation of Intimal hiperplasia between two groups

Table 1:The values of intimal and medial thickening in two groups

Parameters	HA/CMC group	Control group	P value
Intima (μm)	109±27	220±58	0.000
Media (μm)	128±23	182±36	0.000
Intima/Media	0.82±0,08	1,50±30	

OP-003 - INHIBITION OF VEIN GRAFT INTIMAL HYPERPLASIA BY PERIADVENTITIAL APPLICATION OF HYALURONIC ACID – CARBOXYMETHYL CELLULOSE: (AN EXPERIMENTAL STUDY)

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OBJECTIVE: Intimal hyperplasia is one of the main causes of graft failure in coronary artery bypass graft (CABG) and peripheral vascular surgery. Placement of an external support has been reported to prevent intimal hyperplasia of vein grafts. Hyaluronic acid-carboxymethyl cellulose (HA/CMC) is a reabsorbable agent used to prevention for adhesion after surgical procedures. In this study, we investigated the effect of HA-CMC on intimal hyperplasia in a rabbit model.
MATERIAL-METHODS: Right jugular vein to common carotid artery bypass grafting was performed in 24 male New Zealand white rabbits (2.5–3.0 kg) and the animals were divided into two groups: control group (n=12) and HA/CMC group (n=12). Absorbable membran barrier was applied around vein grafts in HA-CMC group. In control group, no material was applied following venous graft bypass. At 30th day after implantation in both groups, the grafts and surrounding tissue were harvested to evaluate the neointimal and medial thickening of vein grafts, neovascularization, inflammatory responses.
RESULTS: At 1 month the vein grafts supported with the HA/CMC membrane demonstrated a statistically significant decrease in neointimal thickening (109 μm [IQR, 78-166]) compared with the unsupported control grafts (220 μm [IQR; 101-312]; P<0.001), and also in medial thickening (128 μm [IQR, 101-181) compared with unsheathed control grafts (182 μm [IQR, 131-255 P<0.001_?. No significant difference was established between the two groups with respect to neovascularization and inflamatory responses.
CONCLUSION: Periadventitial placement of HA-CMC as an absorbable membran inhibits intimal hyperplasia of vein bypass grafts in a rabbit model.

OP-004 - EFFECTS OF NORMOTHERMIC ORGAN BATH AND VERAPAMIL - NITROGLYCERIN SOLUTION ALONE OR IN COMBINATION ON THE BLOOD FLOW OF RADIAL ARTERY

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OBJECTIVE: Radial artery pedicle tissue cooling during harvesting is one of the major causes of vasospasm. We aimed to compare the effects of the pedicle rewarming method, normothermic organ bath and one of the mostly preferred topical antispasmodic agents, verapamil - nitroglycerin solution alone or in combination on the blood flow of radial artery.
METHODS: Consecutively randomized patients (n=80) undergoing coronary bypass were organized as equal sized four groups. Effects of normothermic organ bath and topically performed verapamilnitroglycerin solution alone or in combination on the blood flow of radial artery were investigated. In the control group no antispasmodic treatment was performed. Free flows were measured at three stages as; initial flow after minimal distal harvesting, post-harvesting flow after total harvesting and post-treatment flow following a waiting period after the application of the antispasmodic protocol. At each stage pedicle and esophageal temperatures were also recorded.
RESULTS: Normothermic organ bath, topical verapamil-nitroglycerin solution treatment and their combination increased flow significantly (p<0.001, from 40.3±10.48 to 64.3±18.8, from 38.9±13.91 to 62.75±15.23, from 41.4±11.19 to 75.4±15.32 respectively). The difference between the initial and post-treatment flows were not significantly different in the combined procedure group (p>0.05), whereas the initial levels were not reached in the post-treatment flows (p<0.05) in the normothermic organ bath and verapamil-nitroglycerin groups.
CONCLUSIONS: Hypothermia plays an important role in radial artery vasospasm. The combined application of topical verapamil-nitroglycerin solution and normothermic organ bath is more effective than the alone application of the methods.

OP-004

Temperatures

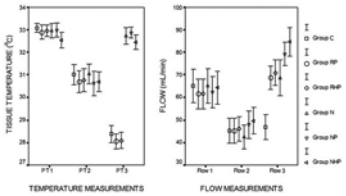


Figure 1. Esophageal temperature and radial artery pedicle temperature data are shown with error bars. Values are presented as mean ± standard deviation. First values were measured after minimal distal harvesting of radial artery, second values were measured after total harvesting of radial artery, and third values were measured at the end of a waiting period after treatment of the radial artery pedicle.

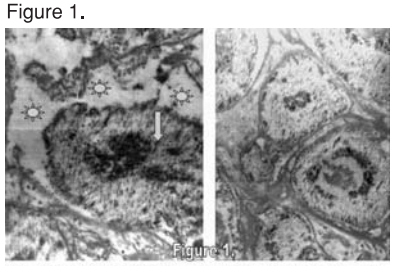
Flow values

AntiSpasmoic Treatment	Control group	NOB	VG	VG + NOB
Initial flow	74.3 ± 25.92a,	b 70.5 ± 20.64a,c	69.95 ± 23.6a,c	73.1 ± 22.6a
Post-harvesting flow	43.1 ± 12.15	40.3 ± 10.48d	38.9 ± 13.91d	41.4 ± 11.19d
Post-treatment flow	39.7 ± 10.53e	64.3 ± 18.8	62.75 ± 15.23	75.4 ± 15.32

Data are presented as mean ± standard deviation. a=p<0.001 versus second flow within all groups, b=p<0.001 versus third flow within control group, c=p<0.05 versus third flow within groups NOB and VG, d=p<0.001 versus third flow within groups NOB, VG, and VG + NOB, e=p<0.001 versus third flows of groups NOB, VG, and VG + NOB.

OP-005

Figure 1.



The intercellular edema is present in between the smooth muscle cells of tunica media from the ITA in tye left side. Figure 1 on the right side, demonstrates the ultrastructurally normal tunica media of ITA.

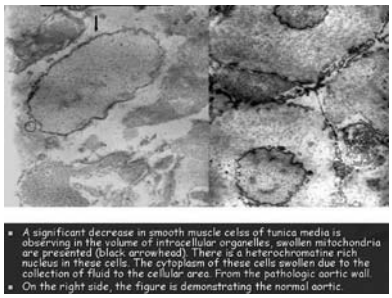


Figure 2.

On the left side, a significant decrease in smooth muscle celss of tunica media is observing in the volume of intracellular organelles, swollen mitochondria are presented (black arrowhead). There is a heterochromatine rich nucleus in these cells. The cytoplasm of these cells swollen due to the collection of fluid to the cellular area. From the pathologic aortic wall. On the right side, the figure is demonstrating the normal aortic.

OP-005 - ULTRASTRUCTURAL INVESTIGATION OF INTERNAL THORACIC ARTERY AND AORTIC WALL PATHOLOGY BY TRANSMISSION ELECTRON MICROSCOPE IN CORONARY ARTERY GRAFTING PATIENTS

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BACKGROUND: Internal thoracic artery (ITA) is known to be resistant to atherosclerosis.However,ITA graft occlusion due to atherosclerotic change is still a problem after coronary artery bypass grafting (CABG).For investigation of ITAs' wall,we examined its histopathologic findings in patients undergoing CABG using transmission electron microscope.In those patients, we also researched the correlation between aortic walls' and ITAs' histopathologic changes.
MATERIAL-METHODS: 60 patients were randomly selected.The ITA was harvested in a standart fashion.1 mm lenght of ITA ring was cut and saved in Glutaraldehide solution for fixation.Aortic walls were provided by aortic punching during proxymal anastomosis.The endothelial layer,media and adventitial layer has been examined according to the score system proposed by Fischlein using the following criteria: (a)completely confluent endothelium;(b)partially confluent endothelium;(c)loosely netted endothelium; (d)islands of endothelium;and (e)no endothelium.
RESULTS: In 12 patients (20%),aortic wall pathology was noted.In 10 of these cases (16%) different degree of histopathologic findings were recorded in ITA samples.Thus,in 83% of cases with aortic wall pathology concomitent ITA pathologies were observed.The most important histopatholojic findings in both arterial samples were as follows:endothelial vacuolisation,intimal thickening and/or intimal seperation,subendothelial edema,swalloning of cytoplasma and mitocondria.
CONCLUSION: In previous studies,the rate of histopathologic changes of ITA have been shown to be between 1-1,8%.The number of studies have also been reported with the use of light microscopic examination.Ultrastructural changes of ITA has been reported with the use of electron microscope in a limited number of studies.Our study findings indicate that there are nearly ten fold more histopathological changes of ITA than the percentage of previously reported cases.

OP-006 - THE MOLECULAR EFFECTS OF BLOOD AND BLOOD-INSULINE CARDIOPLEGIA IN OPEN CARDIAC SURGERY ON MYOCARDIAL PROTECTION

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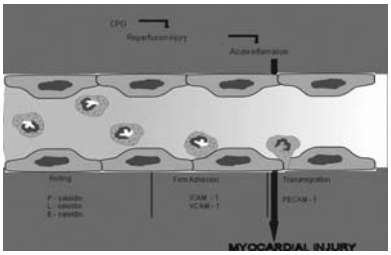
OBJECTIVE: To measure the changes in the levels of PECAM–1 (soluble platelet – endothelial cell adhesion marker), ICAM–1 (soluble intercellular adhesion molecules) and VCAM–1 (soluble vascular adhesion molecules), soluble adhesion molecules involved in acute inflammation during ischemia-reperfusion in adults who underwent open-heart surgery using blood and blood-insulin cardioplegia and to examine the differences in tissue damage at the molecular level as a consequence of insulin's effect on myocardial energy metabolism.
MATERIAL-METHOD: Thirty six cases who agreed to participate and fulfilled the inclusion criteria were included in the study. Patients were randomized into two groups. Group I: Blood cardioplegia (n: 18) and Group II: blood-insulin cardioplegia (n: 18). Blood samples were taken from the coronary sinus and the radial artery before cross-clamp (T1), at 1 minute after reperfusion (T2) and at 30 minutes of reperfusion. sICAM-1, sVCAM-1, sPECAM-1 and serum lactate levels were measured in these samples. Cardiac enzymes (CK-MB, troponin, and myoglobin) were measured at postoperative 1, 8 and 16 hours. The total duration of mechanical ventilator support during postoperative period, and the number of days in the intensive care unit and hospital were recorded.
FINDINGS: No statistically significant differences were observed in sVCAM-1 levels in blood taken from the radial artery at T1, T2 and T3 in either group. On the other hand, there were significant increases between T1 and T3 and between T2 and T3 in samples obtained form the coronary sinus (P=0.000 and P=0.003, respectively). There were also significant increases in sPECAM-1 in samples obtained from both sites between T2 and T3 in both groups (p=0,000). These differences were similar in both groups. sICAM-1 levels did not differ between sites in either group. No significant differences appeared in blood lactate levels, postoperative serum myoglobin and CK-MB levels between groups. However, troponin levels at 8 and 16 hours in the blood-insulin cardioplegia group were higher than the blood cardioplegia group (P=0.003 and P=0.032, respectively). There were no statistically significant differences between two groups in the intubation time and the length of stay in the intensive care unit and hospital.
CONCLUSION: Supplementation of blood cardioplegia with insulin did not yield a significant improvement in adhesion molecules. Therefore, superiority of one cardioplegia over the other in delivering myocardial protection during open-heart surgery has not been shown.

OP-006

Figure 1



The roles of adhesion molecules in inflammation

Table 1

	Group I (blood CPG)	Group II (blood-insulin CPG)	P
Sex, n ♀/♂	3/15	4/14	1,0
Age	61,5 ± 9,0	61,0 ± 9,9	0,89
Diagnosis CAD MS	17 1	17 1	
Operation CABG MVR	17 1	17 1	1,0
Number of vessels bypassed 1 vessel 2 vessels 3 vessels 4 vessels 5 vessels Total	2 4 5 4 2 17	0 5 5 7 0 17	0,74
EF, %	52,06 ± 10	52,00 ± 10,3	0,98
Duration of Perfusion, min	85,5 ± 20,7	94,5 ± 28,2	0,28
ACC time, min	47,1 ± 11,8	50,1 ± 15,0	0,51

General features of the patients participated in the study

OP-007 - THE PROTECTIVE EFFECT OF ILOPROST IN RENAL ISCHEMIA/REPERFUSION INJURY

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BACKGROUND: Acute renal failure due to ischemia/reperfusion injury is a common cause of morbidity and mortality in patients that need suprarenal aortic cross-clamping for surgically treatment of diseases such as aortic aneurysm or aortic coarctation.In this study, effect of iloprost in renal ischemia/reperfusion is investigated on an experimental animal model.
METHODS: Wistar rats subjected to 60 minutes of unilateral warm ischemia were seperated into sham (n=4), control (n=7) and iloprost (n=7) groups. Iloprost was administered by at a dose of 2 ng/kg-1/min-1. Blood samples for biochemical parameters were taken and histopathological examinations of the kidney specimens were made to detect probable changes due to reperfusion injury.
RESULTS: Mean BUN levels after 72 hours were 181,9 ± 108,2 mg/dl for the control group and 127,5 ± 70,3 for iloprost group (p=0,383). Mean Kr levels after 72 hours were 5,0 ± 3,1 for the control group, 3,7 ± 1,7 for iloprost group. (p=0.456) Mean BUN and Kr levels in iloprost group were less than the levels in the control group, but the difference between two groups was not statistically significant. Serious (Grade 2 or Grade 3) acute tubuler necrosis was detected in 86 % of rats in control group (6/7), the ratio was 57 % (4/7) in the latter group. But the difference between two groups was not statistically significant. (p=0.209).
CONCLUSION: Although these findings suggest that, iloprost pretreatment does not statistically reduce injury, there is a trend in iloprost group to have less injury due to ischemia and reperfusion.

MOLECULAR BASIS AND EXPERIMENTAL MODELS FOR CARDIOVASCULAR DISEASES II

OP-008 - THE EFFECTS OF TICLOPIDINE AND CLOPIDOGREL ON INTIMAL HYPERPLASIA AFTER BALLOON INJURY OF RABBIT'S ILIAC ARTERIES

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OBJECTIVE: After vascular reconstructive procedures, neointimal hyperplasia is the most important cause of late-term restenosis which occurred because of smooth muscle cell migration, proliferation and collagen matrix deposition. There are many numbers of investigations which are trying to find out the cause of uncontrolled neointimal hyperplasia and mechanism of intimal thickening but still no answers to the questions. The purpose of the present study was to investigate the effect of ticlopidine and a strong ADP-dependent platelet aggregation inhibitor clopidogrel on neointimal hyperplasia.
METHODS: At the study 27 New Zelland male white rabbits were used. They were divided into 3 groups which includes 9 rabbits at each one. The rabbits in group 1 (Control group) only underwent balloon injury on the iliac artery. Group 1 had no medications, group 2 and group 3 had taken ticlopidine and clopidogrel, respectively, after balloon catheter injury of the left iliac arteries. Medication started during the vascular procedure and stopped 21 days after the operation. At the end of the study, the rabbits were sacrificed and iliac arteries were harvested. Upon them; intimal and medial areas were measured, and intima/media ratios were calculated.
RESULTS: The neointimal thickening was significantly less in clopidogrel and ticlopidine groups than in control group ($p<0.001$). Rabbits, whose taken clopidogrel and ticlopidine had no significant statistical reduction at the media level than in the control group. But intimal /medial level ratios had statistically significant reduction in both medication groups than in the control group ($p<0.001$).
CONCLUSIONS: The use of ADP-receptor antagonists (ticlopidine and clopidogrel) after vascular reconstructive procedures has beneficial effects on restenosis.

OP-009 - THE EFFECT OF NARINGENIN ON NEOINTIMAL HYPERPLASIA AFTER BALLOON INJURY IN RAT CAROTID ARTERY

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BACKGROUND: Neointimal hyperplasia is a proliferation of vascular smooth muscle cells. It is a common side effect of venous, arterial and synthetic grafts used in revascularization during cardiovascular surgery. High levels of neonintimal hyperplasia are directly correlated with increased patient mortality. Naringenin possesses anti-inflammatory and antioxidant effects, inhibits glucose uptake in cultured cells and suppresses proliferation of breast cancer cells. We investigated the effects of naringenin on vascular smooth muscle proliferation and neointimal hyperplasia. Platelet-derived growth factor-BB (PDGF-BB) and tumor necrosis factor-alfa (TNF-α) are markers related to the level of neointimal hyperplasia after vascular injuries.
METHODS: 46 male Sprague-Dawley rats were divided into three groups; sham, control and treatment. Following balloon injury of the internal carotid artery, rats were treated with either saline or 100 mg/kg of naringenin via intraperitoneal injection once per day for seven days. Rats were sacrificed one and three weeks post-balloon injury and both carotid arteries were harvested for histologic analysis. Neointimal growth was quantified and the levels of PDGF-BB and TNF-α were assessed by immunohistochemistry. One-way ANOVA was performed to compare groups with different treatments, followed by multiple pair-wise comparison procedure.
RESULTS: Rats receiving naringenin demonstrated significantly decreased neointimal hyperplasia 1 week (23,87± 2,16 μm vs 10,02± 1,96 μm, $p<.05$) and 3 weeks after treatment (47,7 ± 1,09 μm and 15,67 ± 1,65 μm, $p<.05$) compared to saline treated controls. The percentage of PDGF-BB labelled area in controls was significantly greater compared to the naringenin-treated group (0,36 ± 0,044% vs 0,20± 0,02% after 1 week treatment and 0,52 ± 0,09% and 0,32 ± 0,02% after 3 weeks treatment) with a p value >0,001. Percentage of TNF-α labelled area in control was significantly greater when compared with naringenin treated group (38,09 ± 3,90% vs 20,51± 4,95% after 1 week treatment and 61,67± 4,508% and 31,38± 3,52% after 3 weeks treatment) with a p value >0,001. Levels of TNF-α and PDGF-BB were decreased as well and correlated significantly with histopathological measurements providing a possible pathogenic mechanism underlying our morphological findings.
CONCLUSION: Naringenin is effective in decreasing neointimal hyperplasia and smooth muscular tunica growth caused by balloon injury in rat carotid artery. We found a significant correlation between both PDGF-BB and TNF-alfa expression changes and the morphometric data, that can may be enlighten a causative mechanism underlying wall vessel proliferation.

OP-010 - ILOPROST ATTENUATES THE RENAL INJURY INDUCED BY ABDOMINAL AORTIC-ISCHEMIA-REPERFUSION IN RATS

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PURPOSE: The purpose of this study is to examine the effect of iloprost on renal injury induced by abdominal aortic-ischemia-reperfusion (AIR) in rats.
METHODS: Twenty four Wistar-Albino rats were randomized into three groups (eight per group). Control group underwent laparotomy and dissection of the infrarenal abdominal aorta (IAA) without occlusion. AIR group underwent laparotomy and clamping of the IAA for 120 min followed by 120 min of reperfusion. AIR+iloprost group received 0,45 µg/kg/hr iloprost by constant intravenous infusion via tail vein during 120 min of reperfusion. Blood and kidney tissue samples were obtained for biochemical and histological analysis from all rats, respectively.
RESULTS: Biochemical analysis showed that, AIR significantly increased the plasma levels of malondialdehyde, P-selectin, vascular cell adhesion mollecule (VCAM-1) and intercellular adhesion mollecule-1 (ICAM-I), and the tissue levels of malondialdehyde and catalase ($p<0.05$ vs control group). Iloprost treatment significantly decreased the plasma levels of malondialdehyde, P-selectin and ICAM-1, and the tissue levels of malondialdehyde and catalase ($p < 0.05$ vs AIR group). Histological examination showed that, AIR significantly increased the immunoreactivity of P-selectin, L-selectin, tumor necrosis factor-α (TNF-α), CD11b, CD18 and ICAM-1 ($p < 0.05$ vs control group). Iloprost treatment significantly decreased the immunoreactivity of P-selectin, TNF-α, CD11b, CD18 and ICAM-1 ($p < 0.05$ vs AIR group).
CONCLUSION: The results of the present study show that, iloprost attenuates renal injury induced by AIR in rats. We think that this beneficial effect of iloprost is due to decrement of increased local and systemic expression of adhesion moleculles after AIR.

OP-011 - THE EFFECT OF Nω-NITRO-L-ARGININE METHYL ESTER AND L-ARGININE ON LUNG INJURY INDUCED BY ABDOMINAL AORTIC OCCLUSION-REPERFUSION

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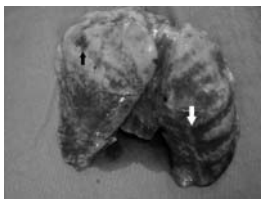
PURPOSE: Nω-nitro-L-arginine methyl ester (L-NAME) is a nitric oxide (NO) synthase inhibitor whereas L-arginine is a NO precursor. The aim of the study was to examine the effects of L-NAME and L-arginine on lung injury after aortic ischemia-reperfusion (IR).
METHODS: Twenty-four Wistar-Albino rats were randomized into four groups (n = 6) as follows; Control (sham laparotomy), Aortic IR (30 min ischemia and 120 min reperfusion), L-arginine (intraperitoneal 100 mg kg-1 live weight) + aortic IR, and L-NAME (intraperitoneal 10 mg kg-1 live weight) + aortic IR. In lung specimens, tissue levels of malondialdehyde (MDA), Vascular Endothelial Growth Factor (VEGF) and nitric oxide (NO) were measured and histological examination was done.
RESULTS: Aortic IR increased MDA, VEGF and NO. L-arginine further significantly increased MDA and NO, and decreased VEGF ($p < 0.05$ vs aortic IR). L-NAME significantly decreased MDA and NO ($p < 0.05$ vs L-arginine + aortic IR) and increased VEGF ($p < 0.05$ vs other groups). Histological examination showed that aortic IR significantly increased ($p < 0.05$ vs control) and L-arginine further increased ($p > 0.05$ vs aortic IR), whereas L-NAME significantly decreased pulmonary leukocyte infiltration ($p < 0.05$ vs aortic IR).
CONCLUSIONS: Our results indicate that L-arginine aggravates whereas L-NAME attenuates the lung injury induced by aortic IR. We also believe that endogenous NO is deleterious to lung injury induced by aortic IR.

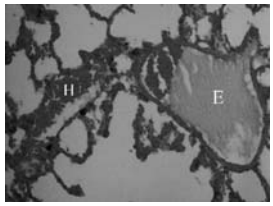
OP-012

figure: 1



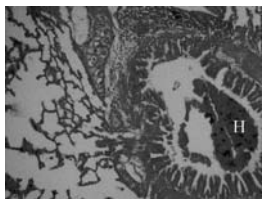
Macroscopic appearance of lungs belong to an animal with massive pulmonary edema.

figure: 2



Intraparenchymal edema & hemorrhage (H), and hemorrhagic intraalvolar edema is shown in a died rat with BCCAL (LM, H&E, x 200).

figure: 3



Intrabronchiolar hemorrhage (H), intraparenchymal hemorrhage and alveolar ruptures are shown in a died rat with massive subarachnoid hemorrhage. (LM, H&E, x 100).

OP-012 - MECHANISMS OF PULMONARY EDEMA IN THE SURGICAL TREATMENTS OF STENOOCCLUSIVE CAROTID ARTERY DISEASE: EXPERIMENTAL STUDY

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INTRODUCTION: Endovascular treatment of stenoocclusive carotid artery disease has been used more frequently as an alternative to surgery. However, these procedures especially endarterectomy may predispose the fatal complications such as pulmonary edema. The objective of this study is to investigate if bilateral common carotid artery ligation (BCCAL) causes pulmonary edema, in the same as endarterectomy procedure.
METHODS: Twenty adult Wistar rats (150-200 g) were randomly divided into two groups: Control group (n=5) and BCCAL group (n=15). Common carotid arteries were dissected bilaterally and permanent BCCAL was applied to only BCCAL group. Six of them died within the three weeks and the remaining animals were sacrificed three months later.
RESULTS: Macroscopically, subpleural pethecial focuses and intratracheal bloody fluid collection was observed in all died six and living three animals. In histopathological analysis, perivascular and subintimal edema formations, alveolar wall destructions and intraalveolar hemorrhage were observed. Four of the six animals died due to massive subarachnoid hemorrhage and they had more lung injury.
CONCLUSION: BCCAL may be accepted as endarterectomy model, and carotid angioplasty or stenting in stenoocclusive carotid artery disease may be superior to carotid endarterectomy.

OP-013 - PROTECTION OF SPINAL CORD FROM ISCHEMIA

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BACKGROUND: The purpose of the study is to investigate and compared effectiveness of iloprost and levosimendan on spinal cord ischemia in experimental model.
MATERIAL-METHODS: Experiments were performed on 50 New Zealand white rabbits of both sexes, each weighing about 3 kg. Animal were randomly allocated into five groups each consisting of 10 rabbits. Spinal cord ischemia was induced with clamping the aorta just below the left renal artery and just proximal to the aortic bifurcation with arterial bulldog clamps. Aortic clamps removed after 40 minutes and restoration of blood flow was verified visually.
RESULTS: Neurological status of the animal in the group A, B, D and group E were better than those in the group C at both after 1 and 4 hours reperfusion. Viability index values in Levosimendan, iloprost and iloprost+levosimendan groups were statistically higher than the control group indicating lesser or no neuronal damage.
DISCUSSION: The results suggest that levosimendan might have reduced ischemic damage in transient spinal ischemia and provide better Neurologic outcome as well as iloprost. However, further studies are needed to define possible mechanisms of its action and to determine the correct dose necessary for maximal benefit.

OP-014 - MECHANISM OF CIRCULATION DISORDERS IN DEEP BRANCHES OF FEMORAL ARTERIES AFTER SPINE SURGERY BY USING MONOPOLAR ELECTROCAUTERY KNIFE: EXPERIMENTAL STUDY

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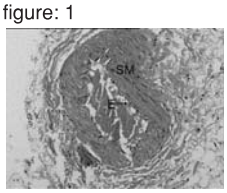
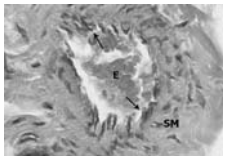
BACKGROUND: It is clearly known that electric currency can be hazardous for living tissues. However, sharp dissection with monopolar electrocautery knife (MEK) has been largely used in spine surgery. Although excellent surgery, some neurovascular disorders may be detected postoperatively. In this study, we investigated if MEK can cause deep branches of femoral arteries (DBFAs) injury.
METHOD: Eighteen rabbits were included in this study. Two of them were used as reference group. The remainings were subjected to paravertebral soft tissue dissection among the L1-L4 levels. Half of the animals were dissected with MEK, and the remainings were dissected with scissors and bipolar cautery. One month after the surgery, nerve roots, dorsal root ganglia (DRG) of L1-4 and FA examined histopathologically. Stereologic and basic geometric methods were used to determine the live and degenerated neuron numbers of DRG, endothelial cell density and luminal volume changes of DBFAs.
RESULTS: Degenerative changes were observed in the nerve roots and DRG of L1-4 and FA. The number of live neurons of DRG was 21600 in healthy rabbits, 19200 in non-MEK group and 14000 in MEK group. Endothelial cells density was 320±20 cells, mm2 in normal animals, (230±15 cells, mm2 in non- MEK group and 300±10 cells, mm2 in MEK group. Reference volume of FA was 15 mm3 in normal rabbits, 12 mm3 in the MEK group and 9 mm3in the MEK group. The differences among the MEK and normal or non MEK groups was statistically significant.
CONCLUSION: Sharp dissection with MEK can be detrimental effect on DBFAs by its destructive effects on neural control circuits and direct effects on FA. Femoral artery injury may be responsible for postoperative circulatory disorders at the lower extremities.

figure: 1



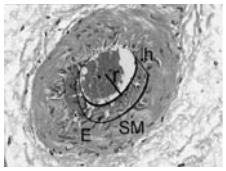
Magnified histopathological appearance of a femoral artery of a rabbit of non-MEK

figure: 1



Histopathological appearance of a femoral artery of a rabbit of MEK group is seen.

figure: 1



Volume estimation and cell counting methods is illustrated

Tablo:1

	cells/mm^3
Normal rabbits	320±20
Non-MEK Group	300±10
Mek Group	230±15

Endothelial cells density was 320±20 cells/mm^2 in normal animals, 300±10 cells/mm^2 in non- MEK group and 230±15 cells/mm^2 in MEK group. The differences between the MEK and non MEK groups was significant (p<0.005). And, the differences among the MEK and normal group was meaningful significantly (p<0.001).

ATHEROSCLEROSIS AND CORONARY ARTERY DISEASE: FROM HISTOPATHOLOGY TO CARDIOMETABOLIC RISK

OP-015 - HISTOPATHOLOGICAL EXAMINATION OF CAROTID ENDARTERECTOMY MATERIALS - ATHEROME PLAQUES

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INTRODUCTION: Carotis endarterectomy (CEA) surgery decreases the risk of primary and secondary stroke in the majority of patients. In this study, the pathologic features of the atherome plaques are examined.
MATERIAL-METHOD: Sixty four patients who underwent CEA between the years 2004-2007 were studied. Surgery was performed under locoregional servical block. Among the patients male/female ratio is 54/10, mean age 55±3.3 (38-83). The mean weight of the plaques is 0.52 gr (0.28-2.41gr). Histopathologic examination of the CEA materials revealed calcification in 47 cases (%73), thrombus in 23 cases (%34), hemorrhage in 2 cases (%2.9). Thrombus and hemorrhage were observed in 2 cases (%2.9) and 12 cases revealed (%18) both thrombus and calcification.
RESULTS: The comparison of the histopathologic features of the atherome plaques revealed that the rate of thrombus and calcification is high. In consideration of the symptomatic patients high rate of thrombus is in common. We believe that the histopathologic examination of the atherom plaques is favorable.

OP-016 - THE EFFECT OF ATORVASTATIN AND EZETIMIB TREATMENT ON SERUM LIPID PROFILE AND OXIDATIVE STATE IN RATS FED ON HIGH CHOLESTEROL DIET

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INTRODUCTION: The effects of ezetimib, the combination of atorvastatin + ezetimib and two different dosages of atorvastatin on serum lipid profile and oxidant-antioxidant system were investigated in rats fed on a diet rich in cholesterol.
METHODS: Rats were assigned to 6 groups. Group 1 was the control group. The other groups 2, 3, 4, 5 and 6 were fed with a high-cholesterol diet for 3 months. During this period, 10 mg/kg/day atorvastatin was given to Group 3, 1 mg/kg/day atorvastatin to Group 4, 10 mg/kg/day atorvastatin+ 1 mg/kg/day ezetimib to Group 5 and 1 mg/kg/day ezetimib was given to Group 6. At the end of 3-month-period, lipid profile and oxidative status were determined by measuring total cholesterol, LDL cholesterol, HDL cholesterol and triglyceride levels and malondialdehyde (MDA), glutathion peroxidase (GPX), catalase (CAT) and superoxide dysmutase (SOD). Moreover, LAD arteries and femoral arteries were examined histopathologically.
RESULTS: The results are shown in Table 1 and 2.
CONCLUSION: The administration of 10 mg/kg atorvastatin to the rats affects serum lipid profile although this effect is not very marked. When ezetimib is given alone, its effect is insufficient though better than 1 mg/kg atorvastatin administration. The addition of ezetimib to 10 mg/kg atorvastatin decreases blood lipid levels a little more. However, ezetimib treatment has negative effects on the oxidative status. Even though high dosage atorvastatin treatment increases the level of antioxidants by decreasing oxidative stress, ezetimib vanishes this positive effect of atorvastatin, on the other hand ezetimib treatment alone increases oxidative stress.

Table 1. The levels of serum lipids

	Total cholesterol (mg/dl)	LDL cholesterol (mg/dl)	Triglyceride (mg/dl)	HDL cholesterol (mg/dl)
Group 1	58.5±8.4	21.1±9.7	62.7±20.9	23.4±5.1
Group 2	63.5±8.3	26.3±8.1	77.8±31.1	24.7±5.2
Group 3	55.6±9.4	17.7±6.4	51.8±15.1	26.2±5.9
Group 4	63.8±9.8	25.7±7.4	65.1±24.7	24.4±3.9
Group 5	54.1±8.2	16.7±5.3	49.7±13.1	26.4±3.1
Group 6	60.2±7.7	24.8±8.2	69.5±25.6	21.4±3.5
p	NS	NS	NS	NS

NS: Not significant

Table 2. The levels of oxidant and antioxidant markers

	MDA (nmol/mg)	GPX (U/Hb)	Catalase (U/ml)	SOD (U/ml)
Group 1	0.9±0.2	18.6±5.7	85.9±16.8	104.9±25.3
Group 2	1.3±0.4	18.8±4.9	81.2±20.8	102.2±13.9
Group 3	0.8±0.8	24.6±6.5**	76.3±11.5	116.6±33.1****
Group 4	0.8±0.4	22.1±7.1***	79.1±10.9	96.8±26.3
Group 5	1.4±0.4	14.0±3.7	79.0±9.8	83.5±14.0
Group 6	1.9±0.4*	13.6±3.8	80.2±10.6	85.3±9.2
p	p< 0.01	p< 0.02	NS	p< 0.05

:Statistically significant versus group 1, 3 and 4 **:Statistically significant versus group 5 and 6 *:Statistically significant versus group 5 and 6 ****:Statistically significant versus group 5 and 6 NS:Not significant*

NEW BIOMARKERS IN CORONARY ARTERY DISEASE

OP-030 - ECHOCARDIOGRAPHY AND BNP MEASUREMENT TO PREDICTION OF PROLONGED INTUBATION PERIOD FOLLOWING CORONARY ARTERY BYPASS GRAFT SURGERY

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BACKGROUND: After coronary artery bypass graft surgery (CABG), prolonged intubation period (PIP) can increase morbidity and mortality. This prospective, randomized study was designed to determine the predictive value of echocardiography and BNP measurement for PIP after CABG.
METHODS: Eighty nine patients were classified in two groups according to median of ventilation time (15 hours) after CABG. Measurement of BNP was made morning of operation and the second day of operation. Median of alveolo-arterial gradient and LA volume were found as 300 and 25 ml/m2, respectively.
RESULTS: According to median of ventilation time, intubation period was found as prolonged in 37 (49 %) of 89 patients (Group 1). The mean LA volume in an apical 4-chamber view was estimated as 22.4±9.3 ml/m2 and 27.6 ± 8.7 ml/m2 (P= 0.034) in Group 1 and 2, respectively. Greater LA volume than 25 ml/m2 was present in 26 (59%) patients with PIP versus 18 in Group 2 (40%) (P=0.026). Multivariate logistic regression analysis showed that female gender (OR: 4.6; P:0.021), alveolo-arterial gradient> 300 (OR: 2.3; P:0.032), LA volume (OR: 2.6; P:0.03), LA volume> 25 (OR: 2.1; P:0.001), cross clamp time (OR: 1.3; P:0.048), cardiopulmonary bypass time (OR: 1.6; P:0.043), and graft number (OR: 1.7; P:0.015) were predicted PIP. BNP levels and other echocardiographic parameters such as LA diameter, mitral flow and tissue Doppler data were not significant.
CONCLUSIONS: Although other echocardiographic parameters and BNP could not predict PIP, increased LA volume within the echocardiographic data is an independent predictor in patients undergoing CABG.

Multivariable predictors of prolonged intubation period

	Odds ratio	95%CI	P value
Female gender	4.6	1.107-30.640	0.021
Alveolo -Arteriel gradient >300	2.3	0.038-0.385	0.032
Indexed LA volume	2,6	0.454-0.798	0.030
Indexed LA volume >25	2,1	0.614-0.914	0.001
Cross- clamp time	1,3	0.133-0.580	0.048
Cardiopulmonary bypass time	1,6	1.162-1.365	0.043
Graft number	1,7	1.109-2.606	0.015

OP-031 - RISK FACTORS FOR INTRA-AORTIC BALLOON PUMP USE IN PATIENTS UNDERGOING ISOLATED CORONARY BYPASS SURGERY

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OBJECTIVE: This study evaluates the risk factors for intra-aortic balloon pump use in patients undergoing isolated CABG to determine the optimal decision for perioperative IABP support.
METHODS: The study included 3223 consecutive patients who underwent isolated CABG with cardiopulmonary bypass during the period 1999 to 2006 in one center with single surgical team. Multivariate analysis was performed to assess potential markers of IABP use.
RESULTS: Forty-seven patients (1,5%) were inserted IABP per-postoperatively. Mean Euroscore of the group was 2,99 %; the overall mortality was 1,05 %. Independent risk factors of IABP use determined in the multivariate analysis were preoperative congestive heart failure (p<0.015; OR:3,4; CI 95%:0,15-3,44), myocardial infarction (MI) within the 24 hours preoperatively (p<0,0001; OR:7,6; CI: 0,00-7,56), chronic renal insufficiency (CRI) (p<0,04; OR:2,9; CI: 1-8,2), ejection fraction (EF) of < 30% (p<0,001; 4,4; CI: 1,9-9,8) and age of >60 (p<0,001; OR:3,9; CI: 1,8-8,11).
CONCLUSION: The need for IABP use can be predicted with the presence of preoperative congestive heart failure, MI within the 24 hours preoperatively, CRI, EF < 30% and age of >60 in patients undergoing isolated CABG. Thus; optimal decision and timing for IABP use can be determined to decrease mortality and morbidity.

OP-032 - LEUKODEPLETION IMPROVES RENAL FUNCTION IN PATIENTS WITH RENAL DYSFUNCTION UNDERGOING ON-PUMP CORONARY BYPASS SURGERY: A PROSPECTIVE RANDOMIZED STUDY

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BACKGROUND: We aimed to show the impact of leukodepletion on renal function in patients undergoing on-pump coronary revascularization.
PATIENTS AND METHODS: Fifty patients awaiting elective on-pump coronary revascularization with normal preoperative cardiac functions and with plasma creatinine levels ranging between 1.5 and 2.0 mg/dL were prospectively randomized into two groups: on-pump CABG with (group A: n = 25) and without leukodepletion (group B, n = 25). Renal glomerular and tubular injury were assessed by urinary alpha glutathione s-transferase (GST), plasma creatinine, and blood urea nitrogen (BUN) levels.
RESULTS: The patients consisted of 14 females and 36 males with a mean age of 57.6 +/- 5.3 years. In the leukodepletion group, the mean levels of creatinine, BUN and urinary GST were found to be decreased on the first, third and fifth postoperative days compared with the control group. There was no mortality. Three patients in the control group needed postoperative dialysis.
CONCLUSION: Patients with renal dysfunction undergoing on-pump CABG surgery seem to benefit from leukodepletion as a measure to prevent tubular damage and renal impairment compared with a control group.

NON-PHARMACOLOGIC THERAPEUTIC OPTIONS IN CORONARY ARTERY DISEASE

OP-033 - COMPARISON OF MIDCAB AND OFF-PUMP CORONARY ARTERY BYPASS GRAFTING IN SINGLE VESSEL DISEASE

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OBJECTIVE: Off-pump coronary surgery is an established method of less invasive cardiac surgery. We compared our early results in patents with 1-vessel disease using full sternotomy (OPCAB) or a left anterior mini thoracotomy (MIDCAB) without cardiopulmonary bypass.
METHODS: From July 2003 to June 2006, 54 patients with single vessel disease of LAD operated by the same surgical team were included in this prospective study. Of these patients, 27 underwent minimally invasive direct coronary artery bypass grafting (MIDCAB) through an anterolateral mini thoracotomy, and 27 had off-pump coronary artery bypass grafting (OPCAB) through a full sternotomy. Patient selections for the groups were based on patients' general condition, anatomical aspects, type of coronary lesions, co- morbidities and patients' preferences. Demographic, operative and postoperative data were collected prospectively.
RESULTS: Demographic data, Canadian Cardiovascular Society Classification and co-morbidities were identical for both groups. There were no operative mortality, early graft insufficiency, myocardial infarction, cerebro vascular accident and conversion to cardiopulmonary bypass in neither group. Mechanical ventilation times and total hospital stay were shorter in MIDCAB group; 6,8±3,0 hr vs. 8,3±1,6 hr (p=0,03) and 4,5±0,7 d vs. 5,2±1,4 d (p=0,03) respectively. Atrial fibrillation was seen in 2 patients in each group, all were returned to sinus rhythm by medical therapy.
CONCLUSION: Although MIDCAB grafting is a challenging technique, on selected patients can be safely performed with low postoperative mortality and morbidity as seen in the medical literature.

OP-034 - OFF-PUMP SAPHENOUS VEIN GRAFTING VERSUS INTERNAL THORACIC ARTERY FOR LEFT ANTERIOR DESCENDING ARTERY IN THE ELDERLY: EARLY CLINICAL RESULTS

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BACKGROUND: The left internal thoracic artery (LITA) to left anterior descending artery (LAD) grafting has been accepted as a gold standard because of its high patency rates. In some conditions such as subclavian artery stenosis, atherosclerosis of internal thoracic artery, insufficient blood flow and injury during harvesting; LITA cannot be used as a graft for LAD, saphenous vein graft (SVG) or other grafts are used. We aimed to compare and investigate results of LITA-LAD and SVG-LAD grafting in the elderly patients undergoing OPCAB surgery.
METHODS: 109 patients over 70 years old undergoing elective primary OPCAB were included in the study. Patients were divided into two groups: Group 1 patients; who would have received a SVG as a graft for LAD (n=37) because of: 1) preoperative known pathology of subclavian artery, 2) harvesting injury of LITA, 3) insufficient flow of LITA, 4) diffuse atherosclerosis of LITA, 5) distal disease of LAD (need for longer LITA). Group 2 patients who would have received a LITA graft for LAD (n=72). Additional saphenous vein grafts were used to complete revascularization in both group. Preoperative demographic data and postoperative results were compared.
RESULTS: Totally, 6.4% of patients were revascularized incompletely due to diffuse coronary artery stenosis or smaller than 1 mm caliber of target vessel in both groups. Two patients in SVG group and 5 patients in LITA group, a coronary artery endarterectomy was performed for right coronary artery. Seven patients were converted to on-pump technique (1 of SVG group, 6 of LITA group respectively, p=0.256). Eight patients in LITA group were re-operated (p=0.03); 1 patient for bleeding and 7 patients for being life-threating instable hemodynamic status with ECG changes localized at anteroseptal segments of myocardium. Operation duration was longer in LITA group than SVG group (p<0.001). Need for inotropic support (p=0.04) and need for surgical revision (p=0.03) were higher in LITA group than SVG group. ECG changes with hemodynamic disturbances were occurred more in LITA group than SVG group (p=0.04).
CONCLUSIONS: Although LITA is the first choice graft for CABG surgery, its spasm may contribute to myocardial ischemia and early postoperative morbidity and mortality. Thermal or mechanical trauma during harvesting, mechanical injury during anastomosing of the graft are the major factors that are thought to be responsible. In the elderly patients, LITA grafts tend to be more problematic than SVG during OPCAB surgery because of its natural spasmodic morphology, being smaller caliber than SVG and technical difficulties of anastomosing. In our patients, we observed better clinical results by using SVG instead of LITA for LAD grafting. Therefore, we concluded that a SVG can be used safely when LITA is not adequate quality for CABG surgery in the elderly patients, with good results.

OP-035 - MID-TERM PATENCY RATES OF CORONARY ENDARTERECTOMIES AFTER OFF-PUMP CABG SURGERY

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OBJECTIVE: The purpose of this study is to evaluate our mid-term patency of endarterectomized coronary vessels using off-pump technique.
METHODS: Among 3217 off-pump CABG operations, the records of 45 patients who consecutively operated electively and performed off-pump coronary endarterectomy between August 1993 and May 2007 were reviewed. There were 39 males (86.6 %) and 6 females (13.3 %). LAD endarterectomy was performed in 15 patients with the open technique (n=12), and the closed technique (n=3). In the remaining 30 patients, endarterectomies were done in the right (n=12 pts) and circumflex (n=12 pts) and diagonal (n=6 pts) coronary arteries.
RESULTS: There was no hospital and mid-term mortality. None of the procedures was converted to on-pump operation. The average number of grafts was 1.9±0.78. The mean time interval from operation to control angiographies was 29,2±22,6 months. One patient had myocardial infarction, 3 patients had atrial fibrillation in early postoperative period. Postoperative control angiographic studies of the 87 anastomosed grafts showed that overall patency rate was 91.9%. Among 7 occluded grafts, 4 received endarterectomy.
CONCLUSIONS: Off-pump CABG surgery with coronary endarterectomy is feasible and achieves reasonable graft patency in selected patients with diffuse coronary artery disease.

OP-036 - ROBOTICALLY ENHANCED CORONARY ARTERY BYPASS GRAFT SURGERY-EARLY RESULTS

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BACKGROUND: The aim of this study was to seek the feasibility of a robotically enhanced myocardial revascularization technique and evaluate short term results in terms of patient outcome.
MATERIAL AND METHOD: 144 patients underwent a single vessel (n=118) or multi vessel small thoracotomy procedure(n= 26). Single or both internal thoracic arteries were prelevated with the aid of a robotic system. Type of the anastamosis are shown in table 1. The left anterior descending coronary artery was revascularised using off pump techniques. After constructing a Y graft, peripheral cannulation and normothermic cardiopulmonary bypass without cross clamping was used for the revascularization of the circumflex system. The right coronary artery was stented in five cases with three vessel disease after the surgical procedure.
RESULTS: There was no operative mortality. Five patients were converted to sternotomy. Major complications included revision due to bleeding(4), myocardial infarction(2), late hemothorax and low cardiac output(2). 12% of cases needed blood transfusions and atrial fibrillation was observed in 11 % of the patients. Overall graft patency at discharge was 93 %. At three months stress induced ECG revealed ischemia in 4.7 % of patients and two cases underwent a successful percutaneous procedure.
CONCLUSION: The technique described above was safe and effective. Despite it's disadvantages, peripheral cannulation and cardiopulmonary bypass enhanced the revascularization of the posterior myocardial wall through a small incision.This method can be an alternative to percutaneous methods when they fail or even as a less invasive first resort in patients with multivessel disease if further data support these findings.

Type of Anastomoses

Type of Anastomoses	Number
LITA - LAD	113
RITA – LAD	2
RITA – RCA	3
LITA – LAD, Free RITA – Dx	3
RITA –LAD, LITA – OM	3
LITA – LAD, RITA – OM (y graft)	15
LITA – LAD, RITA –OM1, stenting of RCA	5
Total	144

OP-039 - SURGICAL CHALLENGE FOR LEFT ANTERIOR DESCENDING ARTERY LONG SEGMENT STENT STENOSIS

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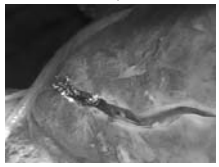
We operated on 5 patients, addmitted to our clinic between January 2007 and May 2007, for LAD long segment stent stenosis. The first two patients were operated on by minimally invasive technique and the latter 3 were operated on by standart open heart surgery techniques.
The stenoses on LAD artery reached the second diagonal branch in 3 patients and in 2 patients the stents were laid distal to the second diagonal branch. Each patient received three stents (mean, range 2 - 7).
In two of our patients the distal anostomosis were performed off-pump. We approached the left internal thoracic artery through the fifth intercostal space and used the raidal artery in an "H-graft" fashion. In the latter three of our patients we used cardiopulmonary by-passtechniques; cardioplegic arrest, moderate hypothermia and mild hemodilution.After the arteriotomy to the LAD artery the stent was fully removed. Endarterctomy was performed and patch plasty was applied by the LITA graft.
Coronary angiographies were performed for one of each groups on the post-operative 2nd months. Grafts were patent and no stenoses were reported.
Stenting the single vessel LAD is still an alternative to surgery. Patients prefer stenting for cosmetic reasons and for their comfort, however, as in our patients, this situation finally needs surgical therapy. Long segment stenting needs to be revised carefully because it challenges the surgeon and of course the patient him/herself.
Recently we prefer to remove the stent and to perform an endarterectomy to LAD. The inflammatory response forces us to fully remove the stent from the proximal to the distal edge of the stent, and the atherosclerotic plaque; and thus challenges our surgery.

Endarterectomy Plaque with the Stent

Diffuse LAD plaque and the stent

Stent Endarterectomy



Endarterectomy and patch plasty preparation in a patient with long segment stent stenosis.

Stent fully removed

OP-040 -ASPIRIN AND CLOPIDOGREL DO NOT INCREASE BLEEDING AND ALLOGENIC BLOOD TRANSFUSION IN CORONARY ARTERY SURGERY

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OBJECTIVES: Antiplatelet agents are effective in the management of stable and unstable coronary artery disease. The purpose of this study is to review the effect of preoperative clopidogrel, aspirin administration on clinical outcome and bleeding complications after coronary artery bypass graft surgery.
METHODS: Data were collected prospectively on 508 consecutive coronary artery bypass patients between January 1st and April 30th at Kavaklidere Umut Hospital. The three study groups were those prescribed aspirin(group 1), clopidogrel(group II), or neither drugs(group III), within 7 days prior to CABG. Baseline characteristics, chest tube output, reoperation rates, use of blood or fresh frozen plasma, ICU length of stay, hospital length of stay were compared.
RESULTS: 198 patients (39%) were on aspirin only, 101 (20%) were on clopidogrel only, and 209 (41%) were on neither. The mean chest tube output in the first 24 hours were 483.71 mL in group I, 567.50 mL in group II, 514.63 mL in group III, ($p > 0.05$). The mean total blood transfusions were 1.30, 1.45, 1.36 ($p > 0.05$). The mean fresh frozen plasma transfusions were 0.92, 1.35, 1.14 ($p > 0.05$). There were no statistically significant differences in chest tube output, total blood transfusions reoperation rates, fresh frozen plasma transfusions, ICU length of stay, hospital length of stay among the groups.
CONCLUSIONS: The results of this study propose that preoperative use of clopidogrel or aspirin are not associated with increased bleeding, need for reoperation and use of blood and blood products after CABG.

MINIMALLY INVASIVE SURGERY FOR ATRIAL FIBRILLATION ABLATION

OP-042 - SURGICAL RADIOFREQUENCY ABLATION OF THE ATRIA FOR CHRONIC ATRIAL FIBRILLATION

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Surgical radiofrequency (RF) ablation is a novel method for treatment of chronic atrial fibrillation. Left and right atrial dilatation, which is mainly responsible for atrial arrhythmias in many of the cases, is the target of this type of treatment and biatrial ablation including both appendages offers excellent postoperative results.
We use Atricure RF ablation since 16 months in cases with chronic atrial fibrillation resistant to medical therapy. Most of the cases are patients with mitral insufficiency and stenosis. A preoperative transthoracic and/or transesophageal echocardiography is always necessary to exclude the presence of an intraatrial thrombus. The RF ablation is performed after initiation of cardiopulmonary bypass and cross-clamping of the aorta. A Maze type mapping has to be mimicked while adjusting the ablation lines. Amiodarone infusion is mandatory during the first hours after the operation and oral amiodarone treatment has to be continued at least 1 month.
We have performed 9 RF ablations in 7 mitral valve replacement, 1 aortic valve replacement and 1 coronary artery bypass grafting cases. Eight of those have leaved the ICU in sinus rhythm and 6 were in sinus rhythm during their hospital discharge. Six patients are still in normal sinus rhythm.
In conclusion, we think that RF ablation, especially biatrial type, is a useful tool to return patients with atrial fibrillation to normal sinus rhythm.

OP-043 - VIDEO-ASSISTED BILATERAL EPICARDIAL PULMONARY VEIN ISOLATION FOR THE TREATMENT OF LONE ATRIAL FIBRILLATION

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BACKGROUND: The aim of this study is to evaluate the feasibility and the efficacy of a new off-pump, bilateral thoracoscopic pulmonary vein isolation technique in patients with lone atrial fibrillation. Methods. Between April 2004 and February 2006, 26 drug-resistant and symptomatic lone atrial fibrillation patients (18 permanent, 8 paroxysmal) underwent an irrigated radiofrequency ablation procedure using the Cardioblade ablation system (Medtronic, Minnesota). There were 16 men and 10 women with a mean age of 55±11 years. Mean duration of atrial fibrillation was 34.2±18.9 months. All patients underwent a bilateral thoracoscopic procedure in which both pulmonary veins were ablated with an atrial cuff using an off-pump epicardial approach. The conduction block was assessed by pacing the pulmonary veins after each ablation. Sixteen patients underwent endoscopic stapling of the left atrial appendage.
RESULTS: There were no hospital deaths. All procedures were completed as planned without any conversions to sternotomy. There were no mojor complications. Follow-up was complete at 6 months, and 80% of the patients were in sinus rhythm (paroxysmal: 100%, permanent: 72%). Of the patients with permanent atrial fibrillation, 85% had regained their atrial transport function. No major thromboembolic event was observed during the follow-up period.
CONCLUSIONS: The video-assisted bilateral pulmonary vein isolation technique was safe and effective. It was curative for paroxysmal atrial fibrillation patients and effective for permanent atrial fibrillation cases. This technique may find wider application if accumulating data further support these findings.

OP-044 - COMPLETELY ENDOSCOPIC BILATERAL PULMONARY VEIN ISOLATION AND LEFT ATRIAL APPENDAGE EXCLUSION FOR ATRIAL FIBRILLATION

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INTRODUCTION: We describe a minimal invasive surgical technique of total endoscopic closed chest treatment for atrial fibrillation.
METHODS: We performed nine totally endoscopic procedures from January to February 2007. Four patients had repeated unsuccesful percutaneous catheter procedures in the past. All patients were operated under general anesthesia, in supine position with both arms alongside the body. A slight tilt of the operating table without repositioning of the patient was sufficient for adequate exposure. Three 10mm thoracoports were introduced, first in the midaxillary line and a second anteriorly using the fourth intercostal space. A third port via the sixth intercostal space anterolaterally. Pulmonary vein ablation was performed using Atricure Lumitip dissector and Isolator Endo ablation clamp. The Isolator multifunctional pen was used for disruption of ganglionic plexi if these were present. Left atrial appendage was excluded using an endoloop. Patients were extubated in the operation room.
RESULTS: All surgical procedures were performed without technical problems. Mean operating time was 128 minutes (range: 96-177). Blood loss was minimal and mean hospital stay was 7 days (range 4-9). After a mean follow-up of 102 days (range: 70-126), 89% (8/9) of all patients were in sinus rhythm.
CONCLUSION: To our knowledge, this is the first reported series of totally thoracoscopic bilateral pulmonary vein isolation and left atrial appendage exclusion for the treatment of atrial fibrillation. We report an excellent short-term outcome. This minimal invasive approach can contribute to a short stay concept in the near future.

OP-045 - EFFECTSOF SERRUM IRRIGATION RADIOFREQUENCY ABLATION TECHNIQUE ON ATRIAL NATRIURETIC PEPTIDE AND HEMODYNAMICS

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In the recent years, serum irrigation radiofrequency ablation technique has been used for the surgical treatment of atrial fibrillation (AF) with %80-90 efficiency. The effects of SIRFA technique on atrial natriuretic peptides and hemodynamics was investigated.
MATERIALS-METHODS: 22 patients (15 females, 7 males) that have undergone SIRFA (Cardioblate TM. Medtronic Minneapolis- U.S.A.) treatment and 30 patients (19 females,11 males average) with normal sinus rhythms that haven't undergone the SIRFA treatment were accepted to our hospital for the study. Patients' pre-operative and post-operative plasma atiral natriuretic peptide (ANP) levels were measured. Plasma ANP and hemodynamic parameters were compared with the control group. Early post-operative transthoratic echocardiographic parameters were compared.
Post-operative plasma ANP level was found to stay high in the test group and plasma levels inclined to rise in the fifth day. Other than right atrium in the second post operative day and urine output in the first day, no other significant differences were detected in hemodynamic parameters. TTEko comparison revealed a significant difference in the mitral valve gradient for the test group.
Along with its effectiveness in AF surgery, serum irrigation radiofrequency ablation does not have negative effects on plasma ANP levels and hemodynamics in early post-operative period. Metabolic effects can be also taken into consideration in ANP level follow-ups. Studies that will include mid- and long term plasma ANP level measurements rather than early period measurements might be more useful in following.

OP-046 - PEDIATRIC EPICARDIAL PERMANENT PACEMAKER APPLICATIONS

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The need for permanent pacemaker is observed less in pediatric patients than adults. Their being smaller in size and the presence of additional cardiac malformations make the implantation of pacemaker technically difficult.
In pediatric patients, transvenous method use is limited due to the technical difficulties originating from the specific factors of this group. For this reason, in permanent pacemaker implantations of this group, epicardial method has been preferred. Eleven patients to whom permanent pacemaker implantations were performed with epicardial method between 1987-2006 at the Ondokuz Mayis University Hospital, Department of Cardio-Vascular Surgery were investigated retrospectively. Five of the patients were female and 6 was male. Mean age was 3.85. Epicardial pacemaker electrodes were placed with partial or full sternotomy in 8 patients and with anterior thoracotomy in 3 patients. Specifically, a pacemaker generator was placed to the last 2 patients in left subdiaphragmatic position. In 7 of the patients, the mode of permanent pacemaker was VVI and it was DDD in 4. Two of the patients died in hospital at the early stage due to the sepsis and breathing insufficiency. One patient was missed for the follow-up. One patient died due to sepsis in the 8 th month postoperatively. All of 7 patients have been alive with normal pacemaker functioning.
We can conclude that in pediatric patients and specifically in the presence of additional cardiac anomalies epicardial method in the implantation of permanent pacemaker is a reliable method with good long-term effects.

ATRIAL FIBRILLATION AFTER OPEN-HEART SURGERY: PREDICTION AND PREVENTION

OP-048 - RELATION BETWEEN MECHANICAL VENTILATION TIME AND ATRIAL FIBRILLATION AFTER CORONARY ARTERY BYPASS SURGERY

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OBJECTIVE: Postoperative atrial fibrillation (AF) is the most comman arrhythmic complication affecting morbidity and mortality after coronary artery bypass grafting (CABG). The aim of this study was to investigate the relation between the incidence of new onset atrial fibrillation and mechanical ventilation time after CABG.
METHODS: Between September 2001 and February 2006, 832 patients underwent isolated CABG at Turgut Ozal Medical Center. Two hundred thirty two of these patients were extubated early (<=6 hours) (Group I), and the other 600 were extubated late (>6 hours) (Group II). The exclusion criteria were left ventricular aneurysmectomy, carotid endarterectomy, valve or aortic surgery during the CABG session, emergency operation, left ventricle dysfunction, renal dysfunction and re-operation. The data were retrospectively analyzed.
RESULTS: Group I had a significantly lower incidence of atrial fibrillation after coronary artery bypass surgery (Group I, 8.6% vs Grup II, 15.4%; p=0.011). Group I had a significantly lower mean age, higher proportion of women, and higher proportions of patients with cronic obstructive pulmonary disease, unstable angina and also had a significantly lower mean number of distal anastomosis and shorter mean aortic cross-clamp time (p=0.0001, p=0.0001, p=0.042, p=0.025, p=0.02, p=0.001, respectively). Mean mechanical ventilation time was 5.2 ± 0.8 hours in Group I, and 9.1 ± 3.6 hours in Group II. Group II patients had a significantly longer mean ICU stay than the Group I patients (p=0.005).
CONCLUSION: Analysis of our data has shown that early extubation of patients after coronary artery surgery reduces the incidence of postoperative atrial fibrillation.

OP-054 - THE ASSOCIATION OF PROLIDASE ACTIVITY, OXIDATIVE PARAMETERS AND PRESENCE OF ATRIAL FIBRILLATION IN PATIENTS WITH MITRAL VALVE DISEASE

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BACKGROUND: Mitral stenosis (MS) is a common cause of atrial fibrillation (AF). Oxidative stress and inflammation factors were shown to be involved in atrial remodeling. The relationship between oxidative parameters and the presence of AF in patients with severe MS remains undetermined.
AIMS: To compare the oxidative parameters and prolidase activity in severe MS patients with and without AF.
METHODS: The study population contained 30 patients with MS and AF undergoing mitral valve replacement (MVR) (group I), 24 patients with MS and sinus rhythm undergoing MVR (group II), and 25 healthy controls (group III). Serum prolidase activity was measured spectrophotometrically. Plasma levels of total antioxidant status (TAS) and total oxidative status (TOS) were determined using a novel automated measurement method, and oxidative stress index (OSI), ratio percentage of TOS level to TAC, was calculated in all subjects. Additionally, we measured tissue TAS and TAC in patients with MVR.
RESULTS: The TAC and OSI were higher, but TOS and prolidase were lower in patients with MS than control (all p<0.001). These parameters were similar in group 1 and group II (ANOVA p>0.05, Figure 1A-1B). Tissue TAC was significantly lower in group I than group II(0.015 ± 0.01 vs 0.026 ± 0.01 mmol Trolox Equiv./L, p=0.014), tissue TOS was similar between groups I and II (0.24 ± 0.06 vs 0.22 ± 0.05 mmol Trolox Equiv./L, p=0.161). Presence of AF was correlated with mean tissue TAC (r=-0.309, p=0.016), prolidase activity (r=0.648, p<0.001), left atrial diameter (r=0.581, p<0.001) and OSI (r=-0.516, p<0.001). Tissue TAC level (β=-0.336, p=0.039) and left atrial diameter (β=0.463, p=0.071) were independent predictors of AF in patients with MS.
CONCLUSIONS: This study suggested that the presence of AF in patients with severe MS may be associated with the plasma prolidase activity, tissue and plasma oxidative parameters.

Figure 1A

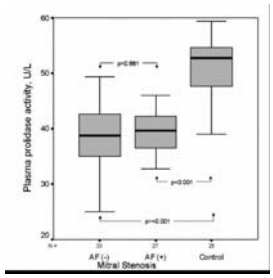

Figure-1: Comparison of groups according to serum prolidase activity (Fig 1A) and oxidative stress index (Fig 1B) (AF: atrial fibrillation).

Figure 1B

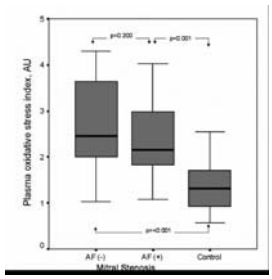

Figure-1: Comparison of groups according to serum prolidase activity (Fig 1A) and oxidative stress index (Fig 1B) (AF: atrial fibrillation).

OP-055 - DOES COMBINATION OF ANTEGRADE AND RETROGRADE CARDIOPLEGIA REDUCE CORONARY ARTERY BYPASS GRAFTING-RELATED CONDUCTION DEFECTS?

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BACKGROUND: Conduction disorders appearing after coronary artery bypass surgery (CABG) may have many different causes. In this study, we evaluated the postoperative conduction disorders after CABG with respect to the ante-grade blood cardioplegia and ante-grade plus continuous retrograde cardioplegia delivery methods.
MATERIALS-METHODS: This retrospective study included 1824 patients undergoing CABG between January 2001 and December 2005. There were 694 female patients (38%) and 1130 male patients (62%). Myocardial protection was done by isothermic hyperkalemic blood cardioplegia. Patents in Group 1 (n = 704) were operated on using only intermittent antegrade cardioplegia and those in group 2 (n = 1120) were operated on using the antegrade plus retrograde continuous cardioplegia. The postoperative occurrences of a new right bundle branch block, left anterior hemiblock, left posterior hemiblock, left bundle branch block, or third-degree atrioventricular block were evaluated and compared.
RESULTS: Total mortality rate was 1.6% (29 patients) without significant difference between the groups. The preoperative and perioperative characteristics were statistically similar in the groups. The occurrence of conduction disorders was significantly higher in group 1 (P =.006, 55 versus 52 patients). The analysis of the patients with conduction disorders showed a significantly increased mortality rate (P <.001) in addition to a significantly increased period of intensive care unit follow-up and duration of postoperative hospitalization (P <.001).
CONCLUSION: The present study demonstrated that the perioperative occurrence of conduction disorders after CABG was decreased by antegrade controlled and retrograde continuous combination cardioplegia.

NEW ECHOCARDIOGRAPHIC APPROACHES IN EVALUATION OF MYOCARDIAL FUNCTIONS, HEART VALVES AND TRANSPLANT VASCULOPATHY

OP-071 - EUROSCORE ESTIMATED MORTALITY SCORE FOR OPEN HEART SURGERY PATIENTS,CORRELATED OR NOT?

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OBJECTIVES: This study is done retrospectively on 2988 patients who were operated between january 2003-january 2005.All euroscores mortality scores were figure outed by pre operative datas of patients and compared post operative real mortality.
METHODS: Congenital operations had been not taken to study. Operative distrubitional profile is CABG 2120(%71),MVR 425 (% 14,2),AVR 147 (% 4,9), AVR + MVR 133 (% 4,5),VALVE SURGERY + CABG 61 (% 2),carotis artery endarterectomy + CABG 19 (% 0,6),others 83 hasta (% 2,8).Risk factors of patients are hyperlipidemia %39.1,hypertension %35.9,family history %35.4,sigarette smoking %33.7,DM %20.9, obesity %18.8,pulmonary hypertansion %9.8,chronic obstructive lung disease %6.3,extracardiac arteriopathy%4.2,neurologic dysfunction %2.8,chronic renal dysfunction %1.8,mean ejection fraction of all patients is %54.83.And then these expected mortality ratios were compared with postoperative real mortality.
RESULTS: At group1(low risk) there were 1516 patients and 14(%0.92) exitus and group1 expected mortality euroscore was %1.13.At group2(mid risk) there were 992 patients and 24(%2.4)exitus and group2 expected euroscore mortality was %3.05.At group3(high risk) there were 474 patients and 56(%11.8)exitus and expected euroscore mortality was %12.24
CONCLUSIONS: For goup1 and group3 there is meaningfull differance between expected mortality and real mortality,but for group 2 no important differance.So euroscore is not suitable risk stratificator for our patients and it shows alittle bit high score for our patients.This may be due to democraphic differance between europe and our patients.

OP-072 - ARE THE LEVELS OF HEAT SHOCK PROTEIN-70 AFFECTED DURING EXTRACORPOREAL CIRCULATION: PUMP OR OFFPUMP?

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BACKGROUND: Many proinflammatory markers may be triggered by extracorporeal circulation during routine coronary artery bypass procedures. In this randomized study, we investigated the serum and atrial tissue heat shock proteins.
METHODS: 20 consecutive patients deemed to undergo coronary artery bypass surgery were randomized for either with (group A) or without cardiopulmonary bypass (group B). Patient data including demographics, proinflammatory markers and heat shock protein-70 were prospectively recorded.
RESULTS: The mean age of the patients was 61.80±10.38 years. No perioperative mortality was observed. Serum HSP-70 levels obtained from right atrial cannula were significantly higher in Group A at t-1 and t-2 ($P<0.05$). However, both groups demonstrated significant elevations in serum HSP-70 levels at t-1 and t-3 compared to t-0. Correlation between postoperatively-increasing serum HSP 70 levels and cardiopulmonary bypass period was significant ($r=0.649$, $P=0.042$) and number of bypass grafting ($r=0.18$, $P=0.722$) for Group A. Both groups were similar for serum and nuclear/cytoplasmic staining for HSP-70 score in both pre- and postoperative period. Myoglobin levels were significantly higher at t-1 and t-3 for Group A. However, it demonstrated peak levels in at t-1. At all t-1 to t3, IL-6 levels were significantly higher than t-0 in both groups. Group A demonstrated significantly higher IL-6 levels at t-1 and t-2.
CONCLUSIONS: Inflammatory response induced by ECC is supported with high levels of IL-6, IL-10 and HSP-70. The increased level of HSP-70 in ONCAB group suggests an inflammatory response to extracorporeal circulation, ischemic injury due to cross clamping or even surgical trauma.

CURRENT THERAPEUTIC ALTERNATIVES IN THE TREATMENT OF HEART FAILURE

OP-073 - THE ROLE OF CALCIUM DESENSITIZATION IN THE PATHOPHYSIOLOGY OF SEPTIC MYOCARDIAL DEPRESSION AND EFFECTS OF LEVOSIMENDAN

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OBJECTIVE: In septic shock, the hemodynamic profile is characterized by components of hypovolemic, obstructive, cardiogenic, distributive, and cytotoxic shock. This sepsis-induced myocardial depression is made by cytokines probability via altering intracellular calcium homeostasis in the cardiomyocyte.
METHODS: We used levosimendan in fifteen patients of septic shock with cardiac failure unresponsive to standard treatment. Followed by a 24-h continuous infusion of levosimendan at 0.2 μg/kg/min to the fifteen patients having the diagnosis of septic shock and continuing their intensive medical therapy in our ICU after 24 h of conventional treatment including dopamine or adrenaline and observed mean urine output, mean arterial pressure (MAP), changes of conventional inotropic agents' dose, central venous pressure (CVP) and outcome.
RESULTS: In nine (%70) of the fifteen patients, infusion of conventional inotrops have been decreased or ceased. Nine patients (%70) were died, but others (%30) were recovered from shock. Three of dead nine patients were died at 96th hours after levosimendan infusion. Urine outputs of all patients have been adequate. CVP decreased in 83.3% of survived and 44.4% of dead patients after the drug. Average MAP values (mm Hg) before levosimendan infusion were compared to after levosimendan infusion, there was not any statistically significant difference. There was a statistically significant difference between the Dopamine infusion dose values before and after levosimendan infusion.
CONCLUSION: Levosimendan is a new inodilator that improves cardiac contractility by sensitizing troponin C to calcium. This drug has proved to be effective in treating advanced congestive heart failure and cardiogenic shock.

OP-076 - PREOPERATIVE AND OPERATIVE RISK FACTORS AFFECTING EARLY MORTALITY IN CARDIAC TRANSPLANTATION

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Heart Failure, is one of the most important health problem worldwide and in our country. Cardiac Transplantation, being an alternative treatment for end stage heart failure is performed successfully in our center. The purpose of our study is to reveal the risk factors affecting early mortality in patients who underwent cardiac transplantation in our clinic.
We have performed orthotopic heart transplantation for 47 patients in our center between 1989 to 2007. There were 40 male (85.1%) 7 female (14.9%), mean age was 30.08 ± 11.42 (16-58) years. Aortic Cross Clamp Time was 75.46 ± 13.35 (48-108) minutes, Total Perfussion Time was 119.78 ± 20.89 (81-172) minutes, Hypotermia: 27.41 ± 1.10 (23-30) ºC, Ischemia Time: 164.91 ± 36.28 (55-240) minutes (p=0.026), Functional lung disorders: 10 patients (21.3%) Diabetes Mellitus: 3 patients (6.4%), Hypertension: 13 patients (27.7%), Functional renal disorders: 10 patients (21.3%).
Sex (p=0.21), Hypertension (p=0.53), functional renal disorders (p=0.43), operation technic (p=0.53) and prolonged ischemia time for donor heart (> 210 dk) were not associated with acute rejection, however it was observed that presence of diabetes mellitus increased the acute rejection risk (p=0.039). When all types of rejection considered, Diabetes Mellitus was associated with the rejection (p=0.042). Presence of preoperative renal function disorder was associated with increased risk of postoperative infection rates (p=0.003). Any other risc factor for infection was not determined. Postoperative acute renal failure development rates were higher in patients with preoperative renal function disorder. (p=0.017). Mortality rate was 60.5% in patients with an ischemia time for donor heart > 120 minutes, while 4 patients in which ischemia time for donor heart < 120 have no mortality (p=0.0039).
We have determined that acute rejection, infection, renal function disorder,diabetes mellitus and ischemia time for donor heart have direct relationship at the univariant analyse in our study. In conclusion ischemia time for donor heart > 120 represants risc factor of mortality.

OP-077 - DETERMINANTS OF IN-PATIENT CARDIOPULMONARY PHYSIOTHERAPY AFTER HEART TRANSPLANTATION

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In this case - study, we indicated the results of in- patient cardiopulmonary physiotherapy programme of a patient with dilate cardiomyopathy which had orthotopic heart transplantation (male, age - 45 years old, body length – 1.67 m, body weight 51 kg) on 12th March 2007 in Dokuz Eylul University, Medical Faculty, Cardiovasculary Surgery Department.
The 6-minute walking test of the patient applied in preoperative period, was limited with efort dyspnea (NYHA III) with 60 m. walking distance. Rating of perceived exertion was 10 (very very heavy) according to the Borg Scale in 6 –minute walking test and step test. 6 – minute walking distance increased to 420 m and rating of perceived exertion was decreased to 2 (very very light) on Borg scale at the discharge.
Progressive exercise program was applied continouosly 42 days for twice a day. The cardiopulmonary physiotherapy programme included chest physiotherapy in the first step; incremental mobilization with breathing control and muscle strengthing in the second step; and we focused muscle and cardiovasculary endurance exercises with progressive ambulation in the third step. Because of being exercise intensity determinants; blood pressure and heart rate variabiles (left heart- peripheral dynamics) were assessed before and after exercise programme and programme were observed related to rejection / hemodynamic responses.
While functional capacity of the patient was incresed 600 %, the rating of perceived exertion was reduced 80 % according to preoperative period. These results obtained after heart transplantaion are the best objective feed-back reflecting the clinical physiology recovery of the patient and success of the multidisiplinary team. The initial blood pressure range with 80/60 mmHg – 120/73 mmHg was not considered as exercise contraindication whereas the recovery blood pressure range with 81/59 mmHg – 127/ 84 mmHg related to initial values indicated optimal exercise intensity. The change of min – max heart rate (zero: during breathing exercise – 20 pulse/min.) showing the relationship between central (heart volume) and periphery (exercised part of the body), reflected the normal physiological responses to defined new exercise loads in our case. The heart rate value of 88 – 120 pulse/min. of the discharge 6-min walking test is the consequence of starting the test with high values. The responces are clinically important as changing the main load of the programme. Meanwhile the responses to increasing loads were normal in our case. Parallel to heart transplantation surgery, the daily planning of in-patient cardiopulmonary physiotherapy programme by follow-up the rejection and pharmocology, hemodynamic monitorization and the goal of musculoskeletal / cardiovascular endurance are critical.That's why the cardiopulmonary physiotherapy programme should considered as a standart treatment in order to reduce retraining process and for the patient adaptation to postoperative transplant clinic.

OP-078 - SUCCESSFUL NEOANGIOGENESIS AND MYOCARDIAL REGENERATION WITH TRANSEPICARDIAL BONE MARROW STEM CELL IMPLANTATION

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OBJECTIVE: Efficiency of transepicardial bone marrow stem cell implantation in generating neoangiogenesis and myocardial regeneration is investigated in a patient with severe coronary artery disease inappropriate for either surgical or interventional revascularization.
METHOD: 65-year-old male patient with two vessels coronary artery disease was accepted as inappropriate for either surgical or interventional revascularization following a coronary angiography that revealed a total occlusion in left anterior descending (LAD) coronary artery with inadequate distal filling after branching to a thin diagonal artery and a 95 % stenosis in a rudimentary right coronary artery. Circumflex coronary artery was dominant and appeared to be normal. Echocardiography revealed a low ejection fraction as 34 % and akinesia or hipokinesia in regional wall motions concordant with ischemic areas. Similarly, 99mTc-MIBI myocardial perfusion scintigraphy revealed aperfusion or hipoperfusion in ischemic areas. Autologous bone marrow mononuclear stem cell suspension was obtained, purified and prepared with the proper technique for injection, one day before operation. At operation, following median sternotomy mononuclear stem cell suspension is injected to the preoperatively determined ischemic areas and around the distal LAD, transepicardially. Efficiency of the procedure, regarding the generation of neoangiogenesis and myocardial regeneration is evaluated with comparisons of the results of echocardiography (performed preoperatively and at 7th day, 3rd month, 12th month), 99mTc-MIBI myocardial perfusion scintigraphy (performed preoperatively and at 3rd and 12th month) and coronary angiography (performed preoperatively and at 12th month).
RESULTS: While postoperative echocardiography at the 7th postoperative day revealed no significant changes in terms of ejection fraction and regional wall motion, echocardiograhies performed at the 3rd and 12th month demonstrated a significant improvement in global ejection fraction (37 % at the 3rd and 40 % at the 12th month) and dramatic improvement in regional wall motion of the ischemic areas (several areas of akinesia returned to mild hipokinesia and several others with severe hipokinesia returned to normokinesia). Although, 99mTc-MIBI myocardial perfusion scintigraphy at the 3rd month revealed mild improvement in perfusion of the lateral segments, at 12th month a significant increase in perfusion of the anterior and lateral segments was observed. These regions were preoperatively determined ischemic areas and were considered as areas of aperfusion or hipoperfusion. Coronary angiography performed at postoperative 12th month demonstrated newly developed widespread collateral arteries in preoperatively ischemic areas that were the areas of bone marrow stem cell implantation.
CONCLUSION: This study demonstrates that implantation of bone marrow stem cells in ischemic areas of myocardium resulted in development of new collateral arteries, increase in myocardial perfusion and improvement in regional wall motion. We conclude that transepicardial implantation of bone marrow stem cells might be an alternative choice of treatment in patients with ischemic heart disease inappropriate for surgical or interventional revascularization.

OP-079 - IS CYTOIMMUNOLOGIC MONITORISATION A SAFE METHOD AFTER HEART TRANSPLANTATION?

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PURPOSE: The aim of this study to show whether the cytoimmunologic monitorisation is a safe method to follow up the heart transplanted patients.
MATERIAL-METHOD: Between 2002 and 2007, 7 patients had heart transplantation at Gulhane Military Medical Academy Hospital. 6 of the patients were male. Mean age was 40±12 (18-55). Donor hearts were implanted to all patients orthotopically. The first patient was followed up only with cytoimmunologic monitorization and only one endomyocardial biopsy was performed. The third patient was followed up with endomyocardial biopsy and cytoimmunologic monitorization. The other five patients were followed up only with cytoimmunologic monitarization without taking any endomyocardial biopsy.
RESULTS: The total and average follow up periods were 12.3 patient years, 22±11.2 months (2-39 months), respectively. The first patient had two times rejection episode in three months according to immunologic markers. Viral infection was diagnosed in the third patient who had painful muscle spasm in both lower extremities and values of CD4/CD8 were under 0.4. CD4/CD8 and Natural killer cell values were suddenly increased in the fourth patient and urinary infection was diagnosed. Seventh patient had once rejection episode and CD4/CD8 ratio increased above 3.8.
CONCLUSION: Cytoimmunolojic monitorisation is a simple and safe method. Rejection or infection may be predicted using this technique.

OP-080 - MICRONIZED FLAVONOID FRACTION IN IMPAIRED LEFT VENTRICULAR FUNCTION

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OBJECTIVE: The aim of the present study was to determine whether pretreatment with oral administration of purified micronized flavonoid fraction (Daflon) had beneficial effects in cardiac function and outcome after cardiac operations.
METHODS: 43 patients undergoing coronary artery bypass grafting with an impaired preoperative left ventricular ejection fraction (LVEF) less than 50% (mean 44,51±3,85) and with a mean NYHA class 2,30±0,74 scheduled for elective coronary bypass grafting agreed to participate in this prospective, randomized trial. Patients randomized to the Daflon group (n=21)received Daflon 500mg 4 days as 3x1000mg orally and maintaned 3 days 1x1000mg orally, a totaL of 7 days preoperatively. Outcome variables included perioperative hemodynamic data, inotropic requirements, morbidity and mortality as well as cardiac ischemia and outcome markers such as CK,CK-MB,Troponin I, Fibrinogen, D-Dimer, Myoglobulin, lactate,SGOT,SGPT and cRP. Hemodynamic and biochemistral data were collected before induction of anesthesia,before starting CPB peroperatively, immediately after CPB and the postoperative 24th hour.
RESULTS: There was only one death (Daflon group). Patients in the daflon group demonstrated statistically significant favoroble alterations in AST, ALT, WBC, CPK, CPK-MB, D-dimer, lactate, LDH, myoglobuline, troponine I and fibrinogen levels compared to the control group in different time points (p<0,05). ICU and hospital stay, inotropic reguirements and EF and NYHA status changes didn't reach to statistical significance between two groups.
CONCLUSIONS: Orally administered Daflon may be a promising drug for a better outcome for patients with impaired cardiac functions prior to cardiac operations due to previously known oxidative stress reducing effects.

VALVULAR HEART DISEASES: NEW DATA FROM PATHOPHYSIOLOGY TO THERAPY

OP-083 - AVR MORTALITY PREDICTION BY EUROSCORE

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OBJECTIVES: This study is done retrospectively on 147 patients who were operated between january 2003-january 2005 for MVR.All euroscores mortality scores were figure outed by pre operative datas of patients and compared post operative real mortality.
METHODS: All these 147 patients were divided to three groups;group1 euroscore between 0-2(low risk group),group2 euroscore between 3-5(mid risk group) and group3 euroscore between 6 or higher(high risk group).And then these expected mortality ratios were compared with postoperative real mortality.
RESULTS: At group1 there were 25 patients and zero(%0) exitus and group1 expected mortality euroscore was %1.50.At group2 there were 66 patients and 1(%1.52) exitus and group2 expected euroscore mortality was %2.85.At group3 there were 56 patients and 3(%5.3) exitus and expected euroscore mortality was %13.18
CONCLUSIONS: For All these three groups there is no significant differance between p valu of expected mortality and real mortality.That means for these three groups euroscore is a good predictor of mortality risk stratifications for AVR patients

OP-084 - AORTIC VALVE PRESERVATION SURGERY WITH ENCOURAGING RESULTS

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INTRODUCTION: Aortic regurgitation (AR) is characterized by malcoaptation of the aortic cusps. Aortic valve repair for aortic cusp prolapse effectively eliminates aortic insufficiency without causing aortic stenosis. Our experience with repair of insufficient tricuspid aortic valve is limited to 13 patients over the past decade.
METHODS: We experienced aortic valve reconstraction operation in 13 patient over the past decate. Mean age of our patients was 42 years. We performed cusp plication and pledgeted commissuroplasty. We used dilators for assessment of the annular diameter following commissural plication. The long free edge was shortened by anchoring the leaflet to the commissures in five patients. In one patient simple decalcification was done.
RESULTS: All patients survived the procedure and were alive free of symptoms during a mean followup of 6,5 years. The median postoperative followup period is 6 years in which only three patients developed postoperative first degree insufficiency. The survival at 5 years is 100% with freedom from symptoms and from aortic valve replacement.
DISCUSSION: Our experience with repair of insufficient tricuspid aortic valve confirmed to be of good results with low complication rate. The operation type must be decided within drawn lined and criteria for valve preservation operations. In our institution we drew criteria for valve preservation: age younger than 60 years, no or minimal calcification, no aortic root pathology, no history of endocarditis or trauma and no connective tissue disease.We drew this criteria in our institution.

cusp plication and pledgeted commissuroplasty - a

cusp plication and pledgeted commissuroplasty - b

cusp plication and pledgeted commissuroplasty - c

OP-085 - AORTIC VALVE REPLACEMENT IN OCTOGENARIANS: IMPACT OF LESS INVASIVITY ON POSTOPERATIVE OUTCOME

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OBJECTIVE: Due to increasing life expectancy in industrialized countries, the number of octogenarian patients undergoing an open heart procedure is increasing. In these patients with high comorbidity less invasive procedures could probably improve the postoperative outcome. The aim of this study was to determine the effects of minimal access aortic valve replacement (AVR) in octogenarians on postoperative morbidity and mortality.
METHODS: Partial upper sternotomy has become the standard approach to isolated aortic valve surgery in patients without any previous cardiac surgery at our institution. Allmost 20 % of the 353 patients who underwent AVR through a partial upper sternotomy between 1998 and 2006 were octogenarians. These 70 patients (16 male, 54 female) had a mean age of 81,8 years (80-95 years). We reviewed retrospectively data on these patients.
RESULTS: The patients had a mean logistic Euroscore of 9,1 (0,9-29,2) and a mean left ventricular ejection fraction of 54,7 % (20-70 %). Mean cross clamp time and mean bypass time were 63,3 min (33-149 min) and 108,5 min (52-290 min), respectively. In 3 patients (4,3 %) a conversion into full median sternotomy was necessary due to bleeding (n=2) and low cardiac output (n=1). Mean ICU and total hospital stay were 2,8 and 11,7 days, respectively. Postoperative bleeding complications were not observed. Deep sternum infection occured in 2 patients (2,8 %). None of the patients had to be reoperated for prosthetic valve dysfunction or endocarditis. The hospital mortality rate was 5,7 %.
CONCLUSIONS: AVR through a partial upper sternotomy in octagenarians is a safe and effective technique with less invasivity resulting in satisfying postoperative morbidity and mortality.

OP-086 - REOPERATION FOR MECHANICAL PROSTHETIC HEART VALVE DYSFUNCTION

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PURPOSE: New generation bileaflet mechanical heart valves rarely require reoperation if the patients are adequetely anticoagulated. We have reviewed patients who required a replacement of a mechanical prosthetic heart valve for dysfunction.
MATERIAL-METHODS: Between January 1996-January 2007, 24 patients (14 Male, 10 Female) who underwent a replacement of a mechanical prosthesis were retrospectively analyzed. The mean age was 49(range 16-74). Mean time period between primary operation and reoperation was 7±5 years (1-22years). A mitral prosthesis was replaced in 14 patients, aortic prosthesis in 10 patients. A significantly higher number of patients undergoing valve replacement were in NYHA Class III-IV, among them 8 patients were in emergency status and 4 patients in emergency status died postoperatively with 50% (4/8) mortality. The reasons of reoperation included 9 patients suffered from pannus formation on prosthetic valve, 6 patients suffered from perivalvular leakage, 4 patients with prosthetic valve endocarditis, 2 patients with thrombosis of mechanical valve, 2 patients suffered from broken valve leaflet. Early-stage potoperative mortality was 16%(4/24). The reasons were low cardiac output syndrome, muliple organ dysfunction and renal failure. The incidence of death in mitral, aortic and double valve groups was respectively 28% (4/14), 0% (0/6) and 0% (0/4).
CONCLUSION: Reoperative prosthetic valve replacement can be performed with acceptable mortality without risk factors of including emergency status, preoperative low cardiac function and multiple organ failure.

OP-087 - QUANTITATIVE DEMONSTRATION OF MYOCARDIAL LEUCOCYTE ACCUMULATION AFTER USE OF DIFFERENT CARDIOPLEGIC SOLUTIONS BY A RADIONUCLIDE METHOD IN HEART VALVE OPERATIONS

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OBJECTIVES: There is no report for a quantitative method which measures count of leucocytes directly which accumulate in the myocardium after the administration of cristalloid or blood cardioplegia.
MATERIALS-METHODS: In this study, randomly selected 21 patients divided into two groups, which were prepared for an elective heart valve surgery. Cristalloid cardioplegia, including potassium and sodium bicarbonate, was used in 11 patients (CC Group) and cold blood cardioplegia in 10 patients (BC Group). For detecting myocardial leucocyte levels, a radionuclide method was used. Leucocytes of each patient were labeled by Tecnesium-99m exametazime (HMPAO) and injected back to the patient before the operation. For comparison of the effects of two cardioplegic solutions on myocardial leucocyte accumulation, myocardial biopsies from the right ventricle were taken peroperatively before the initiation of extracorporeal circulation and following cardiopulmonary bypass. All of the biopsy materials were detected by a gamma counter at the nuclear medicine laboratory for assessing their radioactivity levels.
RESULTS: When myocardial leucocyte counts were compared, in BC group, the accumulation rate was statistically significant (P<0,05), whereas any significant leucocyte accumulation was not observed in the CC group. At the second hour after the operation, left ventricular stroke work index (LVSWI) was lower in BC group (P<0,001). At the second hour following the operation the heart rate was also higher in BC group (P=0.001).
CONCLUSION: Our study findings show that blood cardioplegia administration causes myocardial leucocyte accumulation which may have some clinical effects at the early post operative period of heart valve surgery patients.

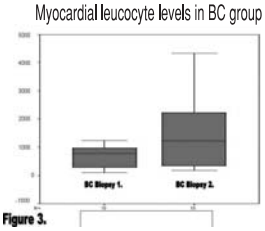

Figure 3.

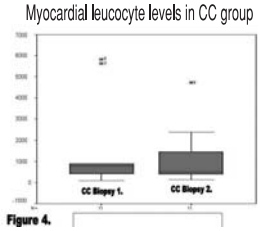

Figure 4.

OP-088 - RETROSPECTIVE ANALYSIS OF ABSENT PULMONARY VALVE SYNDROME

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Absent pulmonary valve syndrome (APVS) is a rare congenital anomaly characterized by itself with ventricular septal defect (VSD), right ventricular outflow tract obstruction (RVOTO), pulmonary valve insufficiency and aneurismal large pulmonary arteries. In this anomaly mortality and morbidity mainly related to airway obstructions due to aneurismal pulmonary arteries. (Fig.1)
We retrospectively analysed 11 cases with absent pulmonary valve syndrome. Two of the cases were in adult age group, who had undergone only VSD closure during childhood period. The median age was 6 months old, starting from 21 days to 20 years. Two patients had severe respiratory problems before the operation, one of them had complete obstruction of the left main bronchus. Two patients had non-confluent pulmonary arteries, in both patients left pulmonary arteries were originated from ductus arteriosus.
In all patients during corrective surgery xenograft valved conduits were used for RVOTR. In 5 patients both pulmonary arteries were plicated, in 2 patients only right pulmonary arteries were plicated.. One patient needed stent implantation for his left main bronchus. The mortality was seen only in one patient (9 %).
In our series preoperative respiratory complications were not as high as like in some other series, although we plicated the pulmonary arteries in 7 (63 %) patients only 2 patients had preoperative respiratory problems. and from the experience of the 2 adult patients who had only symptoms of right ventricular failure before the second operation, it is seen that plication of the pulmonary arteries in asymptomatic patients are still controversial.

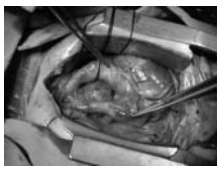
figure 1.
Dilated right pulmonary artery

OP-089 - CITRIC ACID AS A DECALCIFYING AGENT ON THE EXCISED CALCIFIED HUMAN HEART VALVES

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OBJECTIVE: We investigated the effect of citric acid on the calcified human heart valves, in vitro.
MATERIALS-METHODS: Pieces of mitral and/or aortic valves excised from the patients undergoing valve replacement were placed in a freshly prepared phosphate buffered saline solution containing 0.625% glutaraldehyde at +4 0C for 48 h. They were rinsed with 0.9% NaCl and divided into two groups; Study and Control. Control tissues were further treated in a freshly prepared solution with identical properties for another 5 days. Study tissues were placed into a solution containing 3.8% citric acid (pH 7.4) and kept for 48 h at +37 0C, then rinsed with 0.9% NaCl and transferred into a fresh solution containing 0.625% glutaraldehyde with phosphate buffer at 37 0C for 3 more days. Specimens were biochemically and histopathologically evaluated.
RESULTE: Calcium and phosphate levels in the Study group were lower than the Control group (P=0.007 and P=0.042 respectively). Malondialdehyde and protein level values were unchanged. Histopathologic evaluation showed that collagen and elastin fibers were similar in both groups. In the study group, irregular and fusiform calcific formations around the collagen fibers were significantly decreased.
CONCLUSIONS: Decalcifying human heart valves in in vitro conditions with citric acid without an adverse change to the morphology of the valvular tissue specimens is meaningful. We believe that forwarding and looking for the answer to the question "whether systemic application of citric acid could lead to the decalcification and/or reduction of calcification in the native human heart valves" would be expressive.

MITRAL VALVE SURGERY: RISK ASSESSMENT, RESULTS

OP-090 - PREDICTIVE RISK ANALYSIS AFTER VALVULAR REOPERATIONS

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BACKGROUND: Re-operative valvular surgery is common nowadays. Increased mortality and morbidity are generally associated. Re-operations in cardiac surgery are technically more difficult because of adhesions and a more advanced cardiac status of the patient. To determine the incidence and risk factors of mortality and morbidity in valvular reoperations.
METHODS: A series of 61 redo procedures performed on a total of 57 patients in the period between 2002 and 2007 at our institution was retrospectively analyzed. Univariate and multivariable analyses were performed. 648 underwent primary valve operations. The reasons for reoperations were reconstructive surgery in first operation (10 patients, 16.3%), prosthetic valve endocarditis (17 patients, 27.8%), periprosthetic leakage (4 patients, 6.5%), new valve degenerations (7 patients, 11.4%), bioprosthetic dysfunction (10 patients, 16.3%), acute thrombotic stuck valve (4 patients, 6.5%), and pannus formation (9 patients, 14.7%)
RESULTS: Hospital mortality was 6 patients 9.8%. Multivariate analysis demonstrated that age > 60, emergency surgery, impairement of renal function, hemodynamic instability, preoperative cerebrovascular accident, aspergilloma, repeat infective endocarditis were independent risk factors.
CONCLUSION: Valvular reoperations can be carried out with acceptable morbidity and mortality in elective operations but mortality rates are still very high in age > 60, emergency surgery, impairement of renal function, hemodynamic instability, preoperative cerebrovascular accident, aspergilloma, repeat infective endocarditis.

OP-091 - EFFECTS OF HEMOFILTRATION DURING CARDIOPULMONARY BYPASS ON PULMONARY FUNCTION, HEMODYNAMICS, MORBIDITY AND MORTALITY IN ADULT PATIENTS WITH MITRAL VALVE DISEASE

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BACKGROUND: Valvular heart diseases cause reversible and irreversible changes on lung tissue. These changes depend on the degree of valvular pathology and time. Passive pulmonary congestion is an important factor that effects the morbidity and mortality.
OBJECTIVE: This prospective randomized study was performed to evaluate the effects of hemofiltration on pulmonary function, hemodynamics, morbidity and mortality after cardiopulmonary bypass in adult mitral valve patients.
METHODS: Forty patients with mitral valve pathology who had pulmonary hypertension (systolic pulmonary artery pressure > 50 mmHg) undergoing cardiopulmonary bypass were divided into two groups. In the control group conventional cardiopulmonary bypass was used without hemofiltration (Group I). In the study group, in addition to the same procedure, hemofiltration was used during the rewarming phase (Group II). Hematocrit, hemoglobin, platelet, white blood cell, serum albumin, cardiac index, pulmonary function (Pulmonary arterial pressure, pulmonary capillary wedge pressure, central venous pressure, mean airway pressure), alveolo-arterial oxygen pressure difference, extubation time, positive inotropic requirements, hospitalization time, major complications were recorded.
RESULTS: In group I,10 male and 10 female patients were included in the study with a mean age of 49,2 and functional capacity of classII (n=4) class III (n=12) and class IV(n=4). In group II, 8 male and 12 female patients with a mean age of 45,5 and functional capacities of classIII (n=13) and class IV (n=7) were included.In group II the patients stay in intensive care unit, extubation times,inotropic requirements, morbidities,mortalities were found statistically lower than group I, and improvement of the cardiac index were statistically higher.
Conclusions: Finally we believe that, in the surgical treatment of mitral patologies with high pulmonary artery pressures,hemofiltration performed during cardiopulmonary bypass has positive effects on extubation time,stay in intensive care unit and hospital,inotropic requirements, cardiac performance, mortality and morbidity.

OP-092 - EUROSCORE EFFICIENCY FOR MVR PATIENTS

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OBJECTIVES: This study is done retrospectively on 425 patients who were operated between january 2003-january 2005 for MVR.All euroscores mortality scores were figure outed by pre operative datas of patients and compared post operative real mortality.
METHODS: All these 425 patients were divided to three groups;group1 euroscore between 0-2(low risk group),group2 euroscore between 3-5(mid risk group) and group3 euroscore between 6 or higher(high risk group).And then these expected mortality ratios were compared with postoperative real mortality.
RESULTS: At group1 there were 54 patients and zero(%0) exitus and group1 expected mortality euroscore was %1.50.At group2 there were 243 patients and 3(%1.23) exitus and group2 expected euroscore mortality was %2.93.At group3 there were 128 patients and 14(%10.96) exitus and expected euroscore mortality was %13.53
CONCLUSIONS: For All these three groups there is no significant differance between p valu of expected mortality and real mortality.That means for these three groups euroscore is a good predictor of mortality risk stratifications for MVR patients

OP-093 - THE RISK FACTORS PREDICTING POSTERIOR VENTRICULAR RUPTURE AFTER MITRAL VALVE REPLACEMENT

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PURPOSE: Rupture of posterior ventricle is a rare but fatal complication after mitral valve replacement. In this study, we aimed to determine the risc factors for ventricular rupture after valve replacement.
METHOD: 2560 mitral valve replacements that were performed between January 1996 and March 2007 were included in this study. The risk factors predicting ventricular rupture were analyzed using xi-square and logistic regretion methods.
RESULTS: Posterior ventricular rupture was detected in 23 of 2560 (0.8 %). 19 of the rupture cases were women (82.6 %) and 4 were men (17.4 %). The mortality of the rupture cases was 86 % (n=20). 12 of the 23 posterior ventricular rupture cases were 60 years of age or over. 60 years or more lifetime was found as a highly significant risc factor for posterior ventricular rupture (p>0.001). There were no rupture among 513 cases (20 %) in which the posterior leaflet was preserved. Resection of the posterior leaflet was also found as a highly significant risc factor (p=0.008).
CONCLUSION: Posterior ventricular rupture is quite fatal complication. The posterior leaflet should be preservated to prevent posterior ventricular rupture especially in the old aged patients.

OP-094 - THE INFERIOR TRANSSEPTAL APPROACH FOR MITRAL VALVE REPLACEMENT AND CONDUCTION DISTURBANCES

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[1]Umut Heart Center, Cardiovascular Surgery Department, Ankara, Turkey, [2]Ankara University, Medical School, Cardiovascular Surgery Department, Ankara, Turkey

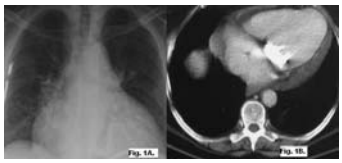
OBJECTIVE: Several access ways to the mitral valve have been introduced, and the choice should be made according to the individual case. The most frequently applied access route is to open the left atrium along the interatrial groove(posterior approach). This study was designed to evaluate the safety and effectiveness of the inferior septal approach for routine valve replacement.
METHODS: 164 consecutive patients undergoing mitral valve replacement were reviewed retrospectively between january 2005-june 2007. Two groups were created based on their surgical approach: interatrial groove(n=90)(group I) and inferior transseptal group(n=74)(group II). Postoperatively and during the follow-up, 12-lead electrocardiography, and transthoracic echocardiography were performed in all patients.
RESULTS: The two groups were similar in terms of pre-oparative variables. The etiology of mitral valve disease was % 73 rheumatic and 34 % of patients had a concomitant procedure(mitral and aortic valve replacement, with or without tricuspid valve intervention). There were not differences in the cardiopulmonary bypass and cross-clamp times. No significant differences in blood loss was found between the two groups. The maintainance of sinus rhythm at late follow-up and newly developed conduction disturbances were not significantly different between the two groups(p=ns). None of the patients needed pacemaker implatation. There were no operative deaths.
CONCLUSION: We report a simple, alternative approach for mitral valve replacement via the inferior transseptal approach that provide similar outcome to the commonly used approach(posterior approach).

OP-095 - MITRAL VALVE REPLACEMENT WITH BILEAFLET PRESERVATION FOR COMPLEX ANNULAR CALCIFICATION

Inan Kaan, Goksel Onur Selcuk, Tatar Tolga, Temizkan Veysel, Karaca Kerem, Arslan Gokhan, Alp Ibrahim, Ugur Murat, Guler Adem, Ucak Alper, Us Melih, Yilmaz Ahmet Turan
Department of Cardiovascular Surgery, Gata Haydarpasa Training Hospital, Istanbul,Turkey

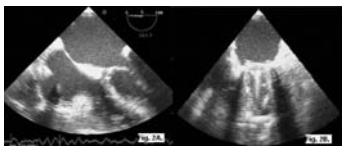
BACKGROUND: Extensive complex calcification of mitral apparatus may preclude optimal valve repair and replacement may be necessary. Extensive debridement of the annulus with leaflet resection may lead to serious complications as atrioventricular separation, coronary artery disruption or cardiac rupture in contrary to protective effects of leaflet preservation on left ventricular function.
CASE: In order to avoid such complications, we performed a mitral valve replacement in a 55-year-old lady for severe mitral insufficiency and extensive annular and subannular calcification by using a modified bileaflet preservation technique. Posterior transposition of the anterior leaflet and its use as a buttress over posterior annular and subannular left ventricular wall allowed extra-support for the debrided and weakened tissues in addition to covering the decalcified areas leading to a protection from debris embolism.
RESULT: Her postoperative course was uneventful and she was discharged on day 7.
CONCLUSION: This technique is safe and reproducible in particularly elderly patients with complex calcification requiring extensive debridement such as in our case. It may have the potential for better preservation of ventricular function and avoidance from mechanical left ventricular wall disruption.

Figure 1



Plain chest radiogram demonstrating ring-like calcification of the mitral annulus (A). Annular calcification extending to subvalvular chordae visible on transverse sections of computed tomography (B).

Figure 2



Preoperative transoesaphageal echocardiography demonstrating severe calcification of the mitral annulus, interatrial septum and the lateral atrial wall (A). Perioperative echocardiography demonstrating normal prosthetic function after valve implantation (B).

Figure 3

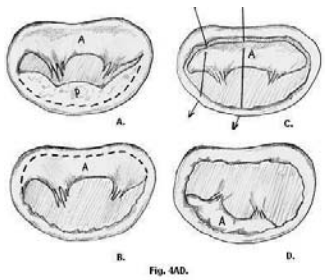


Illustration depicting the posterior transposition of the anterior leaflet and the subannular buttress with Teflon (A-D).

Figure 4

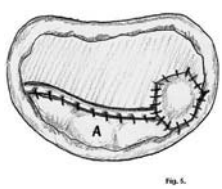


Illustration of posterior transposition of the anterior leaflet and buttressing of the leaflet to posterior left ventricular wall with a teflon felt. Note the pericardial support at posteromedial border of the ventricular wall and the annulus over the heavily debrided area.

OP-096 - NEOCHORDAE REPLACEMENT IN MITRAL VALVE INSUFFICIENCY

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[1]Department of Cardiovascular Surgery, Siyami Ersek Thoracic and Cardiovascular Surgery Center, Istanbul, Turkey
[2]Department of Anesthesiology, Siyami Ersek Thoracic and Cardiovascular Surgery Center, Istanbul, Turkey

INTRODUCTION: Mitral valve anterior mitral leaflet insufficiency due to degenerative disease states, including ruptured or elongated chordae are often regarded difficult to repair. Recently chordal replacement has been an option. However whether the repair of anterior mitral leaflet using chordal-replacement techniques is as safe as the standard repair of the posterior mitral valve is still conceived skeptical.
METHOD: Between 2002 and 2007, 16 patients underwent mitral valve repair with polytetrafluoroethylene sutures for mitral regurgitation in our institution. These patients received an average of 2.1 PTFE sutures for repair; in 7 patients concomitant intervention was applied. Dilatation of the posterior mitral ring was corrected by ring or pledgited suture annuloplasty. The mean age of patients was 43 ± 18 years and 11 were male gender. All patients were in NYHA class III or IV preoperatively. Postoperatively, patients were followed by serial transthoracic echocardiography.
RESULTS: Four patients required inotropic support during early postoperative period. Intensive care unite and hospital stay of patients were 12 ± 0,6 and 6.6 ± 3.2 days respectively. Mean follow up of patients was 18,7 months with no mortality. Two patients underwent reoperation for recurrent mitral regurgitation. All patients are in NYHA class I or II postoperatively.
Extensive anterior chordal pathology can be corrected by neochordae replacement. Mid term follow up of patients reveal that stable repair can be achieved in more than %85 of patients. However long-term observations are necessary to confirm the durability of the technique.

OP-097 - COMPARISON OF EARLY CLINICAL EXPERIENCES WITH BIODEGRADABLE TRICUSPID RING AND DE-VEGA TRICUSPID ANNULOPLASTY: A SIX-MONTH FOLLOW-UP

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BACKGROUND: Various annuloplasty techniques are used in patients with tricuspid regurgitation. In this article we compared the tricuspid annuloplasty results of a new device, biodegradable tricuspid annuloplasty ring with the De-Vega tricuspid annuloplasty.
METHODS: Of 64 patients with functional tricuspid regurgitation, 32 patients underwent implantation of the biodegradable ring into the tricuspid annulus (Group 1) and 32 patients underwent De-Vega tricuspid annuloplasty (Group 2) with concurrent mitral valve replacement and/or other concomitant cardiac procedures. All patients were evaluated by transthoracic echocardiography (TTE) to evaluate the tricuspid valve function, mean pulmonary artery pressure (MPAP), and right ventricle function preoperatively, postoperative 1 week, 3 and 6 months. Parameters collected from patients were compared in two groups.
RESULTS: TTE controls showed that tricuspid insufficiency, MPAP, and NHYA score decreased in both two groups. However, in Group 1 tricuspid valve dysfunction was less (11 [34.4%], and 4 [12.5%] patients, respectively) and right ventricular functions were more preserved especially at 3rd and 6th month TTE consequences.
CONCLUSION: The concept of annulus remodeling using the biodegradable ring which preserves native tricuspid annulus and right ventricular functions than the De-Vega tricuspid annuloplasty, opens new perspectives for tricuspid valve repair procedures, and therefore undoubtedly contributes to the evolving annuloplasty technology

OP-207 - EXTENDED CHORDAL TRANSFER TECHNIQUE IN MITRAL VALVE REPAIR: EARLY RESULTS AT PSCC

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OBJECTIVE: Is to evaluate the early results of extended chordal transfer technique used for Mitral valve repair

PATIENTS & METHODS: Between September 05 till August 07, 26 patients were operated upon for Mitral valve repair using the extended chordal transfer technique at Prince Sultan Cardiac Center, Riyadh Saudi Arabia.
TECHNIQUE: This technique is introduced by our team to repair a wide area of prolapse of the Anterior Mitral Leaflet "AML" with almost a normal posterior leaflet. It entitles limited quadrangular resection from PML which is split posteriorly and spread over and attached to the prolapsed part of AML. Using this technique, the 2ndry chordae are transferred into 1ry and the supported area of AML is doubled by this technique.
RESULTS: The age of the patients Ranged from 24 to70 years (Mean 40.8), 76.9% were Females, 80.7% of patients had Rheumatic Etiology, degenerative disease (15.4%), and Bacterial endocarditis (3.8%). Assoc TV repair (34.6%), Tricuspid valve replacement (3.8%), Aortic and Mitral valve repairs (3.8%), associated Microwave AF ablation (66.5%) The mean Cross Clamp Time was (64.6 minutes), Mean Bypass time was (76.5 minutes), and mean ablation time (27.6 minutes). The mean hospital stay (6.5 days), and mean ventilation time (8.4 Hours).The Operative Mortality was (0%), 1 year mortality (0%). There were no postoperative morbidities. Restoring Sinus Rhythm immediately after surgery was successful in 85% of patients who had ablation. 3 patients (11.5%) had trace MR immediately after surgery, and 2 patients (8%) had mild MR. 4 patients (15.4%) showed mild MR at 1 year follow up, Re-operation rate was 0 % at one year.
CONCLUSION: Extended chordal transfer technique is an effective simple and reproducible technique to repair the extensive prolapse of AML. Mid and long term follow up is needed.

HEMATOLOGIC ISSUES IN CARDIAC SURGERY

OP-098 - THE EFFECT OF ERYTHROPOIETIN ON AORTIC ISCHEMIA-REPERFUSION-INDUCED RENAL INJURY IN RATS

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PURPOSE: The purpose of the present study is to examine the effect of erythropoietin on aortic ischemia-reperfusion (IR) induced renal injury.
METHODS: Twenty-four Wistar-Albino rats were randomized into three groups (eight per group). Control group underwent laparotomy and dissection of the infrarenal abdominal aorta (IAA) without occlusion. Aortic IR group underwent clamping of the IAA for 30 min followed by 60 min of reperfusion. Aortic IR + erythropoietin group underwent same aortic IR periods and was pretreated with 1000 U/kg subcutaneous erythropoietin. In rat kidney specimens, tissue levels of malondialdehyde (MDA), superoxide dismutase, catalase and glutathione peroxidase were measured, and histological examination was done.
RESULTS: Aortic IR significantly increased MDA and superoxide dismutase levels ($p < 0.05$ vs control), and also increased catalase level ($p > 0.05$ vs control). Erythropoietin significantly decreased MDA, superoxide dismutase and catalase levels ($p < 0.05$ vs aortic IR). Histopatological examination showed that focal necrosis in glomerulus, dilatation of Bowman's capsule, degeneration of tubular epithelium, necrosis in tubular epithelium, tubular dilatation, interstitial inflammatory infiltration and congestion of blood vessels in the aortic IR group were significantly higher than the control group ($p < 0.05$). Focal necrosis in glomerulus, dilatation of Bowman's capsule, degeneration of tubular epithelium, necrosis in tubular epithelium, interstitial inflammatory infiltration and congestion of blood vessels in the aortic IR + erythropoietin group were significantly lower than in the aortic IR group ($p < 0.05$).
CONCLUSION: The results indicate that erythropoietin attenuates the aortic IR-induced renal injury in rats.

OP-099 - THE ROLE OF INHERITED TROMBOPHILIC FACTORS IN DEEP VENOUS THROMBOSIS

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BACKGROUND: In this study we investigated inherited risk factors, which might cause venous thromboembolism in our outpatient population.
METHODS: Between 2004-2006, ninety patients who were admitted to our clinic with deep venous thrombosis were evaluated for genetic predisposition to thrombosis by DNA analysis with Factor V Leiden Mutation, Prothrombin 20210 mutation, Methylene tetrahyrofolat reductase (MTHFR) 677 polymorphism and by biochemical parameters with protein C, protein S, Antithrombin III activities and homocystein levels. 37 of the patiens were male and 53 were female.
RESULTS: In 4 patients Factor V Leiden was homozygote mutant, in 32 patients it was heterozygote. Prothrombin G20210A mutation was found in 9 patients. MTHFR polymorphism was diagnosed in 27 patients as heterozygote and in 8 patients homozygote mutant. Protein C activity was very lower level in 7 patients, low level in 11 patients and normal in 52 patients. Protein S activity was very lower level in 12 patients, low level in 9 patients and normal in 48 patients. AT III level was low in 1 patient, high in 2 parients and normal in 62 patients. Homocystein levels were normal in 61patients and were high in 7 patients.
CONCLUSION: Genetic predisposition of the patients should be considered in treatment and follow up the DVT patients espectially if there is no certain cause of this pathology.

OP-100 - THE EFFECT OF PLATELET-RICH PLASMA ON STERNOTOMY CLOSURE

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In nearly all cardiac operations, the heart is exposed after the median sternotomy.After the operation the sternum is closed by the steel wires or the Polidioxanon (PDS) suture material. By the destabilization of the sternum incision, infections can ensue, conversely, the infection can make the sternum incision unstable. By both reasons mediastinitis can ocur which has high morbidity and mortality rates. In our study, we evaluate the benefits of "Platelet-rich plasma" that has many growth factors and can be applied in gel form and assess its benefits in the regeneration of the sternotomy incision.
30 patients with sternotomy incisions included in this study. They are divided into 2 groups; in the first group (study group), Platelet-rich plasma has been applied to sternotomy incision in the closing process while in the second group (control group) nothing has applied. In both groups, sternum densities in the incision line has been measured preoperatively and postoperatively in 2. and 6. weeks.
In the control group, postoperative 2nd week incision line densities of manibrium($p=0.002$) and corpus($p<0.001$) sterni was calculated significantly higher than the preoperative values. In postoperative 6th week, the densities found decreased but no statistical difference was found with the 2nd week densities. In the study group, the densities was found statistically higher than the preoperative values ($p=0.019$). But unlike the control group, in the study group, higher densities were found in the 6th postoperative week than the 2nd postoperative week. These values were found statisticaly very significant ($p <0.0001$).

OP-101 - BOVINE MESENTERIC VENOUS CONDUIT AS A SHUNT CONDUIT INFANTS WITH THROMBOPHILIC FACTORS

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BACKGROUND: Syntethic graft material is being used as a systemic to pulmonary artery shunt conduits.We present the use of bovine mesenteric venous graft (BMVG) material in modified Blalock-Taussig (m-BT) shunt procedure.
MATERIAL-METHODS: The BMVG was used in our 13 patients who had different thrombophilic factor positivity.Three cases were neonate with tetralogy of Fallot and pulmonary atresia and the remaining cases were small infants. The left or right m-BT shunt was performed under cardiopulmonary bypass using a 4mm BMVG in three of them and shunt procedure was performed through left thoracotomy in the remaining cases. Anticoagulant and/or antiplatelets regimen was not administered postoperatively in all cases.
RESULTS: Acute graft occlusion was seen in 3 cases.There was no any complication due to graft material such as hematoma, seroma, bleeding from needle hole, early graft thrombosis or surgery itself in the remaning 10 patients.All patients were discharged home within a good clinical condition.Regular physical examination and echocardiographic control revealed that functioning m-BT shunt one month, three months and six months after the operations.
CONCLUSION: Some complications due to the syntethic graft materials such as hematoma and seroma have been reported in the literature. Antiplatelet and/or anticoagulant agents have inevitable in many of cases tend to hypercoagulability after operation.But, there is limited number of reports have been found about the use of biologic vascular prosthesis in congenital heart disease.Our prospective study findings shows that the BMVG may be use without the administration of antiaggregant and/or anticoagulant regimens after the m-BT shunt operation concomitent with thrombophilic factors.

OP-103 - INCIDENCE OF REACTIVE THROMBOCYTOSIS AFTER CABG OPERATIONS

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AIM: Platelet disturbance following cardiopulmonary bypass can result in an increase in platelet number (a rebound phenomenon called reactive thrombocytosis) and causes a potential risk of thromboembolic complications. The aim of the study was to determine the incidence of reactive thrombocytosis and the risk factors related to it.
MATERIAL-METHOD: The 1350 consecutive patients who underwent CABG during 2006 were included in the study. The demographic, per and postoperative data and one month follow up results of the patients we recorded. Platelet levels were recorded preoperatively, during the cardiopulmonary bypass period, postoperative 1st, 3rd, 5th, 7th, 14th and 30th days.
RESULTS: In 229 (17%) of the patients, reactive thrombocytosis (Plt >400x10^3/mm^3 was found during the postoperative second week. In 9 % of the patients the Platelet count was over 700x10^3/mm^3. The comparative analysis of the patients with reactive thrombocytosis and patients with normal platelet levels showed that mean platelet volume was significantly lower in patients with reactive thrombocytosis. Similarly, pre and postoperative statin use was significantly lower in patients with reactive thrombocytosis.
CONCLUSION: Reactive thrombocytosis is not a rare finding during postoperative period after CABG operations. Mean platelet volume, if lower than normal, may predict reactive thrombocytosis. Statin use may also prevent increase in thrombocyte levels. Follow up of thrombocyte levels can be important in preventing early graft occlusion.

OP-104 - THE EFFECT OF DIFFERENT PRIMING SOLUTIONS ON THE ERYTHROCYTE DEFORMABILITY AND AGGREGATION AMONG CASES UNDERGOING ELECTIVE CORONARY ARTERY BYPASS SURGERY

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The cardiopulmonary bypass (CPB) procedure employed to replace the function of native heart and lung during cardiac surgery is known to influence the normal homeostatic circumstances of blood, including both the blood elements and plasma proteins. These changes in blood are largely due to the adverse effects of the heart-lung machine involving the non-physiological contact of blood with the artificial surfaces, the mechanical shear stress on blood cells, the non-pulsatile perfusion flow and concomitant procedure of hemodilution. Admired by this knowledge, we aimed to investigate the effects of different extracorporeal priming solutions (Ringer, HES 6% 130/0,4) on the aggregation and deformability of erythrocytes among selected cases undergoing elective coronary artery bypass surgery. For this reason, blood samples were taken at four different time intervals: before CPB, in 5th minute after CPB was initiated, in 15th minute after CPB ended and 24 hours after the onset of CPB. Erythrocyte deformability measurements were carried out by an ektacytometer (LORCA [Laser-assisted Optical Rotational Cell Analyzer], RR Mechatronics, Hoorn, The Netherlands) at different shear stress levels via laser diffraction analysis. Elongation index (EI) values were measured at nine different shear stress levels between 0,30-30 Pa. Erythrocyte aggregation measurements were also carried out by LORCA instrument and saved as syllectogram. Aggregation index (AI) was calculated by an existing software. There weren't any significant differences between two different priming solutions regarding the elongation indices at different shear rates and aggregation indices.

OP-105 - PROPHYLACTIC TRANEXAMIC ACID REDUCES POSTOPERATIVE BLEEDING AND NEED FOR TRANSFUSION AFTER CORONARY BYPASS SURGERY IN PATIENTS ON CLOPIDOGREL

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BACKGROUND: This study evaluates the effects of prophylactic tranexamic acid use on postoperative bleeding and transfusion requirements after CABG.
MATERIALS-METHODS: Data were prospectively collected in 3489 patients who underwent isolated CABG with cardiopulmonary bypass during the period 1999 to 2007. Outcome parameters were evaluated in patients with or without use of tranexamic acid in relation with clopidogrel.
RESULTS: A total of 131(3.7%) patients were on clopidogrel and 237(6.7%) patients received tranexamic acid treatment. Tranexamic acid was used in 20(0.6%) patients on clopidogrel and 217(6.2%) patients without clopidogrel. Multivariate regression analysis revealed use of clopidogrel (OR:2.4; 95%CI:1.4-3.9), redo operation (OR:2.3; 95%CI:1.1-4.7), age>65 (OR:1.7; 95%CI:1.3-2.2), peripheral vascular disease (OR:1.7; 95%CI:1.0-2.7) and number of distal grafts>4 (OR:1.6; 95%CI:1.1-2.3) to be independent risk factors for bleeding of more than 1000 ml postoperatively. The usage of prophylactic tranexamic acid (OR:0.3; 95%CI:0.1-0.5) and male gender (OR:0.3; 95%CI:0.2-0.4) are found to be protective factors for bleeding. The usage of tranexamic acid and female gender is found to be protective factors for bleeding. In the patients with clopidogrel; the postoperative chest tube drainage and transfusion rates were decreased with tranexamic acid treatment when compared to not using this therapy [505±439ml vs. 738±399ml ($p<0.05$) and 1.6±2.9units vs. 3.0±12.3units ($p<0.05$) respectively]. They were 616±336ml vs. 372±232ml ($p<0.05$) and 0.6±1.4units vs. 1.9±2.1units ($p<0.05$) respectively in the patients without clopidogrel.
CONCLUSION: Prophylactic use of tranexamic reduces bleeding and the need for transfusion even in the patients on clopidogrel. Routine usage may be beneficial in patients with high risk of bleeding.

OP-106 - A NEW OBLIGATION IN ROUTINE BIOCHEMICAL EXAMINATION BEFORE CORANARY ARTERY BYPASS SURGERY: HGA1C

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OBJECTIVE: Diabetes is a well-recognized independent risk factor for mortality due to coranary artery disease.When diabetic patients need cardiac surgery, either coronary artery by pass (CABG) or valve operations (VO), the presence of diabetes represents an additional risk factor for these major surgical procedures.
There is increasing evidence that agressive glycemic control for patients admitted to the hospital improves clinical outcomes, especially for patients with cardiovascular disease. In this prospective study,we investigated HgA1C values in patients who were hospitalized for coronary artery by pass graftting and were not diagnosed as diabetes mellitus before. HbA1c is a test that measures the amount of glycosylated hemoglobin in blood.The test gives a good estimate of how well diabetes is being managed over time. This test measures blood sugar control over an extended period in preople with diabetes. In general,the higher your HbA1c value the higher is the risk.
PATIENTS: 104 consequtive patients who had following characteristics were included in the study: who had coronary artery disease and were not diagnosed and/as managed as diahes mellitus before hospitalization. 62 of them were male and 42 of them were female. Mean age of the patients were 58,4 ± 11,7. After 12-14 hours fasting blood glucose and Hg A1C values were examined. Fasting blood glucose value of >115 mg/dl and HgA1C of > 5 % was accepted as pathological.
RESULTS: Fasting blood glucose and HgA1C value of 72 cases were in pathological ranges in 104 patients who were not diagnosed and treated as diabetes mellitus before. Those 72 patients were accepted and managed as to be diabeteic patients.
CONCLUSION: Undiagnosed diabetes and impaired fasting glucose are impostant and unrecognized issues within this hospital population. It is recommended tahat healthcare practitioners assume that cardiac patients have an increased likelihood of imparired fasting glucose and hyperglycemia. Advanced practice can improve patient survival by ordering glucose testing and glycemic management as a routine practice for all cardiac surgery patients, regardless of diabetes diagnosis.

AORTIC DISSECTION: AN OLD PROBLEM REVISITED

OP-107 - ANY RELATION BETWEEN THE AORTIC DISSECTION AND THE SEASONS?

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INTRODUCTION: The relation between cardiovascular diseases and the seasons is well-known; however, there exist only a few articles on the seasonal aspects of the acute aortic dissections. In our study we aimed to analyze if seasonal relation was a risk factor for acute aortic dissection.
METHODS-RESULTS: We examined 165 patients with acute type A aortic dissection operated between 1985 and December 2005, retrospectively. The age of the patients were between 18 and 80 years, with the mean age 51,93±12,37 years. 122 of the patients (73,9%) were male. There was a statistically significant relation between the aortic dissection incidence and the seasons (p<0,05). The incidence was found significantly higher during the winter months (especially december and january) when compared with the rest of the year. The incidence was at the lowest level in summer months. Female patients had aortic dissections at the highest incidence during the spring months (p>0,05); while male patients had their highest incidence during the winter (p<0,05). The patients with an aneurysm pattern had aortic dissections at a higher rate in winter (p<0,01); while there was no significant difference between the dissection rates in the other seasons for these patients (p>0,05). 72% of the patients were hypertensive. There was no relation between the dissection incidence of the hypertensive patients and the seasons. Likewise, there was no relation between the dissection incidence of the >70 years old patients and the seasons.
CONCLUSION: Acute aortic dissections were found to exhibit seasonal variations, especially for men and for those having an aneurismal pattern. The results of this study may be a guide for prevention of acute aortic dissections by structuring treatment approaches under consideration of the most vulnerable times of the year.

OP-108 - PREDICTORS OF IN-HOSPITAL MORTALITY IN PATIENTS WITH THE RETRESPECTIVE ANALYSIS OF THE 35 ACUTE TYPE A AORTIC DISSECTION

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Acute aortic dissection is a disease with high morbidity and mortality rate. The aim of this study is to eveluate the predictors for the survival beyond the results of our 35 cases.
MATERIAL-METHOD: Thirty-five patients with acute aortic dissection were enrolled the study between the January 2001 to January 2007. The mean age was 54.42 ± 13.15 and the 24 (69%)patients were men and 11 (31%) patients were women. Thirty-one patients (88.6%) had hypertension and 4 (11.4%) had Marfan's disease. All patients were operated under cardiopulmonary bypass. Total circulatory arrest was achieved at the 18 (51.4%)patients and the 17 (48.6%) patients was done under modorate hypothermia. The operation types were; Tubular graft interposition in 14 patients (40%), valved conduit in 15 patients (42.9%), aortic valve replacement and tubular graft imlantation in 5 patients (14.3%), aortic valve resuspention and tubular graft interposition in 1 patient.
RESULTS: The operative mortality rate was 14.3% (5 patients), the hospital mortality was 25.7% (9 patients) ant the overall mortality rate was 40% (14 patients). In one patient revision was done due to bleeding. Advanced age, copd, heart failure, rupture, sencope, renal deterioration, time loss after the beginig of the disease to the operation, aortic valve regurgitation, postoperative morbidity are the predictors of the hospital mortality in univariate analysis.
CONCLUSION: Due to its lethal complication, acute aortic dissections are need to be rapid diagnosis and surgical repair. It is very important to select the rapid and the true treatment.

OP-109 - IATROGENIC AORTIC DISSECTION DURING CARDIAC SURGERY

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INTRODUCTION: Intraoperative and postoperative iatrogenic aortic dissection is a rare but also feared and if not treated properly is a lethal complication.We aimed to present the risk factors, diagnosis and treatment of this complication by searching the records of patients with aortic dissection during and after adult coronary and heart valve operations at Siyami Ersek Thoracic and Cardiovascular Surgery Center between January 2001 and December 2006.
MATERIAL - METHOD: During this period 14.446 adult coronary and heart valve operations performed and 22 patients with type 1 dissection occuring as a complication of adult coronary and heart valve operations were evaluated. There were 12 male (%54.5) and 10 female (%45.45) patients. Two of these patients had an aortic valve replacement operation; one of these patients had aortic and mitral valve replacements before. Hypertension was determined in 14 (%63.6) patients; 5 patients has diabetes mellitus. These patients has neither the diagnosis of Marfan Syndrome nor other connective tissue disorders. Preoperative aortic diameters are calculated as 3,83±0,31 cm (maximum 5,5 cm minimum 2,3cm); ejection fraction %52±8 (maximum %60 minimum %35)
RESULTS: Peroperative dissection occured in 19 patients; early post operative (first 6 hours) dissection were in 2 patients and 1 patient sustained a post operative dissection after more than one years time primary operations. Peropertive dissection were coronary by pass in 17 patients with coronary artery disease; mitral valve replacement in 1 patient and aortic valve replacement in 1 patient. One of the patients have died before surgery and 7 of them have died intraoperatively. The 2 of 14 patients that transported to intensive care unit have died during ICU observations. One of them had neurologic problems died on post operative 13th day due to multiorgan failure; the other patient died on post operative 19th day due to acute renal failure. The remaining 12 patients had discharged from hospital on post operative day of 16.22±4.02 (max:46 / min:8). The 6 of 14 patients had respiratory problems; 2 patients had acute renal failure; 1 patient had cardiac arrhythmias and 1 patient had compartment syndrome after IABP insertion.

OP-110 - SURGICAL RESULTS OF TYPE A DISSECTION WITH PERIPHERAL VASCULAR MALPERFUSION

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OBJECTIVE: One of the most common lethal complication of type A aortic dissection is peripheral end-organ malperfusion.
METHODS: From January 1987 until February 2007, 302 patients underwent dissection repair and among them 35 patients were assessed for malperfusion of the renal, visceral or extremity circulation. Coronary malperfusion was excluded in this study. In these 35 consecutive patients, aortic repair was performed using femoral bypass, circulatory arrest, and antegrade perfusion after completion of the distal anastomosis. Additional procedures were done only due to the severity of the complication after aortic repair. In-hospital morbidity, end-organ salvage, and mortality were determined.
RESULTS: The operative mortality for the patients with malperfusion was 20% (7/35). This mortality rate was not greater significantly than those without malperfusion, 17.5% (n=302). All deficits resolved except in 7 patients with persistent extremity ischemia who required additional procedures after aortic repair.
CONCLUSIONS: Immediate primer aortic repair in patients with type A aortic dissection with peripheral malperfusion is a reliable surgical option for reestablishing end-organ perfusion. End-organ salvage for persistent deficits can be done safely in early postoperative period following aortic repair.

OP-111 - OUR ASCENDING AORTA SURGERY RESULTS

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INTRODUCTION: Ascending aortic diseases due to aneurysm and dissecttion are life threatening patologies because of rupture and excessive bleeding. Treatment must be urgent. We explored our ascending aorta surgery experiences retrospectively.
METHOD: 40 patient's who exposured ascending aortic surgery between january 1995 and june 2007 in Cumhuriyet University Cardiovascular surgery department results were explored. Surgical approaches which used distal part of left subclavian artery were pointed out in this study.
RESULTS: 32 male and 8 female patients. Mean age was 50.27 in males and mean age was 51.3 females. 25 patients applied with chest and back pain to hospital. Seven of them was complaining with dispnea. Two of them had syncop. Two had palpitation and one of tham had claudicatio. Two were diagnosed incidentally. One of them had throat pain. The most common predisposition was hypertension. But one patient had aortic replacement history. Computerized tomography was used gor diagnosis in all patients. Additionally echocardiography to 12 patients, coronary angiography to 2 patients were performed also. Thirty six patients were diagnosed type I aortic dissection. Two patients were diagnosed type II dissection. Two patients had only ascending aortic aneurysm. Four patients had aortic valve failure, two had coronary artery disease. Ten of patients had pericardial tamponade. Femoral artery cannulated in 34 patients. 18 patient were cannulated additionally via axillar artery to antegrad cerebral protection. 30 of all distal anastomosis were done with open technique under the total circulatory arrest. Fourteen patients exposured Benthall procedure. Supracoronary tubular graft was done to twenty one patients. Four of them exposured supracoronary tubular grafting and aortic valve replacement. One patient exposured aortic replacement and plication to aorta. Coronary artery bypass graftings were done to two patients. Seven of 40 patients were lost in early postoperative period. Two paitent got reoperation because of bleeding.
COMMENT: Mortality of ascending aorta surgery depends on rupture and late diagnosis. Our results are in harmony with literature.

OP-112 - ENDOVASCULAR TREATMENT OF THORACIC AORTA PATHOLOGIES

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OBJECTIVE: Thoracic aortic surgery has still significant mortalite and morbidity rates despite advances in anesthesia, intensive care unit follow up and surgical techniques. Endovascular stent grafting was first applied to the abdominal aorta in 1991. Since then, increasing experience and technological improvements endovascular grafting has been applied even in critical segments of the aorta, such as the thoracic and arch levels. We summarize our experience of endovasculer stent grafting in the treatment of thoracic aorta pathologies.
PATIENTS AND METHODS: Between January 2006 and June 2007, 20 endovascular treatment for thoracic aorta were perforned in 18 patients at our instution. Aortic pathologies were; PDA (1 patient), saccular aortic arch aneurysm (2 patients), descending aortic aneurysm (6 patients), chronic type B aortic dissection (4 patients) and acute type B aortic dissection (3 patients). Accompanying pathologies were abdominal aortic aneurysm (5 patients), aortic aneurysm with aortoiliak occlusive disease (2 patients) and iatrogenic iliofemoral stenosis (1 patient). Cerebrospinal fluid drainage catheter was rouinely inserted before the procedure and pressure was monitored.
RESULTS: Due to very small calibration of the whole aortic and iliofemoral segments endovascular treatment could not be performed in the PDA case. In one of the patients treated for saccular arch aneurysm, descending aortic rupture ensued during the long term follow up and it was treated with stent graft implantation. In one patient treated for chronic type B dissection, antegrade and retrograde aneurysm also compressing the stent graft developed and it was treated with endovascular stent grafting. In one patient, unidentified quadriparesia occured in the early postoperatie period and resolved spontaneously. Type I and type II endoleak occured in two consequent patients. Two patients died in the early postoperative period. Hybrid therapy and/or multiple endovascular procedured were applied to the accompanying patologies. The patients were discharged from the hospital in mean 7 days.
CONCLUSION: Nowadays endovascular stent grafting is commonly used in the treatment of thoracic aortic aneurysms with successful early and mid term results. Despite still the gold standart surgical treatment, we believe endovascular stent grafting is an attractive alternative to open surgery especially in patients with multiple comorbidity factors.

OP-113 - ENDOVASCULAR APPROACH TO ACUTE THORACIC AORTIC SYNDROME: ANALYSIS OF 26 CASES

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AIM: Endovascular procedures are the best way to treat the life threatening acute aortic pathologies in patients with eligible anatomy.
PATIENTS AND METHODS: Between April 2002 and March 2007, 26 patients were treated via endovascular route due to acute aortic syndrome of the thoracic aorta. Thoracic endograft implantation was carried out for Acute Type B aortic dissection in 12 patients, penetrating ulcer of the aorta in 6 patients, travmatic aortic transection in 2 patients, contained rupture of the thoracic aorta in one patient, intramural hematoma and rupture with hypovolemic shock state in one patient and aorto-bronchial fistula in one patient. Fenestration of the intimal flap was done in two patients with Acute Type A dissection due to malperfusion of the abdominal viscera. There were 22 males and 4 females with the mean age of 61,4 ± 11,3.
RESULTS: Self-expandable fabric stent-grafts were used via transfemoral route in order to exclude the diseased segment of the aorta or to cover the primary entry tear in case of Acute Type B dissection. One patient with ruptured intramural hematoma and in shock state was died due to cerebral ischemia and multiorgan failure on the 83rd day. Another patient was died unrelated to aortic pathology on the 74th day (7,6%).
CONCLUSION: Endovascular approach should be considered as the first choice to treat the thoracic aortic emergencies. Multicenter trials may clarify the value of the endovascular procedures in such circumstances.

OP-114 - A NEW SURGICAL APPROACH FOR AORTIC ARCH REPLACEMENT: REPLACEMENT OF THE AORTIC ARCH WITH TRIFURCATED GRAFT PRIOR TO CARDIOPULMONARY BYPASS

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The techniques used for the replacement of the aortic arch are in debate. Total circulatory arrest, retrograde cerebral perfusion, antegrade cerebral perfusion and bilateral cerebral perfusion can be used during the operation. These techniques posses various advantages and disadvantages over each other.
Five patients underwent ascending and aortic arch aneurysm repair with the use of trifurcated graft at our institution. Aortic arch and braches were prepared extensively in this technique and branches of the trifurcated graft were anastomosed to the aortic arch branches with the use of lateral clamps prior to cardiopulmonary bypass. Then cardiopulmonary bypass was initiated via cannulation of femoral artery, perfusion branch of the trifurcated graft. The patients were cooled to 30 C and ascending aorta was replaced with another dacron tube graft distally anastomosed to the descending aorta. Following cessation of cardiac arrest the trifurcated graft was anastomosed to the straight tube graft with the help of a lateral clamp on beating heart. Postoperatively one patient died due to cardiac failure on the fourth day. This technique has advantages such as shorter cardiac ischemic time, shorter cardiopulmonary bypass time and no interruption to cerebral perfusion during the operation.

SPECIAL SITUATIONS IN CORONARY SURGERY

OP-115 - BEING AN ELDERLY WOMAN: IS IT A RISK FACTOR FOR MORBIDITY AFTER CORONARY ARTERY BYPASS SURGERY ?

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Despite the refinements in surgical techniques and postoperative care, elderly women still have a higher prevalence of postoperative morbidity. The outcomes of 112 elderly women (> 80 years) who underwent an elective CABG procedure were compared with those of males operated during the same time interval (n, 164). Mean number of grafts did not differ significantly between groups. Early operative mortality rate was 8.6 % in overall; 8.9 % for female and 8.5 % for male patients). Postoperative complications including prolonged ventilation time (13.4 % in females vs. 8.5 % in male), atrial fibrillation (40 % in females vs. 33 % in males), sternal reclosure (8 % in females vs. 4.2 % in males), pneumonia (5.3 % in females vs. 3 % in males), leg wound infection (11.7 % in females vs. 2.4 % in males), renal dysfunction (10.7 % in females vs 7.3 % in young patients) have found to be significantly higher in elderly women. Mean intensive care unit (3.2 ± 1.1 days in females vs 1.6 ± 0.4 in males) and hospital stays (13.6 ± 2.1 days in females vs 9.1 ± 1.2 in males) were also longer in female patients. Five-year survivals including all deaths for female and male patients were 57 % and 62 %, respectively. In elderly women, revascularization procedures can be done with acceptable mortality rates; but, these patients are still associated with a higher prevalence of postoperative morbidity when compared with the male counterparts.

OP-116 - EFFECTS OF HORMONE REPLACEMENT THERAPY ON EARLY RESULTS OF CORONARY ARTERY BYPASS SURGERY IN POSTMENAUPOSAL WOMEN

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AIM : The aim of the study was to evaluate the effects of hormone replacement therapy in postmenopausal women undergoing coronary bypass surgery.
MATERIAL AND METHOD: Forty seven patients who were at postmenopausal period and undergoing coronary bypass surgery during the years 2002-2006 were involved in the study. Among these patients, the ones under hormone replacement therapy with estrogen were grouped as Group II and the ones not receiving this therapy as Group I. The preoperative, operative and postoperative data of the patients were collected retrospectively.
RESULTS: The mean age of the patients were 59,4±2,7. Blood and blood products were used significantly more in Group I. Similarly patients in Group I had a higher incidence of postoperative atrial fibrillation ($p<0,05$). The comparison of body temperature and leukocyte count revealed that in Group II the results were significantly favorable than Group I.
CONCLUSION: The hormone replacement therapy may lower the morbidities seen after coronary bypass surgery but does not seem to have an effect an overall mortality.

OP-117 - SODIUM NITROPRUSSIDE INFUSION PREVENTS HYPOTHYROIDISM IN PATIENTS UNDERGOING ON PUMP CARDIAC SURGERY

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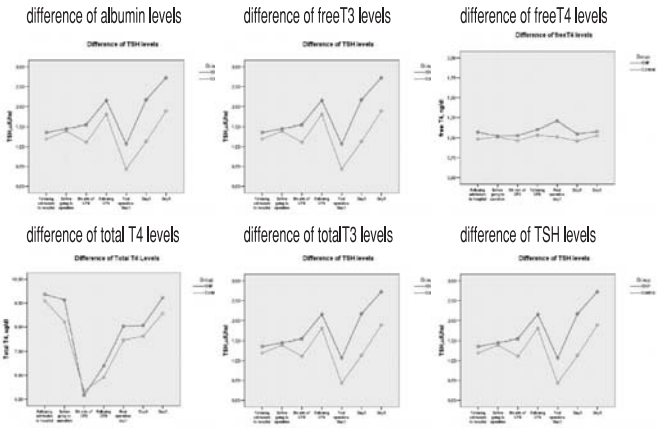
INTRODUCTION: Non-Thyroidal Illness Syndrome (NTIS) is a form of hypothyroidism seen in patients undergoing on pump cardiac surgery. Sodium Nitroprusside (SNP) is a natural donor of nitric oxide (NO). Administration of SNP during cardiopulmonary bypass has been demonstrated to have some beneficial effects such as alleviation of systemic inflammation and the cardiac inflammatory response, inhibition of complement activation, increment of cardiac index and decrease of pulmonary arteriolar resistance, reduction of lung injury or improvement of renal function.
NO has been shown to have some regulatory effects on thyroid cells. SNP inhibits influx, organification and transport of iodide into the thyrocites. SNP also generates a dose dependent release of nitric oxide and cGMP from thyrocites.
Whether use of SNP during cardiac surgery has any effect on thyroid function has not yet been investigated in humans. In the present study, we therefore investigated the effects of SNP administration during the rewarming period of cardiac operations on circulating levels of thyroid hormones.
MATERIALS-METHODS: 36 consecutive patients undergoing elective, primary coronary artery bypass grafting (CABG) operation were prospectively randomized to receive continuous infusions of either SNP(0.1 μg/kg/min) or saline (% 0,9 NaCl) beginning from the initiation of rewarming period until weaning from CPB. fT3, tT3, fT4, tT4 and thyroid stimulating hormone (TSH) levels were detected soon after the patients' admission to the hospital, just before going to the operating room, at the 5th minute of CPB, after CPB and on the post operative 1st, 3rd and 5th days' mornings.
Statistics: Analyses of variance in repeated measures was used for statistical analysis.

OP-117

RESULTS: FreeT3 differences of each group throughout the study period were statistically different from each other (p=0,022).The main dissociation of two groups were significantly observed in two time periods. First, between ending of CPB and beginning of CPB and second, between 3rd and 1st post-operative days. First period was the period when SNP was infused, and at this period,as shown in the graphic(Fig1), the continuous decline of the line of fT3 levels was temporarily stopped and changed its direction upwards, keeping the SNP group to be in the euthyroid state, while the line for control group continued to decline permanently to reach the baseline levels of early post-operative period (day1).Second, between 3rd and 1st post-operative days, indicating an early recovery of SNP group.
CONCLUSION: Effect of sodium nitroprusside on circulating thyroid hormone levels in humans is not well known. In this study, we have shown that routine use of SNP during rewarming period of CPB, affects the thyroid status and prevents further decline of freeT3 hormone levels following CPB and on the early post-operative period.



OP-118 - A DIFFERENT USE OF MULTIPLE PERFUSION SET TOOL AFTER CROSS CLAMP REMOVED IN ON-PUMP CORONARY ARTERY BYPASS GRAFTING SURGERY

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BACKGROUND: In this study we aimed to show the benefits of a multiple perfusion set (MPS) tool with a different usage after removal of cross clamp in on-pump coronary artyery bypass grafting surgery (CABG), that is used for to give cardioplegic solutions. Methods; From June 2005 to Januvary 2007, 96 consecutive patients underwent (48 using MPS and 48 non-MPS groups) on pump CABG with using side cross clamp at the Bursa Yuksek Ihtisas Hospital. Cross clamp time, side clamp time, and cardiopulmonary bypass (CPB) time were recorded. Peroperative blood gas lactate taken from coronary sinus, arrhytmia ratio and need of inotropic agents, intraortic balon pump (IABP) were compared.
RESULTS: Cross clamp time and side clamp time were similar, but CPB time was lower in MPS group (75,1 ± 16,5 / 89,8 ± 19,5). The lactat levels after CPB were lower in the MPS group (2,84 ± 0,52/4,07 ± 0,57). Inotropic agents and/or IABP need in MPS group were 15 (31,3 %) patients, and 29 (60,4 %) patients in other group. Ventricular fibrilation seen 8 (16,7 %) patients in MPS group and 19 (39,6 %) patients in group 2, and cardiogenic shock aplicated per patient was 0,25 in MPS group and 0,83 in the other group.
CONCLUSIONS: MPS may supply an enough perfusion to ischemic myocardium in on-pump CABG, especially at the first minutes after X clamp removal, that provides decreasing in CPB time, and arrhytmia insidence and need of inotropic agents, especially in low cardiac output patients.

OP-119 - COMPARISON OF MAGNESIUM SULFATE WITH OPIOID AND NSAIDS ON POSTOPERATIVE PAIN MANAGEMENT AFTER CORONARY ARTERY BYPASS SURGERY

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OBJECTIVE: This study measured the effectiveness of magnesium sulfate during and after coronary artery bypass grafting (CABG) on postoperative pain and respiratory functions, and compared it with 2 other well-known and widely used analgesic agents: codeine and diclofenac, a nonsteroidal anti-inflammatory drug (NSAID).
DESIGN: Prospective unblinded study. Setting: Single institution.
PARTICIPANTS: Patients undergoing CABG.
INTERVENTIONS: Patients were divided into 3 groups. In group A (n = 50), intraoperative magnesium sulfate, 2 g/70 kg, was infused intravenously and was continued during the first 3 days postoperatively. In group B (n = 50), codeine, 60 mg/70 kg, was given orally 4 times a day for 3 days. In group C (n = 50), diclofenac sodium, 75 mg, was given orally twice a day for 3 days.
MAIN RESULTS: On the first postoperative day the visual analog scale (VAS) score was greater than 5 in all groups. On the second day the VAS score was greater than 5 in groups B and C, and was less than 5 in group A. On the third day the VAS score was less than 5 in all groups. During the first 2 postoperative days the need for morphine was significantly less in group A than in the other 2 groups. Preoperative respiratory function tests (forced expiratory volume in 1 second [FEV1], forced vital capacity [FVC], and FEV1/FVC) were similar in each group. The FEV1, FVC, and FEV1/FVC values on the postoperative first, second, and third days were significantly higher in group A.
CONCLUSIONS: Magnesium sulfate can be a beneficial adjuvant therapy for pain after CABG. In this respect, especially in patients with respiratory problems or intolerance to NSAIDs, magnesium sulfate can be a better choice than NSAIDs and opioids.

OP-120 - COMPARING THE EFFECTS OF FREQUENTLY USED BETA BLOCKERS (NEBIVOLOL,METOPROLOL) ON THE VASCULAR NITRIC OXIDE LEVELS OF THE CORONARY BY-PASS SURGERY PATIENTS

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Metoprolol and nebivolol are β1 adrenergic blockers. Nebivolol plays an important role in the modulation of nitric oxide(NO) secretion in arterial and venous endothelium. NO primarily inhibites the aggregation and adhesion of platelets and other blood cells and contributes to the dilatation of vessels.
Fifty five patients undergoing CABG operation had been included to our study. Patients were seperated to 3 groups. The effects of preoperative metoprolol and nebivolol administration on nitric oxide levels in vascular graft endothelium and vascular graft vasovasorum was campared with controls.
LIMA preparation was made in patients with suituble sternums. In patients with more than one coronary artery stenosis, saphenous ven were added. Tissue samples were collected from these grafts and evaluated by immunohystochemistrical methods.
There were not statisticly significant differences in the age, sex, diabetes mellitus, hypertension and hyperlipidemia parameters of the groups. The highest activity in both endothelium and vasovasorum levels in LIMA and saphenous graft was measured in the nebivolol group. Metoprolol did not increase NO activity in tissue level when compared with the controls.
These findings suggest that nebivolol administration before and after coronary by-pass surgery(uless contraindicated) may be useful in the maintenance of graft patency by its NO mediated vasodilating effects.

OP-121 - MIDSEGMENT HARVESTING OF RIGHT INTERNAL THORACIC ARTERY DECREASES STERNAL ISCHEMIA

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BACKGROUND: We aimed to keep sternal vascularity better by harvesting only midsegment of the right internal thoracic artery (RITA) than using conventional bilateral internal thoracic artery (BITA) harvesting method, and we evaluated the sternal vascularity with single photon emission computed tomography (SPECT).
METHODS: 135 patients undergoing coronary artery bypass grafting (CABG) were divided into three groups: Full-RITA group who would have a full length of RITA as a graft for CABG (n=45); mid-RITA group who would have a midsegment of RITA (n=45); and non-RITA group who would not have a RITA (n=45). Before surgery and twice after surgery, all patients underwent a bone scan with single photon emission computed tomography (SPECT) to evaluate the sternal vascular activity.
RESULTS: Postoperative early scans (6.9 ±0.9 days) showed a reduction of blood flow into the both side of the sternum compared with the preoperative scans (p<0.001). In full-RITA group, there was no significant difference between left and right hemi-sternum (0.56±0.04 and 0.55±0.02 respectively). But, in mid-RITA and non-RITA groups, right hemi-sternum showed significantly better vascularity than left hemi-sternum in the early postoperative period (p<0.001). Nine patients (20%) with diabetes mellitus in full-RITA group had sternal infection (p=0.001); three of them were deep sternal infection with dehiscence. In mid-RITA group, there was only two patients had superficial infection and non-RITA group there was no infection.
CONCLUSIONS: We can prefer mid-RITA technique with improved sternal vascularity and more acceptable sternal complications than full-RITA technique.

OP-122 - IN-HOSPITAL OUTCONE OF PATIENTS WITH PROLONGED INTENSIVE CARE UNIT STAY AFTER ELECTIVE ON-PUMP CORANARY ARTERY BY PASS GRAFTING

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OBJECTIVE: Coronary artery by pass grafting is to be surgical treatment choice of coronary artery disease. Although technical improvements reduced mortality and morbidity rates after coronary artery by pass surgery because of high-risk profile of patient, prolonged intesive care unit stay after surgery remains a serious process and results in additional medical and para-medical problems.
In this study we reported the predictive factors on mortality of the patients who had a prolonged intensive care unit stay after elective on-pump cabg.
PATIENTS AND METHOD: Between September 2001 and November 2006, 137 patients that underwent elective on-pump cabg stayed >=3 days in intensive care unit after operation. Patients were divided into two groups: Group I; survivors and Group II; non survivors. Preoperative, operative and postoperative characteristics of the two proups were compared.
RESULTS: Age, previous myocadial infaction,diabetes mellitus, preoperative renal disfunction, prolonged entubation, re-entubation, post-operative newonset cerebrovascular accident, total perfusion time, inotropic support and number of grafted coronary artery values of non-surviror group were statistically higher than survivor group. On multivariate analysis total purfusion time age, inotropic support and number of grafts were found to be more important factors on mortality.
CONCLUSION: We emphasize that between those predictive factors; number of grafted coronary artery was the most important factor on mortality of the patients who had a prolonged stay in intensive care unit after elective on-pump cabg.

OP-123 - BLOOD CORTISOL LEVELS ON CARDIOPULMONARY BYPASS AFTER METHYLENE BLUE ADMINISTRATION- BLOOD CORTISOL AFTER METHYLENE BLUE

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BACKGROUND: Initiation of cardiopulmonary-bypass leads to a remarkable decrease in mean arterial pressure. We designed this experimental study to investigate if methylene blue which is a cyclic-Guanosine Mono Phosphate inhibitor can substitute phenylephrine in this hypotensive situation.
METHODS: Eighteen mongrel dogs (9.5±1.3 kg) were organized as three groups. After an intramuscular premedication and anesthesia, endotracheal intubation was applied. Methylene blue was administered to seven subjects and phenylephrine to another seven. No manipulation was made in the control group. Then cardiopulmonary-bypass procedure was applied. We took blood samples just before the drugs were administered, after the initiation of cardiopulmonary-bypass and at approximately 15th minute of cardiopulmonary-bypass. Conqurently hemodynamic values were recorded and further parameters were calculated at three stages.
RESULTS: After cardiopulmonary-bypass initiated, blood pressure levels fell down significantly in all subjects. However second mean arterial pressure levels of the control group were significantly different from that of methylene blue group and phenyephrine group (p<0.05 both). The difference between the first and second cardiac output values of all groups were not different significantly. In control group systemic vascular resistance index values decreased in comparison to treated groups. Blood cortisol levels decreased in all groups by the initiation of cardiopulmonary-bypass. In the methylene blue group and the control group, final cortisol levels were statistically similar but lower than the phenylephrine group.
CONCLUSIONS: We conclude that single dose methylene blue can be used effectively for hypotensive periods after the initiation of cardiopulmonary-bypass with less stress hormone release.

Blood Cortisol Levels

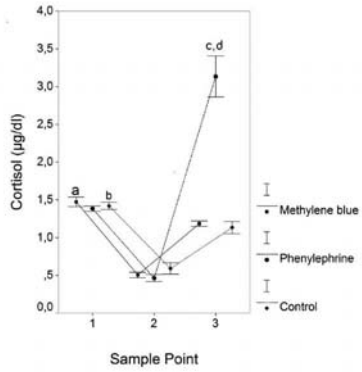

Figure 1. Cortisol levels before and during cardiopulmonary-bypass procedure. (Data are presented as mean±SD.) a: p<0.001 versus second cortisol value in methylene blue group, b: p<0.05 versus second cortisol value in control group, c: p<0.001 versus second cortisol value in phenylephrine group P, d: p<0.05 versus third cortisol values of methylene blue group and control group.

SURGICAL TREATMENT OF CAROTID ARTERY DISEASES AND SURGERY FOR PERIPHERAL ARTERIAL DISEASES

OP-124 - AV FISTULAE MANAGEMENT AS AN ALTERNATIVE WAY WITH SAPHENOUS VEIN GRAFT INTERPOSITIONING IN HEMODIALYSIS PATIENTS; CLINICAL STUDY; EARLY RESULTS

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Although AV fistula operations purposed for hemodialysis access previously managed patients in the upper extrmities, whose fistulas are thrombosed in these areas the search for alternative ways are undertaken.The purpose of this study is in hemodialysis dependent patients group whose fistulas are thrombosed in their upper extremities an alternative way of AV fistula management with saphenous vein graft between radial artey and brachiosephalic vein is established. In our clinic between january 2006 and december 2006 20 patients who were dignosed as choronic renal failure, AV fistula operations managed with saphenous vein graft interposition. All of the patients had previous AV fistula operations and lost the chance of new AV fistula operation in the upper extremities. AV fistula operations with saphenous vein graft interpositioning managed under local anesthesia. The fistulas of the patients in the postoperative periods had thrils. In these period non of the patients upper extremities showed the signs of ischemia. The peripheric pulses were intact. All of the patients are hemodialysed with no problem. The early period fistula occlusion is the most commonly encountered complication wasn't seen in any of the patient. AV fistula management with saphenous vein graft interposition is a usefull hemodialysis method in the patient who had lost the chance of fistula management in their upper extremities. Compared to the politetrafluoroetilen graft interpositining fistulas; lower incidence of infection and thrombosis risks and at the same time it is advantageous economically.

Fig 1.

Fig 2.

Fig 1. Sapheneous vein harvested and adjusted in length.

Fig 2. Saphenous vein is interpositioned.

OP-125 - THROMBUS FORMATION AFTER INTERNAL JUGULAR VEIN CATHETERIZATION AT CARDIAC SURGERY: DO WE NEED PROPHYLAXIS?

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Central venous catheterization is usually required before the operation in cardiac surgery. These catheterizations are mostly terminated at the second postoperative day when the patients are stable in the intensive care unit. In some patients after the cardiac surgery, some embolization may occur, one of which is extremely life threatening fatal pulmonary embolus. In this study, we aimed to investigate the relationship of internal jugulary vein catheterization and embolus formation.
We took fifty patients into our study, who were taken into open cardiac surgery with internal jugular vein catheterization. These catheterizations were terminated in the postoperative second or third day (mean 2,24 days) and their internal jugular veins were controlled with colour coded Doppler ultrasound at postopertive seventh day. In 8 (16%) of these patients, acute thrombus formation was detected and enoxaparin sodium treatment was started for seven days. The patients with thrombi were taken into second ultrasound control and it was seen that the thrombi resolved after the treatment. No complication regarding to thrombus formation was seen in these patients.
In our series of patients, we have seen that internal jugular vein catheterization may cause embolus formation more than expected and if it's so, prophylactic heparinization may be required since it is a life threatening event. For this purpose, more study designs with more number of patients are required.

OP-126 - PROTECTIVE EFFECTS OF ANTIOXIDANT MEDICATIONS ON LIMB ISCHEMIA REPERFUSION INJURY

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BACKGROUND: N-acetylcysteine, beta-glucan, and coenzyme Q(10) were shown to have antioxidant and anti-inflammatory effects on reperfusion injury. The aim of our study was to determine and evaluate the effects of these agents on ischemia reperfusion injury of limb.
MATERIAL-METHOD: Forty-four New Zealand white rabbits, all female, weighing between 2.3 to 4.2 (mean 3.8) kg, were used in the study. Four study groups were arranged of 11 animals each, by randomization. The first group was the control group (Group C), the other groups were the Group Q, which was medicated with coenzyme Q10, the Group betaG, which was medicated with beta-glucan, and the Group N, medicated with N-acetylcysteine. After baseline measurements, for the ischemia-reperfusion experiments, common iliac artery was clamped and collateral flow was occluded by a rubber arterial tourniquet wrapped around the thigh at the proximal third of the leg. After 60 min of transient ischemic period, the limb was perfused for 180 min. After perfusion, biopsy was taken from the adductor magnus muscle. Second blood sampling was done after reperfusion period. Blood and tissue analysis were done and evaluated statistically.
RESULTS: Baseline and post-reperfusion levels of glutathione peroxidase (GPx), super oxide dismutase (SOD), malonyldialdehyde (MDA), and nitric oxide (NO) changed significantly. While MDA levels increased in the control group, it decreased in the other study groups. The increase in GPx and SOD levels were significant in all groups except the control group. Levels of NO were found to have decreased in the control group, whereas it had increased in the other groups.
CONCLUSION: Antioxidant medication may help lowering limb ischemia reperfusion injury. All mentioned medications in our study are shown to be able to have an effective role for preventing ischemia reperfusion injury to some extent through their antioxidant properties.

OP-127 - SURGICAL MANAGEMENT OF DELAYED PRESENTED ACUTE ARTERIAL EMBOLISM

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BACKGROUND: The high mortality of patients presenting with acute limb ischaemia has for a long time been a matter of concern to vascular surgeons and represents one of the driving forces for the development of alternative therapies. Irreversible limb ischaemia following acute arterial occlusion is difficult to define. Whether to revascularize or not depend mostly clinical judgement, because the consequences of re-establishing circulation in a dead limb may be life threatening. At the other hand, major amputation of a viable limb is undesirable. In this study we report our experience of revascularization of the both upper and lower limbs in patients with delayed presented acute arterial embolus.
MATERIAL-METHODS: Fourty six patients, who came from different centers or failed in medical treatment in our hospital between Jan 2003- April 2006, were included in the study. All the patients were admitted to surgery at least 36 hours after initial symptoms (range:36 hours-6 days). Diagnosis and surgical indication were based on the findings of physical examinations, Doppler ultrasonography, classical angiography, and magnetic resonance.
RESULTS: The patients ranged in age from 28 to 86 years old, with a mean age of 59.7 years for men and 65.7 years for women. The underlying cause of arterial embolism was atrial fibrillation in most of patients (31; 67%). Arterial embolectomy performed to all patients undergone to operation and 22% of them required arterial reconstruction such as by-pass additionally. Mortality and amputation rates were 10/46= 21.7% and 6/46= 13% respectively. The most frequent mortality cause was multiorgan failure(MOF).
DISCUSSİON: Atrial fibrillation that largely depends on rheumatic valve diseases and its' complications such as thromboembolic events at upper and/or lower extremities is still one of the major medical problem in developing countries. Late embolectomy and arterial reconstruction is worthwhile for patients with delayed presented acute arterial embolism and this can be realised with acceptable mortality and morbidity rates. Patients should not be denied limb-saving surgery on the basis of a delayed presentation and it is possible to perform successful embolectomy several days or even weeks after the acute episode incompany of medical treatment strategies.

OP-128 - PHERIPHERIC PSEUDOANEURYSMS

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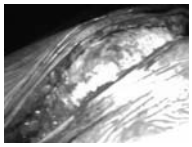
Pseudoaneurysms are can be mycotic, iatrogenic and as a result of variable arterial traumas. In recent years pseudoaneurysms are frequently seen as a complication of increased cateterizations. Between 1 February 2000 – 31 March 2007, 37 patients had been treated surgically at Erciyes University Medical Faculty Cardiovascular Surgery Department. 16 (% 43,24) patients was male, 21 (% 56,76) was female. The younger one was 10 months old and the oldest one was 80 years old, mean age was 54,1 ± 19,4. Most of then were at right SFA (20 - % 54,05) 30 patients were repaired primarily. 2 patient had died (one of them had WEST Syndrome (10 months old) and the other one had chronic renal faulire and had bilaterally popliteal true aneurysm and distal ischemia. Our mortality was % 5,4. Hospitalization time was mean 8 (3-44) days. Pseudoaneurysms are unstable lesions and can be resulted variable complications as ischemia and death. We suppose that pseudoaneurysms must be diagnosed and surgically treated earlier, after trauma and cateterization.

angiographic image of femoral pseudoaneurysm



intraoperative view after skin incision

intraoperative view: after revascularization

external view of femoral pseudoaneurysm

OP-129 - COMPARISON OF WEIGHTS OF CAROTID ENDARTERECTOMY ATHEROME PLAQUES

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INTRODUCTION: Carotis endarterectomy (CEA) surgery decreases the risk of primary and secondary stroke in the majority of patients. In many studies, the degree of the stenosis has been identified as an important factor for endications of surgery. In this study, the weights of the atherom plaques are compared.
MATERIAL-METHOD: Sixty four patients who underwent CEA between the years 2004-2007 were studied. Surgery was performed under locoregional servical block. Among the patients male/female ratio is 54/10, mean age 55±3.3 (38-83). The mean weight of the plaques is 0.52 gr (0.28-2.41gr). The range of weight of the plaques of the male patients is 0.28-2.41gr (mean: 0,45) while it is 0.64-1.36 gr (mean: 0,91 gr) in female patients.
RESULTS: In this study, no relation was found between the weights of the atherom plaques and age and symptoms of the patients. The ratio of the mean weight of the plaques between males and females is statistically significant.
DISCUSSION: The comparison of the weight of the CEA plaques showed that the weight of the plaques of the female patient is higher. We believe that further studies about the weight and histopathologic features of the CEA plaques are in need.

OP-130 - CAROTID ENDARTERECTOMY IN THE OCTOGENARIAN

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OBJECTIVES: The current indications and the efficacy of carotid endarterectomy for have been well described. Few studies, however, have demonstrated the safety of the procedure and the true outcome of surgery in the octogenarian.
METHODS: Data from carotid endarterectomy with exclusively local anesthesia between 1998 and 2004 were reviewed. 41 patients, 80 years or older were compared to those younger for pre- and perioperative data, restenosis and neurological outcome.
RESULTS: 500 carotid endarterectomies in 429 patients were performed. 41 patients older than 80 were recognized in the series and 7 patients among the octogenarians had bilateral severe carotid stenosis in comparison to 43 patients in the younger group (18% vs. 11%, $p<0.05$). Only one patient in the octogenarian experienced a perioperative hemiplegia and 3 patients experienced stroke in the second group. Only four patients in the younger group expired, three due to multiorgan failure following an extensive stroke and the other following myocardial infraction within 1 month of the operation. Additional 5 patients expired in the mid- to long-term followup (one in the octogenarian group, 4 in the younger group; 2.4% vs.1%, $p<0.05$). Causes of death in the late followup were cardiac in 4 patients and multiorgan failure due to dialysis-dependent renal failure in the other.
CONCLUSIONS: Octogenarians, especially those with asymptomatic carotid stenosis have good outcomes following carotid endarterectomy and demonstrate comparable immediate survival and restenosis rates. Although late survival is significantly better in the younger group, this result appears to be independent of cerebrovascular events.

OP-131 - MANAGEMENT OF CONCOMITANT CORONARY AND BILATERALLY CAROTID ARTERY DISEASE

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INTRODUCTION: Surgical management of patients presenting for coronary artery bypass grafting with significant bilateral carotid artery stenosis has not been well defined. In this study, our preliminary results of comparison of coronary artery bypass grafting with concomitant bilateral carotid endarterectomy (group 1) versus coronary artery bypass grafting (group 2) have been reviewed.
MATERIAL-METHOD: A prospective nonrandomized chart review was performed in 77 patients with bilateral carotid artery stenosis, undergoing either combined coronary artery bypass grafting and carotid endarterectomy or lone coronary artery bypass grafting. Concomitant coronary artery bypass grafting with carotid endarterectomy was performed in 33 (43%) and coronary artery bypass grafting in 44 (57%) patients. The average length of stay in the cardiopulmonary intensive care unit was 3.0 ± 7.4 versus 1.9 ± 2.4 days (p=0.36) and total hospital stay was 10.2 ± 6.9 and 7.0 ± 4.0 days (p=0.01) respectively in-group 1 and group 2 patients. There were 4 (12.1 %) postoperative strokes in-group 1 versus no stroke in-group 2 (p=0,03); all strokes were from the ipsilateral side of the carotid endarterectomy in group 1 patients. The in-hospital mortality rates were 1 (3.1%) versus 4 (%9.1) in-group 1 and 2 respectively (p=0.3). Other postoperative complications including inotrop requirement, low cardiac output, readmission to intensive care unit, respiratory problems were all comparable between two groups.
RESULTS: Though mortality rates were comparable between two groups, postoperative stroke rates and hospital stay days were higher in combined operated group. Our results support the justification for performing coronary artery bypass grafting without carotid endarterectomies on the contrary of the literature.

OP-132 - SIMULTANEOUS CAROTID ENDARTERECTOMY AND CORONARY BYPASS SURGERY UNDER CARDIOPULMONARY BYPASS: MIDTERM RESULTS

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BACKGROUND: This study evaluates our midterm results of coronary bypass grafting with concomitant carotid endarterectomy under cardiopulmonary bypass with moderate or deep hypothermia.
MATERIALS-METHODS: Between 1999 and 2007, 23 consecutive patients underwent carotid endarterectomy and coronary bypass operations under cardiopulmonary bypass. All patients had a critical stenosis of 75% or more of the carotid artery. Mean age of the patients was 68.1±6.6; there were 17 men and 6 women. The mean logistic Euroscore of the group was 11.7.
RESULTS: Ten of the patients were operated under deep hypothermia and 13 under moderate hypothermia. At 3 patients the carotid endarterectomy was bilateral. Mean cardiopulmonary bypass and cross clamp time were 79±18.5 min, 49.8 ±15.8 min. Five of the patients underwent total circulatory arrest (TCA), mean TCA time was 12±5.7 min at this group. Mean intensive care unit stay time and hospital stay time were 22.8±11.2 hours and 6.9±3.3 days respectively. The hospital mortality rate was 4.3% (1 patient). The cause of death was renal insufficiency complicated with pneumonia. Two patients (8.6 %) developed a neurological dysfunction postoperatively; one of them was permanent. Follow-up data were obtained for all of the patients; mean follow up period was 39.5±31.6 months. One death (due to cardiac problem) was determined at the postoperative 3rd year. The overall survival was 91.4%.
CONCLUSION: Simultaneous carotid endarterectomy and coronary bypass surgery under cardiopulmonary bypass with moderate or deep hypothermia is a safe and feasible procedure with acceptable midterm results.

RISK ASSESSMENT, MYOCARDIAL PROTECTION, EMERGENCY RE-OPERATIONS IN CABG SURGERY

OP-133 - IS IT SINGLE OR DOUBLE? WHICH ONE PROTECTS THE MYOCARD BEST?

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In this study we compared the effects of placing a single or a double clamp on the aorta upon myocardial functions and myocard protection during CABG with on-pump.
We planned the study by grouping 60 cases with the same demographic criteria as group-1 (double clamp) and 60 cases as group-2. In 60 cases of group-1, after opening the cross clamp, we completed the proximal anastomosis using side clamps. In the 60 cases of group-2 we completed the distal and proximal anastomosis with a single clamp. The cross clamping time in the single clamp group being 77.1 min., was significantly higher than in the group with double clamps (62.9 min.) (p=0.001). Except the preoperative period, the CK-MB values were significantly higher in group 2. Troponin T values were as follows, 0.360±0.200 ng/ml in group 1, 0.466±0.090 in group 2 in the first hour and in 24 hours 0.342±0.142 ng/ml in group 1, 0.487±0.135 ng/ml in group 2, being statistically significant. The postoperative EF decreased in both groups. But this decrease was not statistically significant. WMSI increased in both groups (in group 1 from 1.28±0.34 to 1.36±0.4, p=0.01; in group 2 from 1.31±0.4 to 1.34±0.4, p=0.01) MPI increased significantly in both groups.
The clinical data and enzyme differences show that the double clamp technique is better than the single clamp technique in protecting the myocardium. No difference was found by echocardiographic evaluation between the two techniques in the early period. The technique performed depends upon the surgeons 'choice and the patients' characteristics.

Operative and postoperative values.

	Group -1	Group-2	P value
Graft number	3.5	3.4	Ns
CC time	62.9±14.6	77.1±10.8	0.001
Perfusion time	96.9±21.5	92.8±13.4	Ns
Defibrillation	17(28%)	38(63%)	0.01
Inotrop need	11(18%)	24(40%)	0.02
CK-MB(24.hour)	36,4±35,3	239,3±200,0	0.001
Troponin T(24.hour)	0.342±0.142	0.487±0.135	0.01
EF (preoperative)	48,0±7,0	47.5±9,6	Ns
EF (Postoperatve 6.day)	44,8±6,8	46,5±8,0	Ns

CC:Cross clamp, EF: Ejection fraction, Ns:Not significant,

OP-134 - AT CORONARY ARTERIAL BY-PASS GREFTING; EUROSCORE IS GOOD PREDICTIVE RISK STRATIFICATION METHOD OR NOT

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OBJECTIVE: Between januvery-2003 and januvery-2005,2120 patients undergo CABG operations. For all patients, by using preoperative datas euroscores mortality risk stratifications were calculated and then results were compared to real mortality outcomes for managing estimated euroscore mortality and occured mortality corralations.
METHODS: Retrospectively 2120 patients were divided to three groups as group1:euroscore between 0-2(low risk group),group2:euroscore between 3-5(medium risk group),group3:6 or higher(high risk group).P values of expected mortality and real mortality were compared for each unique groups and also p values were interpreted between groups.
RESULTS: 1402 patients were at group1 and 31 exitus(%2.21) were found at this group.at group2,535 patients were found and group2 has 9 exitus,183 patients were at group3 and 12 exitus were found at this group.Expected mortality euroscore results were 1.1 for group1,2.94 for group2 and 9.47 for group3.
CONCLUSIONS: For group1 and 2,there is no meaningfull differance between p values of expected mortality and real mortality.That means euroscore may show good estimations of risk for low and medium risk groups.But at group3 which is a high risk group,p value is istatisticaly meaningfull which means for high risk group euroscore may show some deviations and may has a poor estimation value.

OP-135 - POSTOPERATIVE OUTCOMES AFTER OFF PUMP CORONARY ARTERY BYPASS GRAFTING IN EuroSCORE LOW AND HIGH RISK FEMALE PATIENTS

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BACKGROUND: Many previous studies have reported that women who undergo coronary artery bypass grafting have higher perioperative morbidity and mortality rates than men. The aim of this retrospective study was to compare perioperative rates of morbidity and mortality and the follow-up events in high and low risk female patients according to the EuroSCORE undergoing OPCAB.
METHODS: 377 adult female patients that underwent elective primary isolated OPCAB surgery were included the study. The patients that underwent OPCAB grafting were divided into two groups based on the **EuroSCORE:** low risk patients (group **I**, n=301, EuroSCORE < 6) and high risk patients (group **II**, n=76, EuroSCORE >= 6). Results. Patients in Group **I** were 60.1+/-7.77 years old and patients in Group **II** were 69.3+/-5.51 years old (p <0.001). Group **II** patients have significantly higher EuroSCORE (p <0.001), predicted mortality rate (p <0.001) in Group **II**. The observed mortality rate in Group **I** was 1% and the predicted mortality rate was (EuroSCORE) 2.42+/-0.76 in this Group. This mortality rate was 41% of the expected rate in Group **I**. The observed mortality rate in Group **II** was 5.3%, which is 79% of the predicted rate (6.68+/-1.11), but the difference was not significant (p=0.2). In Group **II**, the length of stay in the ICU (p<0.01) and ventilation times (p<0.05) were longer than for Group **I**.
CONCLUSION: OPCAB surgery is safe and seems to be a beneficial surgical technique for lowering the rates of morbidity and mortality in high-risk and low-risk female patients.

OP-136 - WHICH CLINIC SCORE SYSTEM IS THE BEST IN EVALUATION OF MORBIDITY AND MORTALITY RATES.EUROSCORE,CLEVLAND OR CABDEAL

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INTRODUCTION: Euroscore,Clevland and CABDEAL score systems are used Widespread for to calculate of operative mortality and morbidity risk of open heart surgery all over the world.
The aim of the study was to evaluate the operative mortality and morbidity risk of the patients undergoing open heart surgery with these score systems.
PATIENTS-METHODS: 501 patients who underwent open heart surgery in our clinic between february 2005 - december 2006 were investigated. 337 (67,3 %) of the patients were male and 164 (32,7%) of them were female. In our clinic, the observed mortality rate was 17(2,6%), peri and post-operative complication was 17(3,4%). For Euroscore and Clevland clinic system,between '0' and '6' risk score was evaluated in low risk group. The higher scores then '6' was involved in high risk groups.For CABDEAL system, the value of cut-off was accepted as '3' risk score.Areas under ROC curve was found 0,904 in Euroscore, 0,863 in Clevland and 0,746 in CABDEAL for mortality.Areas under ROC curve was found 0,772 in CABDEAL,0,723 in Clevland and 0,683 in Euroscore for morbidity.
CONCLUSION: Euroscore in open heart surgery for mortality is the best risk score system. It provides accurate and safe knowledge about the mortality risk of operation. For morbidity, to find the most suitable risk skore system, pre and peri-operative risk factors should be examined in detail.

OP-137 - RENAL RISK ASSESSMENT IN ISOLATED CORONARY ARTERY BYPASS SURGERY PATIENTS

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We aimed to analyze the risk factors for the development of renal disease in patients undergoing isolated CABG, to assess the reliability of the tests used for screening preoperative renal functions with respect to each other.
67 patients were enrolled to the study, all of whom were admitted to our department and undergone isolated CABG in 2005. Demographic properties, clinical findings, preoperative 24-hour creatinine clearance, pre and postoperative 48-hour creatinine levels, operative variables, postoperative complications have been recorded. Patients were grouped according to their creatinine levels and clearance rates. Computational clearance rates were calculated using the Cockroft-Gault formula. Patients with a creatinine clearance rate <60 mL/min were evaluated to have “malignant” renal disease. Student’s t, Mann Whitney’s U, Wilcoxon and Chi square tests were used to analyze the data, $p<0.05$ was considered as significant.
Advanced age, high creatinine levels and low clearance rates caused more postoperative renal problems. Patients with longer cardiopulmonary bypass and aortic cross-clamping times did not have higher rates of renal disorders. The need for IABP support, intensive care and hospital stay times were higher in the group with malignant renal dysfunction. No significant difference was found between serum creatinine levels, computed and 24-hour creatinine clearance rates for their predictive value for assessing renal function.
Preoperative renal dysfunction is a risk factor, increasing morbiditiy and mortality after coronary artery bypass surgery. 24-hour creatinine clearance tests are cumbersome for assessment of renal function preoperatively and has no additional benefit over a simple measurement of serum creatinine level.

OP-138 - CARDIAC ARREST AND EMERGENCY REOPERATION IN CABG

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INTRODUCTION: Cardiac arrest following CABG surgery has a high mortality and morbidity unless radical management is not carried out. Conventional medical supportive therapies and in desperate situations assist device employment have been traditional treatment modalities. Alternatively emergency reoperation has been undertaken infrequently due to the uncertainty of the arrest cause and insufficient data present in literature.
MATERIAL-METHOD: Between 2002 and 2006, 24 perioperative arrest patients have undergone emergent reoperation; and saphenous vein reimplantation distal to LITA has been carried out in all cases. Mean age was 60±9 years and 22 were male (91%). In 16 cases (66%) cardiac arrest took place in the first postoperative day. Seven of these cases have been resuscitated by open chest method. The other 8 cases had cardiac arrest in operating room following CPB weaning or in beating heart technique following anastomosis. Except one patient all were reoperated without coronary angiography due to unsuitable hemodynamic situation.
RESULTS: Hospital mortality was 7 (29%). Mean postoperative intensive care unite and hospital stay days were 7.3±15.8 and 18.7±26.2 respectively. The most frequently encountered complications were acute renal failure and low cardiac output.
Coronary reoperation and saphenous vein reimplantation is a good alternative to conventional management methods in cardiac arrest situations.

OP-139 - COMPARISON OF PER-OP PULMONARY FUNCTION TESTS OF OBESE FEMALE AND MALE PATIENTS WHO UNDERWENT CORONARY ARTERY BY-PASS SURGERY

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INTRODUCTION AND AIM: There are number of factors which cause pulmonary complications in coronary by-pass surgery besides obesity.This condition shows a difference in obese females and males..The study is planned to investigate these variations.
MATERIAL-METHOD: 124 female (mean age of 57.15±5,77) and 191 male (mean age of 60.57±7.02) patients were included into this study.They were compared according to their per-op pulmonary complications.
RESULTS: There was a statistically meaningful difference ($p< 0.001$) between the two groups as male patients had excess of weight(F 93.39±7.47,M 99.56±5.39) but their body mass indices (BMI) were lower(F 34.83±2.44, M 32.99±2.29) than the females.Smoking rates were higher in males and it was statistically significant ($p<0.001$).
FVC (L) (forced vital capacity) of the pulmonary function tests (F 2.98±0.32, M 4.38±0.64) was distinct in the pre-op period, but was indifferent in the post-op period (F 2.44±0.5, M 2.33±0.54).FEV1 (expiratory volume in the first second) was different ($p<0.01$,$p<0.01$) in the pre-op (F 2.44±0.60, M 3.42±0.67) and post-op periods (F 2.00±0.7,M 1.71±0.96). FEV1/FVC was indifferent in the pre-op period but was different in the post-op period ($p>0.05$, $p <0.001$).
PaO2 was statistically indifferent at the pre-op period in their arterial blood gases but was lower in males at the post-op period and the statistical difference was meaningful($p<0.001$).PaCO2 values was higher in females during the pre-op period but it was higher in the post-op period in the males and the statistical difference was meaningful ($p<0.001$, $p<0.0001$).
There was no difference in the post-op pulmonary complications.Intubation periods (F 18.62±6.94, M 15.30±4.71), ICU period (days) (F 3.06±1.12, M 2.73±0.98), hospitalization period (F 13.4±5.3, M 11.65±2.34) were statistically significantly different in females (in the order of $p<0.001$,$p<0.001$, $p<0.001$).
DISCUSSION: It was observed that the effects of the obesity in per-op pulmonary complications was different in female and males.It was considered that the increase in the intubation,ICU and hospitalization periods of the female patients may be due to the fact that females have a more sedentary life.

OP-140 - EFFECTS OF HEMOFILTRATION DURING CARDIOPULMONARY BYPASS ON BLOOD TRANSFUSION IN CABG PATIENTS

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AIM: The aim of the study was to evaluate the effects of hemofiltration during cardiopulmonary bypass on blood transfusion in patients undergoing CABG operation.
METHOD: Sixty five consecutive patients undergoing CABG were involved in the study. The patients were randomly asked for informed consent for hemofiltration during CPB. Twenty nine of these patients underwent CPB with hemofiltration with informed consent (Group I). The rest of the patients were operated with routine CPB technique without hemofiltration (Group II). The demographic data and pre, per and postoperative hematologic data of the patients were collected. The amount of transfused blood and blood products were recorded.
RESULTS: The mean age of the patients was 67, 3 ±3, 4 years old. The comparison of groups revealed no significant difference in demographic data. The peroperative data were similar, too. The number of grefts, cross clamp and CBP periods, the total operation time and total mechanical ventilation period, blood loss and hemodynamic data and total hospital stay were similar. The only significant difference was the values of hematocrit and hemogram levels during postoperative first 2 days and units of transfused blood and blood products. The hematocrit and hemogram levels were significantly higher in hemofiltration group at the end of operation, and during the postoperative first 2 days counts.. Similiarly, Group I significantly received less fresh frozen plasma ($p<0.05$), RBC ($p<0.05$), and total blood ($p<0.05$), transfusion when compared to Group II.
CONCLUSION: Hemofiltration have potential beneficial effect in selected patients undergoing CABG. Our results showed that the use of hemofiltration may lower the amount of transfused blood and blood products. This can be useful in patients with comorbidities as higher hematocrit levels and less transfusion may lower complications.

OP-141 - THE ROLE OF BRAIN NATRIURETIC PEPTIDE IN PREDICTING POSTOPERATIVE COMPLICATIONS IN PATIENTS UNDERGOING CORONARY ARTERY BYPASS GRAFTING

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The heart is an endocrine organ, which synthesizes 2 different types of natriuretic peptides: atrial natriuretic and brain natriureticpeptide (BNP). The purpose of this study was to assess the relationship between preoperative BNP levels and postoperative complications and outcomes in patients undergoing isolated coronary artery bypass grafting (CABG). The study consisted of 85 patients undergoing first time elective CABG. There was a significant correlation between preoperative BNP levels and preoperative ejection fraction, number of vessels grafted and cross clamp time (p=0,004; p=0,016; p=0,041 respectively). There was a higher preoperative median BNP level in patients requiring the inotropic support (65,25pg/ml vs 189pg/ml p=0,004), in patients who developed new onset postoperativeatrial fibrillation (65,3pg/ml vs 197pg/ml p=0,006), and in patients who required intra-aortic balloon pump (68pg/ml vs 325pg/ml p= 0,021).
This study suggests that baseline plasma brain natriuretic peptide concentration predict post operative new onset AF, IABP usage and inotropic support in patients undergoing first time elective CABG.

CORONARY ARTERY DISEASE AND HEART VALVE DISEASES: FROM BASIC TO COMBINED OPERATIONS

OP-142 - PLASMA OXIDATIVE STATUS, PROLIDASE, PARAOXANASE AND ARYLESTERASE ACTIVITIES IN PATIENTS WITH CORONARY ARTERY DISEASE AND HEART VALVE DISEASES

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BACKGROUND: Plasma paraoxanase (PON), arylesterase (AREST) activities, and oxidant stress are related to coronary artery disease (CAD). The aim of the study was to compare the plasma levels of antioxidants by measuring total total oxidation status (TOS) and total antioxidant capacity (TAC), prolidase, PON, AREST in CAD, heart valve disease and control groups.
MATERIALS-METHODS: Study population included 21 patients with coronary endarterectomy (Group I, 19 male, mean age: 65 ± 11 years), 50 patients with heart valve replacement (HVR) (Group II, 25 male, mean age: 52 ± 13 years) and 20 healthy volunteers (Group III, 6 male, mean age: 56 ± 14 years). Plasma prolidase, PON and AREST activities were measured spectrophotometrically. Oxidative and anti-oxidative status was evaluated by measuring plasma TOS, TAC and oxidative stress index (OSI).
RESULTS: Plasma prolidase activity was significantly greater in control than patients group (51.23.± 5.9 U/L vs. 40.21 ± 4.9 U/l, respectively, p<0,001). But no statistically significant differences between Group I and II (39.20 ± 4.6 U/l and 41.47 ± 4.7 U/l, respectively, p=0,111) (Figure 1). PON and AREST activity were increased in patients group than control (both, p<0.001). TAC was lower, while TOS was higher in control than in patients (p<0.001, p<0.001; respectively). TAC and TOS are similar between Group I and II (both p>0.05). OSI was significantly different between Group III and Group I and II (p<0.001) (Figure 2).
CONCLUSION: Our results suggest that these parameters may be a role pathogenesis of the coronary and valvular heart disease.

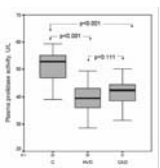

Figure 1: Comparison of groups according to plasma prolidase activity (C: control, HVD: heart valve disease, CAD: coronary artery disease).

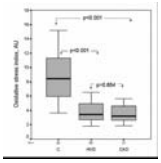

Figure-2: Comparison of groups according to plasma oxidative stress index (C: control, HVD: heart valve disease, CAD: coronary artery disease).

OP-143 - EUROSCORE ISA GOOD PREDICTOR OF PREOPERATIVE MORTALITY RISK CLASSIFICATION FOR COMBINED CABG+VALVE SURGERY

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OBJECTIVES: This study is done retrospectively on 61 patients who were operated between january 2003-january 2005.Operations were CABG with MVR or AVR or AVR+MVR.All euroscores mortality scores were figure outed by pre operative datas of patients and compared post operative real mortality.
METHODS: All these 61 patients were divided to three groups;group1 euroscore between 0-2(low risk group),group2 euroscore between 3-5(mid risk group) and group3 euroscore between 6 or higher(high risk group).And then these expected mortality ratios were compared with postoperative real mortality.
RESULTS: At group1 there were 9 patients and zero(%0) exitus and group1 expected mortality euroscore was %1.52.At group2 there were 36 patients and zero(%0) exitus and group2 expected euroscore mortality was %3.43.At group3 there were 16 patients and 5(%31.25) exitus and expected euroscore mortality was %8.79
CONCLUSIONS: For group1 and group2 there is no significant differance between p valu of expected mortality and real mortality.That means for these two groups euroscore is a good predictor of mortality risk stratifications.But for group3 p value is below to 0.001 so for this group euroscore has a poor estimation power.This type of poor results were taken also at high risk group of CABG and maybe same prognostic factors of CABG affects high risk group of CABG+VALVE SURGERY (for example obesity,DM)or maybe dueto low patients numbers for group3(16 patients at group3)

OP-144 - SIMULTANEOUS CARDIAC AND THORACIC OPERATIONS

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BACKGROUND: Simultaneous cardiac and thoracic lesions are uncommon, but when present they pose a therapeutic challenge for cardiothoracic surgeon. In this study, we retrospectively evaluated the results of the simultaneous cardiac and thoracic operations which were performed in our department and reviewed the literature.
METHODS: Between January 2001 and May 2007, 12 patients underwent simultaneous cardiac and thoracic operations. There were 2 female and 10 male patients ranging in age between 13 and 65 years, with a mean age of 33±4 years.
RESULTS: Eight patients underwent median sternotomy, 5 of whom required CPB. Three patients underwent left thoracotomy. The remaining one required both left and right anterior thoracotomy and axillary incision. The thoracic procedures consisted of wedge resection in 2 patients, ligation of bullae and pleurodesis in 3, cystotomy in 1, repair of diaphragm in 1, pleural decortication in 2, and repair of injured lung in 3. The cardiac procedures consisted of mitral valve replacement in 3 patients, coronary bypass in 2, replacement of ascending aorta in 1, pericardiectomy in1, pericardiopleural window in 2, and repair of left ventricle in 2 and pericardium in 1.
CONCLUSION: From our series and a review of the literature we conclude that simultaneous cardiac and thoracic surgery can be performed safely and should be considered as an alternative to staged treatment. Off-pump coronary artery bypass surgery should be preferred to avoid complications associated with CPB and systemic heparinization in a simultaneous operation.

OP-145 - CORONARY ARTERY BYPASS GRAFTING AND CONCOMITANT DESCENDING AORTA TO BIFEMORAL BYPASS VIA MEDIAN STERNOTOMY

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OBJECTIVE: Some patients have advanced atherosclerotic coronary and peripheral vascular diseases in which surgeons are sometimes forced to perform concomitant coronary and peripheral bypasses in the same session. We evaluated a new approach of combined coronary and aorto-bifemoral bypass grafting performed through median sternotomy using the descending aorta as the inflow source.
METHODS: 4 patients with advanced coronary and aortoiliac diseases were operated in the same session. Following the coronary artery bypass grafting (CABG), posterior pericardium was bluntly dissected and the proximal anastomosis of a bifurcated Dacron graft to descending aorta was performed. The limbs of the graft was passed through an opening in the diaphragm and then passed through retroperitoneal space. Two tunnels are created in both groins. The limbs passed through the tunnels and the distal anastomosis in the groins were carried out in the conventional fashion.
RESULTS: The postoperative course was uneventful in all 4 patients. The patients were discharged from the hospital on 7-10th postoperative day (mean 8th day). In the second year follow-up multi slice computerized tomographies and magnetic resonance angiographies, all grafts were patent.
CONCLUSION: We believe this technique is a reliable alternative procedure to consider in CABG patients who are not suitable candidates for standard aorto-femoral operations with reasonable morbidity and excellent patency rate.

Figure 1

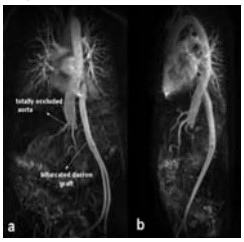

Figure 1a:Postoperative anteroposterior MR angiographic view of patient one. The occluded abdominal aorta and the bifurcated Dacron graft is shown. Figure 1b: Lateral MR angiographic view of patient one. Proximal anastomosis of the Dacron graft is demonstrated.

Figure 2

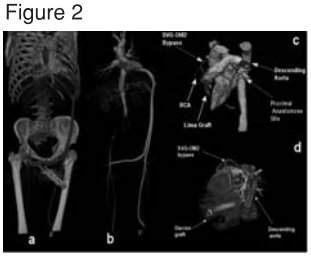

Figure 2a and 2b: Postoperative Multislice CT view of patient two. Aortobifemoral and left femoropopliteal bypass operation is shown. Figure 2c and 2d: Postoperative Multislice CT view of patient two demonstrating the coronary bypasses and the proximal anastomosis of the Dacron graft. SVG: Sapheneous vein graft; OM2: Second obtuse marginal branch of circumflex artery; LIMA: Left internal mammary artery

Figure 3

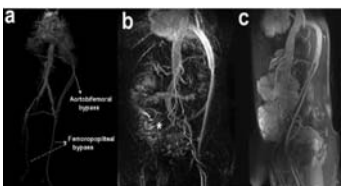

Figure 3a: Postoperative Multislice CT view of patient three demonstrating the bilateral common iliac artery stenosis, aortobifemoral and bilateral femoropopliteal bypasses. Figure 3b: Postoperative anteroposterior MR angiographic view of patient four. * is the aorto-right external iliac anastomosis. Figure 3c: Postoperative lateral MR angiographic view of patient four.

OP-146 - REOPERATIONS IN CARDIAC SURGERY: FEASIBILITY AND NECESSITY OF RESTERNOTOMIES

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Open heart operations are mainly performed via median sternotomy incisions. This classical standard approach offers easy access to all cardiac chambers and many great arterial and some hemithoracal structures. After 50 years of open cardiac surgery, reoperations are frequently performed in advanced centers. Progression of the underlying disease (e.g. coronary artery heart disease), reparations of residual anomalies (e.g. septal defects, right ventricle outflow tract restenoses or aneurysms, graft related problems) or re-replacement of dysfunctioning intracardiac prostheses (e.g. mechanical valves, bioprostheses) are main reasons for reoperations. Retrosternal adhesions create difficulties during this procesures and fatal injuries are not infrequent in inexperienced hands.
We have performed 46 reoperative procedures in more than 2000 open heart cases between May 2002 – June 2007. Initial operations have been performed in different centers including ours. Patients were between 3 and 76 years (mean 18,5) and time interval between the initial procedure and the reoperation was between 9 and 232 months. Early operative mortality was five, where 3 of them were coronary re-revascularization procedures.
Postoperative bleeding and ICU stay was longer in those patients, which has directly affected the number revisions, transfuaion of blood elements and hospital stay. Long term follow up was similar to the rest of our patient population.
We conclude, that reoperations are unavoidable happenings in cardiac surgery and increasing experience reduces its morbidity and mortaility rates in advanced centers. Management of those patients both pre- and postoperatively is very important and operative strategy is affecting the course.

OP-147 - CORONARY REOPERATIONS ON PATIENTS WITH LITA DEGENERATION

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PURPOSE: To retrospectively review experience on coronary reoperations for late term LITA dysfunction
MATERIAL-METHODS: 29 (4 female, 25 male) patients who underwent an isolated redo CABG procedure for a degenerated LITA graft between January 1996 to January 2007 were analyzed. The mean age of the patients was 61(30-74) with 11 patients undergoing urgent revascularization for acute coronary syndromes. The mean time between primary and redo CABG was 10±5 years (1-20 years). The mean ejection fraction was %41 (%22-%62). Patients with patent LITA grafts and patients who underwent additional procedures (valve replacement, aneurysmectomy) were excluded.
RESULTS: All patients underwent reoperation through a median sternotomy and with CPB. The mean number of distal anastomosis was 2.6 (1-4). Bypass to LAD was performed with a free RITA in 9 patients, saphenous vein graft in 17 patients and radial artery in 3 patients. Hospital mortality was 3 patients (10%). All 3 patients were operated urgently for acute coronary syndrome and died with low cardiac output, 2 of these patients were reexplored for bleeding. All survivors are under follow-up, with patients showing significant improvement in angina class and functional capacity
CONCLUSION: LITA grafts are usually resistant to degenaration but may fail during late follow-up. Reoperation in these patients has a higher mortality rate compared to primary CABG. Poor left ventricular function and urgent surgery increases operative risk.

OP-148 - THE RESULTS OF THE HEART OPERATIONS IN PATIENTS EIGHTY YEAR OF AGE OR OLDER

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The purpose of this study is to evaluate the results of the heart operations in patients eighty years of age or older.
Between January 2006 and May 2007, 103 patients eighty years of age or older (>= 80) underwent cardiac surgical procedures at Kosuyolu Hert and Research Hospital Istanbul.
43 (41.7%) patients were female, 60 (58.3%) were male and mean age was 81.24± 2.3 (80-93). Forty-nine (47.6%) patients underwent CABG-CPB, 24 (23.3%) had OPCAB, 12 (11.6%) had AVR, 6 (5.8%) had CABG plus AVR, 4 (3.9%) had CABG plus MVR, 3 (2.99%) had AVR plus MVR, 2 (1.9%) had CABG plus Carotid endarterectomy, 2 (1.9%) had CABG plus mitral reconstruction, 1 (0.9%) had mitral reconstruction.
The percentage of LIMA usage was 74.7% (65/87) in the subgroups of the patients isolated conventional CABG-CPB, OPCAB and combined CABG with valvular procedure. Total hospital mortality was 23.3% (24 of 103) patients.
The mortality rate has been high in the patients eighty years of age or older. Comorbid conditions should be evaluated carefully for the operation indication in these patients

OP-149 - EARLY AND MID-TERM RESULTS OF RING ANNULOPLASTY IN TREATMENT OF CHRONIC ISCHEMIC MITRAL INSUFFICIENCY

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Avrupa Safak Hospital, Istanbul, Turkey

OBJECTIVE: Ischemic mitral insufficiency is an undesired complication of myocardial infarction leading to progressive heart failure. But stil there is debate on indications of surgery and type of surgical procedure. In this study we present early and mid-term results of Ring Annuloplasty in treatment of chronic ischemic mitral insufficiency.
METHOD: In our institution we applied Ring Annuloplasty to 44 patients. Grade of mitral insufficiency was 2/4 in 12,3/4 in 25 and 4/4 in 7 patients. LIMA was harvested in 36 patients (86.36). Mean number of grafts is 3.2±0.7. We prefered to use flexible circular ring of Sovering. RESULTS: Mean ICU stay was 3.36±1.94 days and patients were discharged at 8.21±3.61 days. In hospital mortality was 4 (9.1). All were lost because of low cardiac output. Post-operative 13.1±4.66 (6-22) month echocardiographic studies revealed significant decreases in left ventricular end-systolic and end-diastolic diameters. Residual leak was 1.12 avaragely.
CONCLUSION: Allthough some degree of mitral insufficiency persists after aplication of mitral rings, Ring Annuloplasty is still the prefered way to treat ischemic mitral insufficiency and lead to beter improvement in patients conditions.

OP-150 - COMBINED CORONARY ARTERY BYPASS GRAFTING AND CAROTID ENDARTERECTOMY; EARLY POSTOPERATIVE RESULTS

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[2]Department of Anesthesiology, Avicenna Hospital, Istanbul, Turkey
[3]Department of Radiology, Avicenna Hospital, Istanbul, Turkey

Since high-grade (>70%) internal carotid artery stenosis is a risk factor for stroke in patients undergoing coronary artery bypass grafting (CABG) optimal management of patients with combined coronary and carotid artery disease is still controversial. The aim of this study is to review early postoperative results of the combined CABG and carotid endarterectomy (CEA) performed at the Clinic of Cardiovascular Surgery of Avicenna Hospital in Istanbul.
The doppler ultrasound evaluation for 163 patients revealed carotid arterial stenosis over 50% in 39 patients (23,9%), and critical operative stenosis in 23 patients (70% stenosis or over at least one carotid artery or ulcerated plaque in any degree of stenosis and peak flow was operative criterias) (14,11%). Three patients were symptomatic and two of them had early transient ischemic attack. We performed CABG operations for 158 patients between September.2006 – May.2007. Eighteen of these patients had combined CABG + CEA surgery (11,38%). Two of these patients with bilateral carotid stenosis had CEA one week before combined procedure.
There was no major complication except one patient with incomplet vocal cord paralysis(5.5%). The youngest patient was 36 years old and oldest one 76 years old. The mean age was determined 63,7. Seven patient's age was below 65 (38,8%).
We recommend routine doppler ultrasound scanning for carotid stenosis during evaluation for CABG. If critical carotid stenosis is determined, the combined surgery should be peformed. According to our series the combined surgery for both coronary and carotid stenosis is effective and safe.

PENETRATING CARDIOVASCULAR INJURIES, CHALLENGES IN PEDIATRIC CARDIOVASCULAR SURGERY

OP-151 - PENETRATING CARDIAC INJURIES

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Departmant of Cardiovascular Surgery, Erciyes University, Kayseri, Turkey

To obtain this, we reviewed 63 cases suffering from penetrating heart wounds that admitted to Erciyes University Medical Faculty, Cardiovascular Surgery Department between 1987 to 2006 retrospectively. 56 of them were male and rest were female, age ranged from 12 to 60 years (mean was 30.1 years).57 cases had stab on on admittion were underwent to rapid resuscitation and emergency surgery. Mortality rate was 12.6% with 8 cases.In conclution, most importance factor effecting mortality rate is clinical condition of patients. Rapid transport and emergency resuscitative operation applied by weil trained specialists decreases mortality rate.

OP-152 - OUR EXPERIENCES IN HEART AND GREAT VESSEL INJURIES

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Trakya University Medical Faculty, Department of Cardiovascular Surgery, Edirne, Turkey

OBJECTIVE: We aimed to examine results of the surgical interventions in heart and great vessel injuries with high mortality risk.
MATERIAL-METHOD: Eighteen cases which were admitted to Emergency Service of Trakya Univercity Hospital and operated with penetrating heart injury were examined retrospectively between March 1999 and February 2007. 14 (77.7%) of the cases were male and 4 (23.3 %) female. Mean age was 38.5 (16-77). Mean duration between injury and operation time was 65±25 (30-120) minutes. While diagnosis was correcting by radiographically and echocardiographically in hemodinamically stabilized patients, in three patients cardiac injury was detected intraoperatively performed by other surgical clinics. In 9 patients median sternotomy, left lateral thoracotomy in 5 patients, right lateral thoracotomy in 1 patient, median upper abdominal and subxiphoidal incision was made in 3 patients.
Firstly, cardiac hemorragies was controlled with finger compression. Then sutured with tephlon pledget sutures or pericard supported 3-0 polyprophilene sutures. Aorta and vena cava injuries were repaired by 3/0 and 4/0 polyprophilene sutures. Case with branch of right coronary arterial injury was repaired by 4/0 polyprophilene suture. Lung injury in three patients, liver, spleen and gall bladder injury in 1, stomach injury in 1 patient were obtained as additonal injuries. Probable nonpenetrating buckshot injuries was detected on aorta and pulmonary artery in one case injured with firearm. Case with right atrium injury was repaired by 4/0 polyprophilene suture.
FINDINGS: Localization of injury site is frequently right ventricle with six cases as in seen Table-2. Two of the cases died in Emergency Service, 2 intraoperatively and 2 postoperatively in intensive care unit (Mortality 27,7 %). Twelve patients treated primary repaired without postoperative complication and discharging from hospital while paraplegia was obtained in one case with descendan aorta and medulla spinalis injury.
DISCUSSION: Ten percent of the penetrating thorax injuries related to the heart. Mortality is high in heart injuries. It is mentioned that penetrating heart injuries are icreasing progressively in recent years. Better prehospital care, faster transportation and resusitation are the reasons. Hemodinamically stabilized patients with penetrating thorax trauma can be examine echocardiographically. Right ventricle is most frequently injured site of the heart because of its anatomic localization and followed by left ventricle. Survival rates are changing in different series between 60% and 87%.
CONCLUSION: As a result emergency interventions in cardiac injuries can save life but delay in diagnosis and treatment increase morbidity and mortality.

Table 1: Reasons of Injury

Reasons of Injury	Number of Patients	%
Penetratin	11	61.1
Firearm	3	16.7
Traffic Accident	2	11.1
Iatrogenic	2	11.1

Table 2: Injury Sites

Injury Sites	Number of Patients	%
Right Ventricle	6	33.3
Right atrium	1	5.5
Aorta	2	11.1
Vena cava	2	11.1
Right Coronary Artery Branch	1	5.5
Internal torasic artery	1	5.5
Thorax	3	16.6
Pericard	2	11.1

OP-153 - STAB WOUND OF THE HEART AND THE IMPORTANCE OF RAPID SURGICAL INTERVENTION

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Rapid action and immediate surgical intervention increase the chance of saving the life of the patients with penetrating heart and great vesseles injury. Aggressive management is currently recognized to lead to more optimal results than conservative management. Cardiothoracic injury causes 25% of deaths immediately following trauma, and the majority of these fatalities involve either cardiac or great vessel injury. The bullet injury of the heart is a common phenomenon in war surgery while in civil cardiac injury the stab wound accidents is more common. Such injuries could be easily missed if attention is placed only on the more obvious injuries.
We present three cases of penetrating cardiac injury concentrating lights on the efficacy of the rapid action that give us more chance to save the life of the patient.

OP-154 - TRAUMATIC ARTERIOVENOUS FISTULAS

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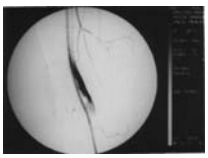
Department of Cardiovascular Surgery, Erciyes University, Kayseri, Turkey

Traumatic arteriovenous fistulas can be seen as a result of penetrating injuries or as a complication of a surgical intervention. In our department we managed and treated 19 patients with traumatic A-V fistula between 1983-2006 years. 15(78.95%) patients were male and 4(21.05%) patients were female. The avarage age was 35.33(The youngest being 10, the oldest being 61 years old). Etiology was stabbing in 11patients and gun shot injury in 8patients.Five fistulas (26.31%)were between right superficial femoral artery and vein leading among traumatic fistulas. Saphenous vein graft was mostly used in arterial repairs (52.63%), while primary suturing in venous repairs. Except one of them who underwent amputation at underknee level due to infection,all patients had discharged healty.

resim1 **resim1** **resim1**



resim1: radiologic view of traumatic arteriovenous fistulas

resim2: view of traumatic arteriovenous fistulas

resim3: intraoperative view of traumatic arteriovenous fistulas

OP-155 - ARTERY INJURIES IN THE UPPER EXTREMITY

Tasdemir Haluk Kutay, Ceyran Hakan, Emirogullari Omer Naci, Kahraman Husnu Cemal, Akcali Yigit Fevzi
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Artery injuries in the upper extremity are among the injuries which lead to serious functional disorders, loss of limbs or even mortality. The treatment is performed by urgent resusciation early vascular surgery and injuries which have arose are treated as well. In our department during the period of January 1978 to December 2006, 233 cases with upper extremities were examined retrospectively and as a result were surgically intervened. Of the cases, 184 (78.96) were male and 49 (%21.04) were female, the average rate was found as 28.63 (their ages ranging from 4 to 79). Penetrating injuries. Of the 173 (%74.25), penetrating injuries were the most common reason, while radial and ulnar arteries were the most frequent reasons for the 155 case, the number of the brachial injuries were 80. the mostly preferred surgical techniques was end to end anastomosis of the 119 case. In our study the amputation rate of the 2 case was found as %0.8 undesifable consequences may be inevitable since the blunt injuries of the axilliary and subclavian arteries are frequently accompanied by neurogenic, soft tissue and osseous injuries. However the injuries of more distal arteries are rarely accompanied by the injuries of neural and/or soft tissue injuries and the consequences are more favorable.

OP-156 - PERIPHERIC VASCULAR INJURIES

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Trakya University Medical Faculty, Department of Cardiovascular Surgery, Edirne, Turkey

OBJECTIVE: Vascular injuries that needed emergency intervention are important healt problem because of high mortality and morbidity rate (amputation rate is 10-40 %). We aimed to examine retrospectively the patients that treated with peripheric vascular injuries in our clinic.
MATERIAL-METHOD: In our clinic, surgical intervention was applied to 188 patients with peripheric vascular injury between February 2000 and February 2007. 14 (7%) were female and 174 (94%) were male. Mean age was 33 (3-82).
FINDINGS: The reasons of injuries were listed in table 1. Mean time duration between injury and admission to emergency service were 3 hours (20 minutes-72 hours). Localization of the injuries were shown in Table 2. In 127 (67.5%) patients upper extremity vessel, 44 (24.4%) lower extremity vessel, 15 (8%) great vessel and 2 (1.1%) visceral vessel injuries were obtained. Radial artery injury in 46 (24.4%) patients were most frequently seen while in 32 (17.0%) patients both arterial and venous injuries were seen. Accompanying muscle and tendon injuries with vessel injuries in 68 (36.2%) cases were most frequently seen while, in 34 (18%) cases bone fracture and in 26 (13.9%) cases nerve injury were obtained. Applied surgical procedures were shown in table-3. End to end anastomosis technique that applied for 86 cases (45.6%) was the most frequent one. Amputation was performed 2 patients (1.0%) and 4 patients were died.
CONCLUSION: Nowadays, mortality and morbidity related peripheric vascular injury take importance in spite of improving surgical techniques. Experiences in vascular surgery field decreases mortality and amputation rates. We thougt that mortality and morbidity rates in vascular injuries decrease by early transport, early diagnosis and multidiciplinary interventions.

Table 1. Injury Reasons

Type of Injury	Number(n)	%
Firearm	23	12.4
Penetrating	129	68.6
Blunt Trauma	29	15.4
Iatrogenic	6	3.1
Electric shock	1	0.5
Total	188	100

OP-156

Tablo 2. Localization of Injuries

Localization	Artery	Artery-Vein	Vein	Total
Radial	46			46
Ulnar	37			37
Radial+Ulnar	19			19
Brachial	10	7	2	19
Axillary	1	3	1	5
Subclavian	2			2
Femoral	9	10	2	21
Popliteal	3	10	2	15
Tibial	4			4
PFA side branch	2			2
A.Glutea inf	1			1
Iliac	4	2		6
V.Cava			6	6
Aorta	1			1
A.Carotis int	2			2
A.Mes. sup	1			1
Vena portae			1	1
Total	142	32	14	188

Tablo 3. Surgical Procedures

Surgical Procedure	Number(n)	%
End-to-end Anastomosis	86	45.6
Lateral Repair	20	10.7
Saphenous Vein Graft Interpozition	41	21.8
Cephalic Vein Graft Interpozition	17	9.1
Syntethic Graft Interpozition	14	7.5
Ligation	9	4.8
Saphenous Vein Patch Plasty	1	0.5
Total	188	100

OP-157 - CAN EUROSCORE PREDICT MORBIDITY AT OPEN HEART SURGERY

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Turkye Yuksek Ihtisas Hospital Cardiovascular Surgery Department Ankara, Turkey

OBJECTIVES: Euroscore risk stratification is applied 2988 patients who went open heart surgery between january 2003-january 2005 at Turkye Yuksek Ihtisas Hospital cardiovascular surgery department to see 'can euroscore estimate morbidity of open heart surgery patients preoperatively'.
METHODS: Congenital heart surgery patients were not included to study.Patients were divided to three groups;euro score between 0-2 is goup 1,3-5 si group 2,6 and higher is group3.Risk stratification of morbidity is done by preoperative value of all patients. Democratic datas of groups are;age between 17-80 years old;%68.6 male,%31.4 female; hyperlipidemia %39.1; diabettis mellitus %20.9; cigarette smoking %33.7; hypertension %35.8; family history %35.4;obesity %18.8; pulmonary hypertension %8.4; chronic obstrictive lung disease %6.3; extracardiac arteriopathy %4.2; neurologic dysfunction %2.8;chronic renal dysfunction %1.7,mean ejection fraction of patients were %54.8 (between %25-75). Operative distrubition of patients; CABG 2120 patients(%71),MVR 425(%14.2),AVR 147(%4.9), AVR+MVR(%4.5),CABG+AVR and/or MVR,CABG+Carotis artery endarterectomy(%0.6), others 83(%2.8).
RESULTS: Mean hospitalization time of group1:6.06 days,group2:6.35 days, group 3:7.92 days. Mean entubation time interval of group 1:14.56 hours, group 2:14.97 hours, group 3:31.34 hours. mean ICU staying time of group1:1.57 days, group 2:1.67 days,group 3:3.48 days
CONCLUSION: Hospitalization time period differances are istatisticialy meaningfull at three groups,lower the euroscore shorter the hospitalization. As an entubation time interval differances are also meaningfull at three groups,when risk score get high level,entubation time become longer.Besides these two parameters ICU staying time is much more longer at high euroscore groups.So we found a corralation between euroscore and morbidity of patients

OP-158 - CARDIAC COMPLEXITY AND POSTOPERATIVE INFECTION IN PEDIATRIC CARDIAC SURGERY

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[2]Department of Pediatric Infectious Diseases, Hacettepe University, Ankara, Turkey

BACKROUND: Post surgical infectious complications are major causes of morbidity and mortality in pediatric patients undergoing cardiac surgery. The aim of the present study is to determine whether underlying cardiac malformations and surgical procedures add any additional risk for infection in pediatric patients.
MATERIAL AND METHODS: Patients data were retrospectively collected from PCVS-ICU medical file and pediatric microbiology laboratory results from Sep 2004-Dec 2005. Because of variety of cardiothoracic surgical procedures and cardiovascular diseases, the patients were grouped according to complexity score.
RESULTS: 168 patients who were operated were examined retrospectively. 92 patients had acyanotic and 76 had cyanotic congenital heart diseases. Then patients were regrouped into 4 classes, according to complexity scores. The infection rate was 23%, 17 out of 74 clinical documented infection and two microbiologically confirmed infection in group I, 24%, 7 out of 29 clinical documented infection and 2 microbiologically confirmed infection in group II, and 26% 8 out of 30 clinical documented infection and two microbiologically confirmed infection group III, while in class IV the infection rate was % 37, 10 out of 27 clinical documented infection and 3 microbiologically proven infection that was significantly higher. In both group III and IV were infected with more pathogenic and resistant infectious agents.
CONCLUSION: There was no difference in prophylactic agents and no significantly difference of duration in mechanical ventilation when all classes were compared. When the patients who die during post operative periods were eliminated from the study, the mechanical ventilation time increased in category IV.

OP-159 - RENOVATED HEART SURGERY CLINIC OF CERRAHPASA SCHOOL OF MEDICINE: EVALUATION OF FIRST 6 MONTHS

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The results of the open heart surgery operations performed at our renovated university clinic were presented.
A total of 129 patients (114 men, 82 women; mean age 48.75±21.02 years) underwent open heart surgery in our center between December 2006 and May 2007. The main operations were performed for coronary artery surgery to 83 (64.3%) patients. Other etiologies were: mitral valve disease (n=15), aortic valve disease (n=10), ascending aortic aneurysm (n=2) acute type A aortic dissection (n=2), atrial septal defect (n=13). tetralogy of Fallot (n=5) and patent ductus arteriosus (n=2). Main population of the patients were referred from various clinics from our university. Therefore the rate of comorbidity of the patient population is high. Major comorbidities were; diabetes mellitus (n=35), goiter history (n=20), pulmonary hypertension (n=8). history of renal transplantation prior to cardiac surgery (n=3), active infective endocarditis (n=3), systemic lupus erythematosus (n=2) and von Willebrand's Disease (n=1) There were 3 in-hospital mortality (%2.3). Major postoperative complications were wound infections in 3 patients (2.3%), low cardiac output in 2 patients (1.5%), new onset renal insufficiency in 2 patients (1.5%), temporary neurologic disorder in 2 patients (1.5%). Total heart block was observed in 2 patients with an extensive calcified aorta and permanent pacemaker device was inserted. There was no reoperation, perioperative myocardial infarction and mediastenitis. Open heart surgery operations were restarted with a renovated intensive care unit and operation theaters since December 2006. Shortly after its renovation, we think that open heart surgery has been performed successfully despite of high comorbid diseases.

CONGENITAL HEART DISEASES: IMAGING, ANESTHESIA, INTERVENTIONAL AND SURGICAL APPROACHES

OP-160

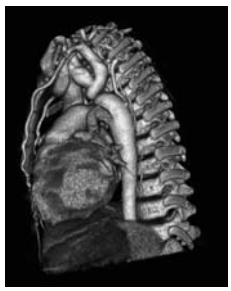

Figure 1
aortic coarctation

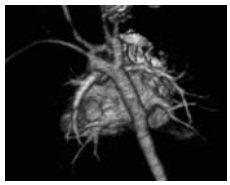

Figure 2
double aortic arch

Figure 3
total abnormal pulmonary venous connection

OP-160 - MULTIPLANAR AND THREE DIMENSIONAL MULTI-SLICE COMPUTED TOMOGRAPHY ANGIOGRAPHY IN EVALUATION OF CONGENITAL THORACAL VASCULAR ANOMALIES

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AIM: To evaluate the usefulness of Multi-Slice Computed Tomography (MSCT) angiography in diagnosis of congenital thoracal vascular anomalies.
MATERIAL-METHOD: Thirty-nine patients (21 male, 18 female) aged between 5 days and 16 years (mean 2 years) with the suspicion of thoracal vascular anomaly were evaluated by 16 detector MSCT between August 2005-June 2006. Multiplanar and 3 dimensional images were obtained studied. Additionaly conventional angiography was performed in 15 patients. Operation was planned by 3 dimensional CT images in 15 patients. The findings of CT angiography were compared with conventional angiography and the results of surgeries.
RESULTS: The vascular anatomy and pathology were successfully displayed in all of the patients by MSCT angiography. The hipoplasia of arcus aorta, coarctation of aorta, double aortic arch, interrupted aortic arch, abnormalities of pulmonary arteries, truncus arteriozus, transposition of great arteries, abnormalities of cephalic arteries, partial or total abnormal pulmonary venous connection, persistant left superior vena cava were demonstrated alone or in combination. All of findings of the conventional angiographies were compatible with MSCT anjiography results. Additionally compression of airways, lung and mediastineal pathologies along with detailed anatomy of complex vascular anomalies were reported by MSCT angiography before surgery.
CONCLUSION: MSCT angiography is an important diagnostic tool to evaluate congenital thorachal vascular anomalies in children. Along with vascular anomalies, it enables to evaluate airways, lung parenchyme and neighbouring structures. Besides, three dimensional lifelike images are rather useful to plan surgery.

OP-161 - LIVER FUNCTION OF DESFLURANE VERSUS SEVOFLURANE ANESTHESIA IN CYANOTIC CHILDREN FOR OPEN HEART SURGERY

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INTRODUCTION: Liver dysfunction (3.2%) is not a frequent complication of cardiac operations. This complication sometimes leads to hepatic failure, which is associated with a significant morbidity and mortality. Several risk factors have been evaluated for the devolopment of alterations in liver function. Anesthetic agents, cardiac failure and cardiopulmonary bypass (CPB) are play a role of the etiology of liver dysfunction. Thus, assessing alterations of liver function integrity in cardiac operation patients appears to be of high importance in developing strategies to avoid liver dysfunction in the postoperative period. The actions of desflurane and sevoflurane on the liver function seems to similar in many studies. Aim of the study, the perioperative liver function in cyanotic children undergoing desflurane and sevoflurane anesthesia for open heart surgery.
MATERIALS AND METHODS: The perioperative liver function in 28 cyanotic patients who underwent open heart surgery were compared with sevoflurane and desflurane effect. Desflurane was given at concentration levels of 5-6% before CPB and 2-3% during CPB, sevoflurane was given at concentration levels of 1-2% before CPB and 1% during CPB with BIS monitorization after standard anaesthesia induction. The induction of anesthesia was provided with thiopental, morphine, vecuronium. Two groups were given desflurane and sevoflurane before and during CPB. Group A: Desflurane-cyanotic patients (n=14), Group B: Sevoflurane-cyanotic patients (n=14). Blood samples were performed, before induction, at the end of the operation and 24th hours postoperatively. Liver function was assessed at these times by determining plasma concentrations of alanine aminotransferase (ALT), aspartate amino transferase (AST), g-glutamyltransferase (GGT) and alkaline phosphatase (AP).
RESULTS: There were no differences between the groups regarding to gender, age, body weight, CPB time and aortic cross clamping time. At the end of the operation and 24th hours postoperatively, plasma AP levels were significantly lower in the Group B than the Group A ($p<0.05$). The patients anesthesied with desflurane had significantly more liver dysfunction compared with the patients anesthesied with sevoflurane.
CONCLUSION: In conclusion, liver function should be monitored more closely for AP changes and liver damage in children undergoing desflurane anesthesia for congenital heart surgery.

OP-163 - COMPARISON OF EXTRAPLEURAL VERSUS INTRAPLEURAL APPROACH FOR CLOSURE OF PATENT DUCTUS ARTERIOSUS IN VERY LOW WEIGHT BIRTH PREMATURE INFANTS

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[2]Kavaklidere Umut Hospital, Dept. of Cardiovascular Surgery, Ankara, Turkey
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BACKGROUND: Failure of postnatal closure of the ductus arteriosus (DA) remains some complications of very preterm birth.We retropectively rewieved our 22 premature infants with DA treated surgically due to severe pulmonary hypertension (PH) through left posterolateral thoracotomy insicion using extrapleural or intrapleural approach.
MATERIAL-METHODS: Study parameters for infants with PDA included complications of surgery,hospitalisation time,lenght of stay in intensive care unit and artificial respirator ventilation.Mean age at operation was 22±6days and mean weight was 1750gr (range from 860 to 2490gr) were treated through a posterolateral skin insicion.The pleura was opened in the first group (9 cases), but it was detached with blunt dissection in the extrapleural group in the second group (13 cases).
RESULTS: Three patients died after operations.The remaining patients were extubated after the operation.Mean intensive care unit stay and duration of mechanical ventilation were ranged from 5.8 to 8 days respectively in the first group,however,mean ICU stay time and duration of artificial respiration were as follows;5 days to 3.2 days respectively in the second group. Duration of artifial ventilation and staying of ICU time decreased in the intrapleural group.No patient needed chest tube insertion in the second group after operation.
CONCLUSION: Though the medical approach is an initial treatment in infants with PDA, it is associated with fails to close of the PDA. We propose that early ductal closure via extrapleural approach in these cases because it is associted with low morbidy, shortening of ICU stay, duration of mechanical ventilation time than the cases who undergoing surgery through transthoracic approach.

OP-164 - RESULTS OF THE ARTERIAL SWITCH OPERATION IN TAUSSIG-BING HEART IN THE SETTING OF DOUBLE OUTLET RIGHT VENTRICLE

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[2]2Department of Pediatric Cardiology, Siyami Ersek Thoracic and Cardiovascular Surgery Training and Research Hospital, Istanbul, Turkey

BACKGROUND: The arterial switch operation has become the most common repair for double outlet right ventricle with a subpulmonary ventricular septal defect. Single centre experience of the arterial switch operation in Taussig-Bing heart is reported.
METHODS: Since 2003, ten patients with double outlet right ventricle and subpulmonary ventricular septal defect (5 of 10 are associated with an aortic arch obstruction and/or coarctation) have undergone complete single-stage repair. The median age of repair was 53.5 days and the median weight was 4.05 kg. The great artery position was side by side in 5 patients. Surgical technique involved the arterial switch operation and ventricular septal defect closure in all patients. In four infants, the aortic arch was concomitantly enlarged with an homologous pericardial patch under deep hypothermic circulatory arrest. One neonate with coarctation required resection and extended end to end anastomosis and arterial switch procedure concomitantly.
RESULTS: There has been one early death due to right heart failure on postoperative day 10. The mean follow-up is 12.4 months. There have been no reoperations for recurrent aortic arch obstruction, residual coarctation, residual pulmonary artery stenosis or unrecognized ventricular septal defect. In 2 patients, permanent pace maker was placed due to 3rd degree atrio-ventricular block. All survivors are currently in clinical state of New York Heart Association functional class I.
CONCLUSIONS: The arterial switch operation with ventricular septal defect closure can be applied to all great artery relationships. Concomitant single-stage repair for Taussing-Bing heart with aortic arch obstruction and coarctation achieves excellent early term prognosis. Long term follow-up and comparative studies are mandatory to conclude the efficacy of the presented technique.

OP-165 - SURGICAL REPAIR OF COARCTATION OF AORTA: REVIEW OF 115 CHILDREN OPERATED IN A SINGLE CENTER

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Untreated CoA is associated with premature mortality and morbidity. Here we present a retrospective study to review the experience of a single center with surgery for CoA over 10 years to assess surgical and late mortality and morbidity, thereby also identifying survivors who could be targeted for systematic clinical follow-up in order to prevent long-term complications. We further wanted to examine the role of possible risk factors for surgical and late mortality.
We identified 115 patients 25 neonates, 40 infants and 50 children who were operated for CoA and the present cohort is not very different from recent series where neonates and infants predominate and severe cardiovascular morbidity is very frequent. 62.6% of the patients were male. Mean age at surgery was 40 months (min 8 days – max 15 years) and maximum follow-up was 11 years (median 8 years).
The classical technique of resection and end-to-end anastomosis has been proved to be feasible in majority (81pts) all cases, with the evident advantage of avoiding foreign material other than sutures. In the small child, particularly in the presence of hypoplastic aortic arch, our current policy is to consider as the first choice the technique of resection and end-to-end anastomosis enlarged to the aortic arch (11pts). The subclavian flap is taken into consideration only in the presence of hypoplasia of the distal aortic arch (14pts). Graft interposition was prefered in 6 older patients. The technique of patch aortoplasty has been almost completely abandoned because of the known problems associated with the presence of a synthetic patch (3pts).
Of the total 115 patients 11.3% had interventions for recoarctation. 5.2% patients were treated for re CoA by surgery. The probability of avoiding death, re-intervention for CoA, re-intervention for associated anomalies and cardiovascular complications in the entire study population was 96%, 93% and 86% 1, 5 and 10 years after surgery, respectively.In our review overall mortality over the whole duration of follow-up was 4.3 %. Mortality in the early postoperative period was 1.7% and late mortality was 2.6%.
By considering the mean age residual/recurrent coarctation generally absent in older children, as in our experience, is more frequent particularly in two categories: neonates and patients with associated hypoplasia of the aortic arch. None of the neonates required antihypertensive medication after the repair. Also none of the patients but the ones with significant gradient at the repaired segment and had reintervention, antihypertensive medication 6 months after surgery. Complications occurred in the study population during follow-up mainly in neonatal and infantile age groups.
Although surgical repair for CoA seems to be the gold standard, it is still associated with mortality and morbidity and there is still need for reintervention. These, patients therefore need careful and close follow-up.

OP-166 - POSTERIOR PERICARDIAL ASCENDING-TO-DESCENDING AORTIC BYPASS THROUGH MEDIAN STERNOTOMY FOR COMPLEX AORTIC COARCTATION

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OBJECTIVE: Adult patients with complex forms of descending aortic disease remain a surgical challenge and have a high risk of postoperative mortality and morbidity. Surgical management may be complicated when there is an associated cardiac defect necessitating repair or a hostile anatomy exists due to previous thoracotomy or radiation precluding an anatomic repair.
METHODS: 6 patients that underwent concomitant intracardiac/ascending aortic aneurym repairs at the same stage with an ascending-to-descending extra-anatomic bypass through posterior pericardial approach between 2002-2007.
RESULTS: 3 patients underwent ascending aortic aneurysm repair and aortic valve replacement; 2 patients underwent isolated aortic valve replacement and a patient underwent aortic and mitral valve replacement with ascending aortic aneurysm repiar in addition to ascending-to-descending aortic bypass. Mean age of patients were 21±2.2 years. No perioperative mortality was observed. One patient experienced prolonged ventilatory support due to pneumonia. All patients were free of pressure gradient between upper and lower extremities. Grafts were patent without narrowing/thrombosis or pseudoaneurysm formation in all patients at 6th and 1st year followups except for the most recent patient, in whom long-term results are not available.
CONCLUSIONS: The surgical management of patients with complex coarctation or recoarctation with or without associated cardiac disorders must be individualized. Extra-anatomic coarctation bypass appears to be a safe flexible method that is particularly useful in adult patients when simultaneous intracardiac repair is required.

OP-166

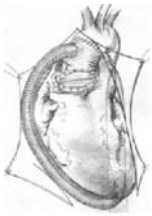

Figure 1
Illustration depicting posterior pericardial approach for ascending-to-descending aortic bypass

Figure 2
Intraoperative appearance of side-graft to the descending aorta from the graft in ascending aortic position.

Figure 3
Posterior pericardial route for ascending-to-descending aortic bypass. Note that the side graft is passed behind inferior vena cava anterior to oesaphagus.

OP-167 - PERFUSION TECHINIQUES OF PEDIATRIC AORTIC ARCH RECONSTRUCTION

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OBJECT: Today, Various techniques have been used in pediatric aortic arch reconstruction.these are profound hypothermic circulatory arrest, antegrade cerebral perfusion and simple clemp techniqe.
METOD: Pediatric aortic arh reconstruction was performed in 13 patients at our instution. Reconstruction was applied with antegrad serbral perfusion (8 patient),simple aortich arch klemp(5 patient). After reconstruction of aortic arch, Cardiac intervention was performed with instituting cardio pulmoner bypass.Antegrade perfusion was provided to be used gore-tex graft of truncus brachiosefalic arter.
CONCLUSION: Truncus brachiocephalic artery cannulation is practical and easy in pediatric aortic arch reconstruction.In some patients,aortic arch reconstruction may be performed with simple clemp.

OP-168 - A NOVEL APPROACH FOR OFF PUMP ATRIAL SEPTOSTOMY APPLICATIONS

Poyrazoglu Huseyin Hakan[1], Avsar Mustafa Kemal[1], Tor Funda[1], Salih Orhan Kemal[1], Ciftci Bahattin[1], Erdem Sevcan[2], Ozbarlas Nazan[2]
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Atrial septostomy or septectomy are required to enable atrial mixture in various congenital cardiac lesions. The aim of this article was to introduce a technique where atrial septostomy application could be employed off pump with the aid of a new device. To our knowledge this is the first report for this technique in the literature. We report the results of seven patients where we employed our technique succesfully using a new combined device as an alternative to traditional methods. The major advantage of our approach was avoiding detrimental effects of cardiopulmonary bypass (CPB) applications.

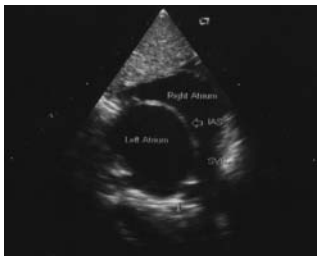

figure 1
Echocardiography showing right septal deviation SVC: superiour vena cava; IAS: inter atrial septum.

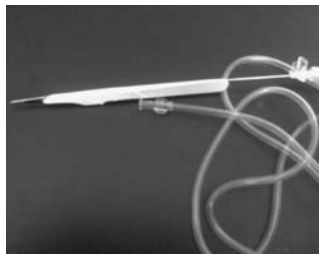

figure 2
Needle attached to surgical blade connected to pressure monitoring line

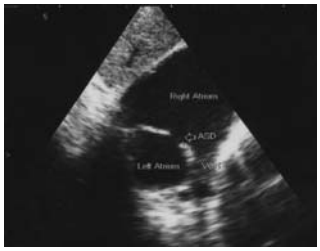

figure 3
Post-operative echocardiography showing surgically created ASD. VCS: vena cava superiou

tablo1

Case number	Age/ gender	Preoperative O2 saturation	Postoperative O2 saturation	Diagnosis	ASD diameter	Performed operations	Discharged time / Day
1	6 month Female	55	86	HRV,VSD, PHT, TGA	6mm	Atrial septostomy, Pulmonary banding	12
2	3 month Male	40	95	TGA,VSD, SPD,PFO	8mm	Atrial septostomi, aorta-pulmonary shunt (5mm PTFE tube graft)	56
3	24 month Male	50	90	TGA,VSD, SPD,PFO	6mm	Atrial septostomy, aorta-pulmonary shunt (5mm PTFE tube graft)	60
4	3 month Male	55	90	MA,SV, PHT	7.3mm	Atrial septostomy, aorta-pulmonary shunt (5mm PTFE tube graft)	16
5	6 month Female	48	88	MA,VSD, PDA, AC,PFO	8mm	Atrial septostomy,pulmoner banding, correction of coarctation (end to end anastomosis),PDA ligation	22
6	7 month Female	68	89	DILV, TGA, MA, PH	6mm	Atrial septostomy, pulmonary banding	40
7	8month Male	60	88	TAPVD, DORV TGA,MA, PDA,HLV	7mm	Atrial septostomy, PDA ligation, pulmonary banding	20

HLV: Hypoplastic left ventricule, VSD:Ventricular septal defect, PHT:Pulmonary hypertension, TGA:Transposition of the great arteries, PS:Pulmonary stenosis, MA: Mitral atresia, AC:Aortic Coarctation, PDA:Patent ductus arteriosus, HRV:Hypoplastic right ventricule, DORV: Double outlet right ventricule, PFO: Patent foramen ovale, SPD:Subpulmonary stenosis, SV:Single ventricule PA:pulmonary atresia, AS:Atrial septostomy, TAPVR:Total Anomalous pulmonary venous return, PTFE: Polytetrafluoroethylene, DILV: Double inlet left ventricule.

CONGENITAL HEART DISEASES : FEATURES IN FOLLOW-UP AND TREATMENT

OP-169 - THE EFFECT OF PULMONARY HYPERTENSION ON POSTOPERATIVE INFECTION INCIDENCE IN PEDIATRIC CARDIAC SURGERY

Yilmaz Mustafa[1], Ozyuksel Arda[1], Devrim Ilker[2], Demircin Metin[1], Dogan Riza[1], Kara Ates[2], Secmeler Gulten[2], Pasaoglu Ilhan[1]
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[2]Department of Pediatric Infectious Diseases, Hacettepe University, Ankara, Turkey

BACKROUND: Post surgical infectious complications are major causes of morbidity and mortality in pediatric patients undergoing cardiac surgery. The aim of the present study was to determine the spectrum and the risk factors of infection in pediatric patient who had open heart surgery and to describe the role of pulmonary hypertension as a risk factor for in these group of patient.
PATIENTS AND METHODS: Clinical data were collected from September 2004 to April 2005 from 168 patients with various congenital heart diseases who underwent open cardiac surgery. Among patients with high pulmonary blood flow, mean pulmonary artery pressures was classified as group 1; mild (MPAP between 20-30 mmHg), group 2; moderate (MPAP between 31-40 mmHg), and group 3; severe (MPAP above 41 mmHg). Clinically (CI) and microbiologically proven infections (MPI) were evaluated.
RESULTS: There were 39 patients without high pulmonary blood flow and clinically documented infection ratio was 15.4% with overall mortality was 12.8%. In group 1 (21 patients) there was 23.8% CI and only one methicilline sensitive S. epidermidis bacteremia, with 9.5% mortality, in group 2 (12 patients), CI ratio was 33% and one K. pneumonia pneumonia and one candidemia, in group 3 (22 patient) there was 40.9% CI and 8 (36%) MPI with 18.2% mortality.
CONCLUSION: Infections represent a frequent complication for children who undergo heart surgery. Based on our data, higher infection incidence and infection with more resistant pathogen in patient with pulmonary hypertension suggests that an alternative antibiotic strategy should be considered for these patients.

OP-171 - CHORDAL DETACHMENT IS VERY SAFE METHOD WHILE REPAIRING VENTRICULAR SEPTAL DEFECT

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Ventricular Septal Defects are generally repaired with transatrial approach. This approach gives very good view to asses and to repair VSDs that are generally perimembranous types. These defects may have some adhesion, fibrosis and chordal fusion that are localised around them. Sometimes these processes might be hardened to reach to VSD even if tricuspid septal leaflet was cut. In our case, the patient had perimembranous VSD which was surrounded with tricuspid septal leaflet and profuse chordal attachment that were very thick probably because of high flow. In spite of the fact that the tricuspid septal leaflet was cut, we could not reach to VSD. There were many chordal attachment and fusion around it. Detachment was carefully performed and perimembranous VSD was observed as in a good view. VSD was repaired with primary suture using 4-0 polypropylene suture. After beating heart, there was no tricuspid insufficiency in TEE. According this case, chordal detachment may be needed and it may give very good view to reach to the VSD without any complication.

OP-172 - SYSTEMIC PULMONARY SHUNT PERFORMED BY USING SHELHIGH INTERNAL MAMMARIAN HOMOGREFT: EARLY RESULTS

Poyrazoglu Huseyin Hakan[1], Avsar Mustafa Kemal[1], Tor Funda[1], Ciftci Bahattin[1], Bayraktar Ihsan[1], Yildirim Siir[1], Salih Orhan Kemal[1], Ozbarlas Nazan[2]
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[2]Departments of Pediatric Cardiology, Cukurova University, Adana, Turkey

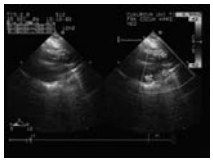
OBJECTIVE: Evaluation of early findings in aortopulmonary shunts using bovine internal mammarian artery graft.
METHODS: Gluteraldehyde and NO REACT treated bovine internal mammarian artery graft was used in 20 aorto-pulmonary artery shunt cases between May 2005 and April 2006 in our clinic. Grafts with 4 mm proximal and 5 mm distal parts or 5 mm proximal and 6 mm distal parts were implanted to all patients. Cases were between 20 days to 7 years; 55% were female and 45% were male. BT shunt with left thoracotomy was performed to cases aging 2 years and older, central shunt with sternotomy was performed to cases younger than two. Eight cases were emergently operated. 9 cases had TOF(tetralogy of Fallot) and/or PA(pulmonary atresia), 3 had TGA(transposition of great arteries)+VSD(ventricular septal defect)+PS(pulmonary stenosis), 3 had TA(tricuspid atresia), 3 had PS+DILV, and 2 had PA.
RESULTS: After the operation, sudden recovery of pulse oximetry oxygen saturation and partial O2 pressure were observed in all patients. During this period oxygen saturation of patients were between 84-100%. One patient was re-operated at postoperative third hour due to bleeding. Two patients died. The hospitalization period was between 7-29 days. No shunt obstruction was observed in early (first post operative week) and middle period (post operative 24th week) echocardiographic evaluations.
CONCLUSION: With this study we proved alternative use of Shelhigh internal mammarian artery graft instead of inorganic tubular grafts in shunt operation of congenital heart diseases with decreased pulmonary blood flow. But much more cases and long term results are needed to be more definite.

OP-172

Figure 1

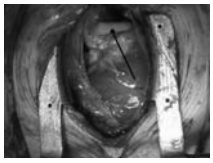
picture of greft

Figure 2



A patent turbulent flow was seen in shunts with echocardiography

Figure 3



operative view

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AGE	SEX	DIAGNOSIS	SHUNT TYPE	GRAFT DIAMETER mm	GRAFT DIAMETER (6th Month) mm	DISCHARGED day	PREOP sO2	POST OPsO2
5 months	M	TOF	AORTA MEAN Pa	4-5	4,20	13	46	89
4 months	M	TOF	AORTA L Pa	4-5	4,38	11	63	95
1 year	M	TOF	AORTA MEAN Pa	4-5	4,30	10	58	91
3,5Years	F	TOF	AORTA L (BT)Pa	5-6	4,36	9	52	93
3,5 months	F	TOF	AORTA MEAN Pa	4-5	4,54	18	42	91
3 months	F	TOF	AORTO R Pa	4-5	4,68	21	43	95
3,5 months	F	TOF	AORTA L Pa	4-5	4,80	16	65	97
2 months	F	TOF	AORTA MEAN Pa	4-5	4,72	9	44	90
20 days	M	TA	AORTA MEAN Pa	4-5	4,45	28	38	90
30 days	M	TA+PA	AORTA MEAN Pa	4-5	Ex		44	88
3 days	F	TA+PS	AORTA MEAN Pa	4-5	Ex		48	96
40 days	F	PA+MA ASD	AORTA MEAN Pa	4-5	4,90	29	58	97
7 years	M	TGA+VSD+PS	AORTA L Pa(BT)	5-6	5,85	7	71	95
4 years	F	TGA+VSD+PS	AORTA L Pa(BT)	5-6	5,81	8	40	84
2 years	M	PA+DILV	AORTA L Pa(BT)	5-6	5,78	16	30	87
1 year	F	PA+DILV	AORTA MEAN Pa	4-5	4,89	11	20	86
4 years	M	PS+AVSD	AORTA L Pa(BT)	5-6	5,53	8	71	96
11 months	F	PS+AVSD	AORTA MEAN Pa	4-5	4,83	20	66	100
2 years	F	TGA+AVSD DORV	AORTA L Pa(BT)	5-6	5,74	11	68	94
2 months	F	F	AORTA MEAN Pa	4-5	4,84	18	44	90

PA:Pulmoner atresia ASD;Atrial septal defect L: left TOF:Tetraloji of fallot VSD:Ventriculer septal defect pa: pulmonary AVSD:Atrioventriculer septal defect PS:pulmoner stenoz R:right DORV:Double outlet right ventricul DILV:Double inlet left ventricul TA:Tricuspit atresia TGA:Transposition of great arteries

OP-173 - DOUBLE-ORIFICE MITRAL VALVE: OPERATIVE DIAGNOSIS

Hatemi Ali Can[1], Canikoglu Mustafa[1], Gursoy Mete[1], Ozgol Ilhan[1], Guzeltas Alper[2], Cetin Gurkan[1], Kansiz Erhan[1]
[1]Istanbul University Institute of Cardiology Department of Cardiovascular Surgery, Istanbul, Turkey
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INTRODUCTION: Double-orifice mitral valve (DOMV) is an uncommon congenital cardiac malformation characterized by two mitral valve orifices with separate subvalvular apparatus which occurs as an isolated anomaly or in association with other cardiac malformations such as ventricular septal defect, atrial septal defect, Ebstein's anomaly, patent ductus arteriosus and most commonly atrioventricular septal defects (AVSD). This article presents a case of partial AVSD with DOMV in a 4-year-old-girl.
CASE: A four-year-old girl was admitted to our institution for atrioventricular septal defect repair. Two-dimensional and Doppler echocardiography disclosed a defect in the atrial septum primum with a moderately enlarged right atrium and ventricle, and moderate left AV regurgitation. DOMV was not found in echocardiographic examination. AVSD repair was performed in the usual two patch technique. On inspection, the mitral valve was found to have two valve orificies. The larger orifice located anterolaterally and an accesssory mitral valve located posteromedially neighbouring coronary sinus was recognized intraoperatively. Three strategies have been adopted in the correction of DOMV: major valve repair, cleft suture, valve replacement. There was no insufficiency from accessory valve in this case. The accessory mitral valve was functional and compedant so no surgical intervention for an accessory orifice was needed. Postoperatively transthoracic echocardiography revealed no mitral insufficiency and competant double orifices.
CONCLUSSION: The functional and anatomical status of DOMV should be assessed by surgeons intraoperatively and treatment strategy should be individualized, some cases such as ours may not necessitate surgical intervention. In this state DOMV is considered as only rare image and indication for echocardiographic follow-up.

OP-174 - OFF-PUMP FONTAN OPERATION IN COMPLEX SINGLE VETRICLE

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Fontan operation is usually performed with cardiopulmonary bypass. Extra-cardiac Fontan operation has advantages when compared to the conventional Fontan procedure. Also it can be performed off-pump. Fontan operation is performed without cardiopulmonary bypass at our institution. Off-pump Fontan is challenging in patients requiring pulmonary arterioplasty especially due to previous central shunt operations performed by median sternotomy and to the right pulmonary artery.
Our 16 patients series of off-pump extra-cardiac Fontan patients included 5 patients who required pulmonary arterioplasty. All the patients underwent successful extra-cardiac Fontan procedure without cardiopulmonary bypass.
Off-pump Fontan can be performed in patients who do not require intra-cardiac surgical interventions. Extensive pulmonary arterioplasty can also be executed with off-pump technique.

OP-175 - RESULTS OF PARTIAL STERNOTOMY DURING SURGERY FOR CONGENITAL HEART DISEASE IN THE ADULT

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BACKGROUND: Repair of congenital heart defects with limited sternotomy in older children and adults have been reported to result in significant reduction in perioperative morbidity.
METHODS: 23 patients operated for congenital cardiac defects between 2003-2006 were reviewed for pre- and perioperative data including respiratory, cardiovascular functions, postoperative hemorrhage as well as transfusion and postoperative pain-killer requirements. A 3-5 cm midline sternotomy with "I" or inverted "T" shape along the corpus of the sternum to retain stability.
RESULTS: The mean of the patients was 23±8.6 (range 16 to 57) years. 16 patients had atrial septal defects, 4 had ventricular septal defect and 3 had subaortic discrete membrane. The mean aortic clamp and bypass times were 42.4±30.2 and 66.6±40.1 minutes, respectively. The mean mechanical ventilation time was 3.1±2 hours; only two patients were kept on ventilator for more than 6 hours. The mean amount of perioperative hemorrhage from the mediastinal tubes was 240±55 ml and transfusion requirement was 1.2±0.8 units of packed red cells. The mean duration of hospital stay was 8.4±5 days. Two patient stayed in the hospital for 16 and 28 days, respectively. Excluding two patients whose hospital stay were 16 and 28 days, 6.1±2.2 days. Preoperative and postoperative FVC at 1st month was 87.6±6.6% vs. 78.3±10.1% of the expected ($p<0.05$). No wound or hemorrhage-related complications were observed.
CONCLUSIONS: Partial sternotomy allows adequate exposure with limited postoperative blood loss and transfusion requirements. It results in better cosmetics and excellent chest stability resulting in rapid restoration of preoperative respiratory function.

OP-176 - EXTRAPLEURAL TECHNIQUE FOR THE CLOSURE OF PATENT DUCTUS ARTERIOSUS IN PREMATURE INFANTS WITH PULMONARY HYPERTENSION

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BACKGROUND: About a third of infants born before 30 weeks gestation will develop clinical signs of a patent ductus arteriosus (PDA) that requires treatment. We presents 13 low birth weight premature neonates with PDA and pulmonary hypertension (PH), who were treated surgically through left posterolateral thoracotomy insicion using an extrapleural technique.
MATERIAL-METHODS: Study parameters for infants with PDA included age, weight, complications of surgery and lenght of stay in ICU and respirator. 13 patients, mean age at operation was 17±2 days and mean weight was 1250 gr, were treated surgically through a posteriorlateral limited skin insicion. The pleura were detached with blunt dissection from the thoracic wall and the descending aorta was exposed. PDA was dissected from the surrounding tissue and the ductus was encircled and than double clipped.
RESULTS: All patients were extubated after the operation in intensive care unit within two or three days. Mean intensive care unit stay and duration of mechanical ventilation were seven and three days respectively. Pulmonary congestion disappeared after the operation in all cases. There was no any complication such as pneumothorax or bleeding after the surgery. All patients were discharged within a good clinical condition.
CONCLUSION: We suggest that ductus ligation may be preferable in early time via extrapleural approach because it is associted with low morbidity and mortality, have some advantages such as decrease the risk of pulmonary complications due to chest tube insertion.

CORONARY AND NON-CORONARY INTERVENTIONS

OP-177 - PRACTICAL AND EFFECTIVE APPROACH FOR PREVENTION OF REPERFUSION INJURY IN ACUTE MYOCARDIAL INFARCTION: RETROGRADE BLOOD CARDIOPLEGIA AND PRESSURE REGULATED "COLD" BLOOD PERFUSION

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Myocardial protection and reperfusion have critical importance for the patients undergoing emergent revascularization for acute myocardial infarction. Methods for the prevention of reperfusion injury can be summarized as "controlled perfusion" which indicates pressure controlled flow and addition of substrates vital for the cell metabolism. Difficulties in the supply of the substrates, cardioplegic solutions, additional strategies for reperfusion and a different operation plan have modified the originally defined "controlled reperfusion".
The data of 20 patients who were operated for acute myocardial infarction without special measures (Group I) were analyzed and compared with the results of respective 37 patients to whom we fashioned a novel reperfusion technique (Group II). Our novel reperfusion method is cheap and easy to apply and does not require any complicated changes in the operation and cardioplegia strategies
The both groups showed significant alterations in means of low cardiac output, electrocardiography changes, arryhtmia rates, analysis of simultaneous coronary sinus and arterial blood gasses, pH, and calcium content. Cardiac enzymatic changes were significantly different between Group I and II.
This report defines our novel controlled reperfusion technique. Also we present our experiences and results with this technique on 57 consecutive patients divided into two groups requiring emergent coronary revascularization and we conclude with high feasibility of this technique

OP-181 - PERCUTANEOUS SEPTAL ABLATION VERSUS SURGICAL MYECTOMY FOR PATIENTS WITH HYPERTROPHIC OBSTRUCTIVE CARDIOMYOPATHY

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AIMS: The aim of this study was to compare the effects of percutaneous septal myocardial ablation and surgical myectomy in decreasing left ventricular outflow tract gradient, septal thickness, ventricular dimensions and mitral regurgitation in symptomatic hypertrophic obstructive cardiomyopathy patients.
MATERIALS/METHODS: Between 2002 and 2006, 40 patients were treated due to hypertrophic obstructive cardiomyopathy. Twenty-four patients underwent surgical myectomy and the remaining 16 patients underwent percutaneous septal myocardial ablation. All patients were symptomatic despite maximal medical treatment and had a left ventricular outflow tract gradient higher than 65 mmHg. All patients were examined in the pre- and postoperative period with echocardiography by the same physician. The patients were followed-up for a mean 13 mounts period postoperatively.
FINDINGS: There were no mortalities in either group. At 1 year follow-up, left ventricular outflow tract gradients did not differ significantly between the two groups. In post procedure period, moderate mitral regurgitation was seen in four (25%) patients in ablation group, and in two cases (8.3%) in the myectomy group. After treatment, effort capacity and New York Heart Association Class was better than the baseline parameters in percutaneous septal myocardial ablation group. However, postoperative mitral regurgitation grade and effort capacity was better in the surgical group.
CONCLUSION: None of these techniques is superior in decreasing left ventricle outflow tract gradient. We conclude that surgical myectomy is preferable over percutaneous septal myocardial ablation in cases with mitral regurgitation.

OP-206 - THE ARTERIAL AND VENOUS GRAFT HOLDER FOR CORONARY ARTERY BYPASS GRAFTING

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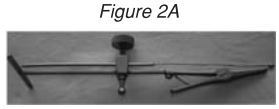
A new design arterial and venous graft holder is constructed for use during proximal and distal anastomosis in coronary artery bypass grafting. The device consists of a flexible arm and a handle part (Fig 1). The flexible arm of the holder was multi-jointed and attached to sternal retractor. The handle part is composed of three parts; a T-shape body, an atraumatic clip for holding the graft and a coronary probe attached with an adjustable fixation screw to the body (Fig 2A). The handle part can be used to hold the graft easily either by an assistant or by attached to a flexible arm. When the clip holds the end of graft, the coronary probe can be gently inserted into the graft without causing endothelial injury. Uniform olive tip coronary probes (available in 1mm, 1.5mm and 2mm sizes) allows for easy, atraumatic insertion into graft (Fig 2B). It facilitates opening the heel of the graft and stitching the most difficult angle of the anastomosis (Fig 3A). Several sutures (5 or 7) throws are then placed with the conduit in the air, coming around the heel towards the near side (Fig 3B). After the probe is removed from inside of the graft, the conduit is then parachuted down onto the arteriotomy, the handle part for CABG is released and the anastomosis is then completed with no-touch tecnique (Fig 3C-3D). This new instrument provides excellent exposure and a more comfortable anastomosis.

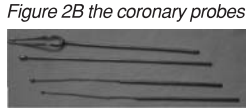
Figure 1

Figure 2A



The view of the handle part

Figure 2B the coronary probes



The A-V graft holder consists of a flexible arm and the handle part.

Figure 3A-3B

Figure 3C-3D

AORTIC ANEURYSMS: CHALLENGING THERAPIES

OP-192 - OUR CLINICAL EXPERIENCES IN ANEURYSM CASES

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PURPOSE: We aimed to declare our experiences in patients operated in our clinic with aneurysm.
MATERIAL-METHOD: Sixtyeight patient with the diagnosis of aneurysm were operated in Cardiovascular Surgery Clinic of Trakya University Hospital between January 2000 and March 2007.
FINDINGS: Aortic aneurysm was detected in 40(58,8%) cases and periferic aneurysm were 28 (41,2%). Eleven (16,1%) of them were operated with the diagnosis of ruptured abdominal aortic aneurysm, 16 (23,6%) were elective abdominal aortic aneurysm and 13 (27,9%) were ascendan aortic aneurysm.
Nine dacron grafts to ascendan aorta, 4 dacron grafts to ascendan aorta with aortic valve replacement, 27 polytetraflouroethylene (PTFE) Y grafts to abdomial aorta and 28 autogen and PTFE grafts were used for the patients diagnosed with periferic aneurysm and pseudoaneurysm. One month mortality was 4 (5,8%). Three of them were ruptured abdominal aortic aneurysm and the other one was ascendan aortic aneurysm.
RESULTS: Cases diagnosed with aneurysm should examine in detail and timing of the operation should choosen carefully. We thought that elective surgery can be the most suitable alternative because of the high mortality and neurological complication rates.

OP-193 - ENDOVASCULAR AND HYBRID TECHNIQUES FOR THE TREATMENT OF COMPLEX AORTIC PATHOLOGIES

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BACKGROUND: This study evaluates prospectively recorded data of a series of high-risk patients with complex aortic pathologies who underwent endovascular or hybrid repair in our institution.
METHODS: Between 2005 and 2007, 5 patients (3 male) with a median age of 58.0 years (range; 53 to 67 years) underwent endovascular and hybrid treatment for complex aortic pathologies (2 type A aortic dissection; both with an intimal tear at the ascending aorta, one with concomitant coronary artery disease and the other with thoracoabdominal aortic aneurysm, 1 ascending aortic pseudoaneurysm complicated with mediastinitis, 1 traumatic thoracic aortic transection, 1 native thoracic aortic aneurysm associated with coarctation). All the patients were class >= 3 according to the American Society of Anesthesiologists classification.
RESULTS: All the patients underwent endovascular or hybrid treatment. Two stage therapy including surgical first and endovascular later was performed in one patient. Technical success was achieved in all of the patients. Two endovascular stenting of the ascending aorta (one with reconstruction of the supraaortic branches and the other with coronary stenting), 2 endovascular stenting of the thoracic aorta (one with balloon dilatation first), 1 endovascular stenting of the thoracic and abdominal aorta and bilateral iliac arteries (with a prior ascending aorta replacement and aortic valve replacement) were performed. No intraoperative deaths occurred, 1 patient who had mediastinitis preoperatively has died due to sepsis and multiorgan failure at the postoperative period. At one patient, early brachial embolectomy was performed postoperatively. No renal, respiratory or neurological dysfunction was observed. At a median follow-up of 9.8 months (range; 2 to 20 months), all stents were patent at postoperative computed tomographic scan.
CONCLUSION: Endovascular and hybrid techniques are technically feasible and safe in selected cases with complex aortic pathologies especially in high-risk patients.

OP-194 - SURGICAL PROCEDURE IN ABDOMINAL AORTIC ANEURYSMS ACCOMPANYING CORONARY ARTERIAL DISEASE

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OBJECTIVE: Gastrointestinal complications after coronary artery bypass graft is rare, but the mortality rate is %71 when mesenteric ischemia develop. Gastrointestinal complications in on –pump cardiopulmonary bypass are more than off-pump cardiopulmanary bypass surgery because of low flow in the operation. We are presenting our surgical strategy in abdominal aortic aneurysms accompanying coronary arterial disease.
MATERIAL AND METHOD: 11 patients who had >= 6 centimeter diamater abdominal aortic aneurysm accompanying coronary arterial disease and admitted to our service between 2004 and 2007 were included in this study. Average age was 64,8 ± 4,2. All patients were followed up for 6 months.
RESULTS: If there is enough neck inferior of the renal artery for endovascular stent procedure in three patients, and coronary artery bypass graft revealed one week after endovascular stent implantation in these patients. Two patients revealed off-pump coronary artery bypass operation and aortobiiliac graft replacement in one step. The next 6 patients had operated cardiopulmonary bypass surgery at first step and aortabiiliac bypass or tube graft interposition in the abdominal aorta was revealed 3 months after the first operation.
CONCLUSION: There was no gastrointestinal complication at perioperative period. In the abdominal aortic aneurysm accompanying coronary arterial disease first choice is endovascular stent implantation if there is enough neck infrarenal segment. We prefer one step operation when the patient is suitable for off-pump coronary artery bypass surgery, while the patient isn't suitable for off-pump coronary bypass surgery we operated abdominal aortic aneurysm 3 month after the on-pump coronary bypass surgery.

OP-195 - CELL SAVER IN SURGICAL THERAPY OF THORACOABDOMINAL AORTIC ANEURYSMS

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BACKGROUND: Diagnose of the patients with aortic aneurysm have commonly been made with coincidentally or with rupture in emergency rooms. Intraoperative blood transfusion is one of the most important parts of the surgical treatment of these patients.
METHODS: Between 2002 and 2005, thirty-six patients with thoracoabdominal aortic aneurysm underwent operation in our clinic. The patients who were operated by using cell saver were grouped as Group A and the others were as group B. The demographic, operative and postoperative variables were compared retrospectively between two groups.
RESULTS: The mean aspirated blood volume was 2311±543 ml, per patients, in Grup A (n=17). The mean transfused autologous blood volume was 2311±543 ml. In postoperative period mean blood drainage was 1106±726 cc and 4,2 unit of erythrocyte suspension and 5,3 unit of fresh frozen plasma were transfused, per patients. Two patients underwent revision for bleeding. One patient died due to disseminated intravascular coagulation, another one was due to cardiac failure and three patients were died due to multi-organ failure. In Group B (n=19), mean blood drainage was 1298±516cc and 5,7 unit of erythrocyte suspension and 8,8 unit of fresh frozen plasma were transfused, per patients, postoperatively. One patient underwent revision for bleeding and there were 4 deaths.
CONCLUSION: Intraoperative cell saving in thoracoabdominal aortic aneurysm surgery provides the use of patients own blood instantly and decreases the risks of allogeneic blood transfusion.

OP-196

Figure 1

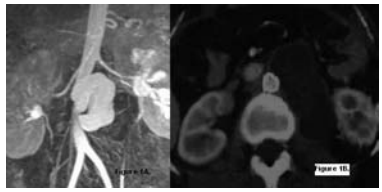

Figure 1: Abdominal aortic pseudoaneurysm and the post-EVAR CAT scan. (A and B.)

Figure 3

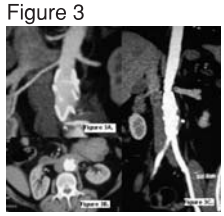

Figure 3: First year control CAT scan of the patient with aortoenteric fistula in Figure 2. No endoleak or displacement is observed.

Figure 2

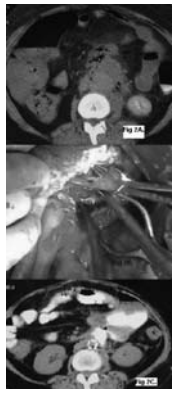

Figure 4

Figure 4: A saccular abdominal aortic aneurysm in Behcet's disease

Figure 2: Contained rupture of abdominal pseudoaneurysm and aorto-enteric fistula (A.). Intraoperative view of the aorto-enteric fistula and the aortic defect (B.). CAT scan with oral contrast. Note that endostent covering the aortic wall is visualized and no connection exists between the contrast-filled intestines and the aorta (C.).

OP-196 - MIDTERM RESULTS WITH ENDOVASCULAR APPROACH TO ABDOMINAL AORTIC PATHOLOGIES IN BEHCET'S DISEASE

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BACKGROUND: Behcet's disease is an inflammatory disorder characterized with recurrent oral and genital ulcers, uveitis, skin and vascular lesions and extends from Eastern Asia to the Mediterranean Basin along the ancient Silk Road.
METHODS AND PATIENTS: 7 patients (aged 37.6±9.9, range 37 -52 years) with abdominal aortic pathologies (aneurysm, pseudoaneurysm and aortoenteric fistula) and Behcet's disease were treated with EVAR between 2002 and 2007.
RESULTS: Three patients were treated with tube-shaped endostents, one received aortouni-iliac and three aortobi-iliac endostents. Except for the patients 3 and 4, where an emergency intervention was necessary, all patients were treated in elective conditions. Patient 3 had an open aortoenteric fistula. Only first patient experienced a procedure-related complication. Rupture of external iliac artery led to ligation and a crossover bypass.
CONCLUSIONS: Experience on a limited number of patients and presentation of complicated cases at most of the time may hinder the true outcome of EVAR in this situations. More specific conclusions on issues particularly as aortoenteric fistulae are to be reached with growing experience. Nevertheless, it is important to note that we have not observed procedure-related complications except the first patient in this series. Endovascular approach for abdominal aortic pathologies in Behcet's disease appears promising although the long-term results and the use in various clinical settings are to be evaluated. Recurrent nature of the lesions requires close followup with frequent

OP-197 - COMPLEX ABDOMINAL AORTIC ANEURYSM SURGERY

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Proximal extension of the abdominal aortic aneurysms can be present above the renal arteries in a frequency of 2-5%. The surgical treatment of these cases is a complex procedure. Many authors describe various surgical techniques. Oblique anastomosis and visceral reconstruction is performed through transabdominal and/or subcostal incisions and medial visceral rotation methods. Extraperitoneal approach and thoracophrenolaparotomy incisions may also be used.
Between 1996-2006, 12 patients with suprarenal aneuryms and type IV thoracoabdominal aneurysms were operated at our institution through extraperitoneal approach and thoracophrenolaparotomy incisions. The descending aorta was clamped and aortic reconstruction was performed in all cases. In three patients proximal graft anastomosis was performed to the descending aorta and coeliac orifice, superior mesenteric artery and right renal artery was implanted as carrel method to the graft and left renal artery was separately implanted to the graft. In three other cases graft was opened obliquely and proximal graft to aorta beveled anastomosis included the coeliac orifice, superior mesenteric artery and right renal artery, and the left renal artery was anastomosed directly or by seperate graft to the aortic graft. In the remaining six patients graft to aortic anastomosis was performed just beyond the renal arteries without visceral reconstruction to the infrarenal abdominal aorta. Mean aortic cross clamp time was 33 minutes and left renal ischemia time was 40 minutes in Group 1. Mean aortic cross clamp time was 12 minutes and left renal ischemia time was 25 minutes in Group 2. Mean aortic cross clamp time was 12 minutes in Group 3. One patient died due to acute renal failure in Group 3 in the early postoperative period and one patient died due to acute myocardial ischemia in the late postoperative period.
Extraperitoneal approach and thoracophrenolaparotomy fascilitates the visceral reconstruction in complex abdominal aortic aneurysm surgery. Especially in patients who have been performed beveled anastomosis minimizes the total ischemia time.

PRINCIPLES AND PRACTICE OF CARDIVASCULAR NURSING

OP-198 - THE STANDARD OF PROFESSIONAL PERFORMANCE FOR CARDIOVASCULAR NURSING

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All professions have as their cornerstone and creed a code of ethics and or professional performance standards. The cardiovascular nursing profession is no different. As the field of cardiovascular nursing grows and changes in defining the role of a nurse, the central theme will always be that of caring. It can be said that, all other duties and responsibilities of cardiovascular nurses have centered around, “caring". Caring has been described by many nursing theorist as the innate nature of a human being to be able to give unconditional help in the form of doing for, therapeutic communication, therapeutic touch, compassion, a gentleness of spirit and humbleness of knowing ones self. It can be seen that within the standards of professional performance the center theme is the caring for the cardiac surgery client from every aspect. It is within these guidelines that the cardiovascular nurse can better define his/her role as a the one individual who has the ability to enhance the cardivascular surgery patients mental and physical wellness by coordinating, educating, and working with other professionals like cardiovascular anesthesiologist or surgeons to promote a caring and supportive environment. In this article, professional performance standards of a registered cardiovascular nurse such as quality of practice, education, professsional practice evaluation, collegiality, colloboration, ethics, research, resource utilization and leadership were presented.

OP-199 - HOW TO MAKE YOUR DREAM COME TRUE AS A PROFESSIONAL NURSE

Atar Nesime
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This paper represents beginning my career as a cardiovascular surgery ICU nurse and my transition process from Turkey to USA as a professional nurse. My initial educational requirements were fulfilled at Ege University in Turkey. After I finished my school, I was eligible to work at Dokuz Eylul University. Employment opportunity at cardiovascular surgery ICU for 4 years allowed me to peak my interest in this specific field as it gave me a better understanding of patient` s needs and care in this specific area. Upon completion of my masters in 1999 I was offered a teaching position at Ege University. In 2001, I took one month vacation to Tallahassee, Florida to visit my brother who at the time was a PhD student at Florida State University. This experience change my career plans entirely.
After returning to Turkey, I started to seriously think about going back to the U.S. in order to pursue further education in nursing, and to advance my nursing knowledge and skills. I would have to leave my position as a nursing instructor. I was not sure where my dreams and expectations would lead, especially since I was traveling to a place described to me as a land of opportunity.
Based on my personal and professional experience in the U.S I know I have made the right decision by going to the U.S. I was accepted to University of California San Francisco Family Nurse Practitioner post masters special study program in 2006.

OP-201 - IS HOME CARE A VIABLE ALTERNATIVE IN TURKEY? A COMPARATIVE STUDY

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There are some powerful economic realities which make home care not only an attractive alternative but also an economically advantageous choice. New technologies and the medical breakthroughs will increase the number of people living longer, ultimately making it inevitable that they will ultimately become frailer needing care with ADL. In addition, advanced wound care, negative pressure wound therapy, telemetric monitoring, etc. are a few of the examples of medical breakthroughs which make home care a better economic alternative than treatment in a hospital. In fact, hospital at home concept is now gaining momentum and spreading to treatments which had been traditionally reserved for hospitals. Another socio-economic reality is that nobody wants to be in a nursing home and/or in a hospital for long term. Last, certainly not the least is the financial cost of caring and its drag on the overall economy of a country.
There exist some successful home care models which have been implemented. It is no coincidence that these are mostly in the developed countries. However, there are some successful community based grass roots funded, manned, and monitored home care models which are of exemplary nature. These can act as the ideal template to implement home care based health services in Turkey. This paper will give examples of such programs, discuss the strategies adopted and evaluate various schemes to contain costs in order to sustain effective home based health care in Turkey.

OP-202 - THE STANDARDS OF CARDIOVASCULAR NURSING PRACTICE

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The Scope of cardiovascular nursing practice involves the assessment, analysis, nursing diagnosis, outcome identification, planning, implementation of interventions, and evaluation of human responses to perceived, actual or potential, sudden or urgent, physical or psychological problems that are primarily episodic or acute, and which occur in a variety of settings: non-acute, acute, or interventional. These may include minimal cardiovascular nursing care which includes life-support measures in the acute patient, or advanced knowledge of interventional procedures. The Scope of cardiovascular nursing practice include patient and family education; appropriate referral and discharge planning; and knowledge of legal implications.
The multilevel dimensions of cardiovascular nursing practice include the varying roles, responsibilities, functions, and skills that involve a specific bodies of knowledge. In this review, the reflection of cardiovascular nursing practice on to cardiac patient care is presented by reviewing the practice of cardiovascular nurses and standards.

OP-203 - TO EMPHASISE THE IMPORTANCE OF OPERATION ROOM COUNTING FORM FOR OPERATION SET AND COMPRESS

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PURPOSE: To emphasise the measurements to minimise the probability of forgetting compress or instruments in mediastinum or thorasic cavity in open heart surgery patients from the time of median sternotomy up to the closure of sternum.
METHOD: Two thousand eight hindred and twenty one open heart surgery was done in our clinic until March 2004 up to now. Only the X-rayed compresses were used in all operations. We applied the counting form for operation set and compresses to all patients. Documantations of patient information, surgical team, materials to be counted (preoperative, peroperative and postoperative), and the machines and materials in the operating room are found in this form. Although we applied this form to all patients, compress was forgetten in the mediastinum of one patient. In this patient we realised the missed compress during dressing of wound. We took the scopies of patient and found the missed X-rayed compress on the posterior side of the heart. We opened the sternum again and took the missed compress after that. We did the countings again, and closed the sternum.
CONCLUSION: Although the counting form is used for all the patients, compresses has to be counted aloud by circule and scrub nurses. Sternum has to be closed after compresses are controlled counted by surgeon, scrub and circule nurses and written to the form. In our only patient we decided that our patient condition was unstabil and closed quickly. Due to this counting has to be done and controlled before and after closure of sternum by this triple team carefully.

OP-204 - DETERMINE THE HOME NEEDS OF PATIENTS WHO HAD OPEN HEART OPERATIONS

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AIM: This research was made as descriptive in order to determine the home needs of patients who had open heart operations.
METHOD: The data at the research were collected by means of "Patient Information Form" and "Determining The Home Needs According The Functional Health Pattern Form" with the face to face technique. The research consisted of 18-65 years old people who live in Sivas city center, accept to join the research and don't the loss of hearing and speaking. The data that were got, eveluated by using percentage.
RESULTS: According to the findings that were gotten from the research, %71.0 of patients are male, the avarage of age is 58.07, %60.0 are retired. At the first week of discharging, it has seen that %93.3 of patients had problems with eating and metabolism, %84.4 with intensive excretion, % 100.0 with activities and exercises, %88.9 with sleeping and resting, %100.0 with knowing and perception, %100.0 cope with stres, %64.5 with sexuality. At the sixth week of discharging it is seen that there are less problems than the first week but more problems with sexual activities.
CONCLUSION: it is found out that the information that was given to the patients by the health personal was not enough, and patients need health personal with the perception of health, eating, metabolism, excretion, activities-exercises, sleeping and resting functions. In the direction of gaint result, after the open heart operation some advices about active nursing about meeting the individuals and his familys needs at were given.

OP-205 - THE RESPONSABILITIES OF THE NURSE IN THE WEANING FROM THE MECHANIC VENTILATION

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The procedures of decreasing the support of mechanical ventilation until the pateint is able to breathe hiself/herself are called "weaning". In this period the respiratory load is shifted from the ventilation toward the patient.
The elongation of the intubation time extends the duration of stay in the intensive care unit by causing undesired events such as airways trauma, aspiration and pneumonia. It is indicated that the risk of nosocomial pneumonia is increased with a ratio of 1 ± 0.76% per day in the patient connected to the ventilation. Furthermore, mechanic ventialtion is a factor that increases the cost. Thus, the patients that can tolerate the spontaneous respiration should be determined and should be weaned from the ventilation as soon as possible. On the other hand, to wean the patient that requires the respiratory support from the ventilation earlier increases the morbidity and mortality
The process of weaning from the mechanical ventilation is decided conventionallly by the physicians. However, the protocols developed in the recent years, the nurses can decide the wake-up process. The extensive studies done in this field show that the nurses use protocols shortening the weaning process. The decision process can be made more safer through the use of weaning strategy or protocol. The nurses should considered the emotional and psychosocial requirements of the patients.
After the ceasing the use paralytic and sedative agents, weaning from the mechanical ventilation is performed by two technics such as rapid weaning and gradual weaning. Even though the criteria used in the weaning process vary, the basic features that should be considered are as follows: FiO2, PEEP, acid-base balance, arterial blood pressure, secretion quantity, hemoglobin, body temperature, the sedation level, the psychosocial status of the patient and the nutritional process.

POSTER PRESENTATIONS

SURGICAL THERAPY FOR CONGENITAL HEART DISEASES

CVS-001 - CARDIAC SURGERY IN A PATIENT WITH PENTALOGY OF CANTRELL

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Pentalogy of Cantrell (POC) is a rare congenital defect associated with five ventral midline abnormalities (ectopia cordis, midline supraumbilical wall defect, defect of the lower sternum, absent pericardium, anterior diaphragmatic defect) and high mortality. Existing cardiac defect is the most important factor influencing morbidity and mortality. We report a 4260 g, female infant with POC associated with situs solitus dextrocardia, ventriculoarterial discordance, hypoplastic left ventricle, hypoplastic mitral valve, ventricular septal defect, severe pulmonary stenosis and atrial septal defect. She was delivered via cesarean section at 40 weeks gestational age. The first stage performed in neonatal period. We prefered to wait until all peritoneum and pericardium were covered with skin to prevent infection and possible rupture. Then, since there was severe pulmonary stenosis, an urgent palliative procedure was performed. She was accepted in the operation room with an oxygen saturation lower than 50%. The patient underwent successful surgical palliation when she was 2 months old with a modified Blalock-Taussig shunt (3.5 mm PTFE graft) and the sternal defect was repaired. Primary repair of the sternum in the neonatal period is possibly the best type of management for this rare condition, because simple closure of the sternal defect during the first months of life avoids more complex reconstruction necessary in older children. She had uneventful recovery. She was extubated on the second postoperative day with 80% oxygen saturation. After one week intensive care unit stay, she has been followed in our ward and now pediatric surgery team initiated the definitive treatment aiming to correct 7 cm wide omphalocele. As a second stage further palliative surgery for the cardiac malformation should be performed in the future.
Pentalogy of Cantrell is a rare congenital defect with high mortality, which is hard to evaluate and usually almost impossible to perform total repair surgically.

CVS-002 - SYNDROME OF NOONAN AND THE TREATMENT OF ACCOMPANYING ATRIAL SEPTAL DEFECT

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Department of Cardiovascular Surgery, Gulhane Military Medical Academy, Ankara, Turkey

Syndrome of Noonan is an autosomal dominant rarely encountered genetic disorder that is characterized with shortness, typical facial dysmorphism and congenital cardiac anomalies. 50% of patients has a mutation of the PTPN11 gene on the 12th chromosome. Mostly accompanying cardiac anomalies are pulmoner valvular stenosis or dysplasia, atrial septal defect and hypertrophic cardiomyopathy which is predominantly seen in the interventricular septum or left ventricle. Characteristically, dysplastic and thickened pulmonary valves are seen. VSD, atrioventricular groove defects and nonatherosclerotic coronary artery aneurysms are less frequently accompanying cardiac anomalies. More than 50% of patients have cardiac anomalies. In this report a four years old boy with Noonan'syndrome and an accompanying ASD that was repaired successfully is presented. ASD is found in the 6-10% of these patients. The diagnose, treatment and following of the ASD are the same as in ASDs without Noonan Syndrome. Because of the high incidence of cardiac anomalies, the children who had a diagnosis of Noonan's Syndrome should be closely xamined for the cardiac anomalies. In the surgical treatment of ASD, standard CPB method is used and the defect can be repaired primarily or with a pericardial or dacron patch.

CVS-003 - COMPARISON OF LEVOSIMENDAN WITH CONVENTIONAL INOTROPIC SUPPORT AFTER ARTERIAL SWITCH OPERATION

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INTRODUCTION: Arterial switch operation is the procedure of choice in the treatment of transposition of the great arteries (TGA). Because of high incidence of low cardiac output syndrome in the early postoperative period different protocols for inotropic support have been developed to treat myocardial failure. Since 2006 we started to use levosimendan (calcium sensitizer) to prevent low cardiac output syndrome in the early postoperative period.
OBJECTIVE: To compare two protocols of inotropic support after arterial switch operation.
MATERIAL AND METHODS: Twenty seven neonates with TGA were operated on in the Children's Cardiac Center From January 2006 to January 2007. They had undergone an arterial switch operation at the mean age of 10±3 days. Depending on the inotropic strategy, these patients were divided into two groups. First group included 13 patients that were treated with dobutamine (range: 2 to 7 mcg/kg/min) and dopamine (range: 3 to 5 mcg/kg/min) in the early postoperative period. For vasodilation nitroglycerin in the dose of 1-3 mcg/kg/min was administered routinely. Second group included 14 patients. We used 0.1-0.2 mcg/kg/min of levosimendan for inotropic support in these children. For additional support we administered dopamine. For vasodilation nitroglycerin in the dose of 1-3 mcg/kg/min was added if needed.
Surgical technique, cardiopulmonary bypass management and myocardial protection were the same in both groups. Main hemodynamic parameters, ventilation time, intensive care unit (ICU) stay duration in the two groups were compared.
Results: Mean LA pressure in patients of the group I was 3.5 mmHg 24 hrs following surgery, 5.5 mmHg 48 hrs later, 4.1 mmHg 72 hrs later, versus 5.4 mmHg, 4.7 mmHg, 4.2 mmHg in patients of the group II, respectively. Mean ejection fraction in patients of the group I was 53.2% 24 hrs following surgery, 53% 48 hrs later and 55% 72 hrs later, versus 51.4%, 59.3%, 65% in patients of the group II, respectively.
The results of the new protocol of inotropic support implementation were the shortening of ICU stay (25.5 days in the group I vs. 8.8 days in the group II, $p<0.001$) and of postoperative mechanical ventilation time (163 hrs in the group I, vs. 52 hrs in the group II, $p<0.001$). In the group II 6 patients only required additional dopamine support in the dose of 2 mcg/kg/min and 5 patients received nitroglycerin in the dose of 1-2 mcg/kg/min.
Hospital mortality was 7.6% in the group I and 0% in the group II, p = NS.
CONCLUSION: With the use of levosimendan in the early postoperative period for prevention of low cardiac output syndrome we received the tendency towards increasing of the ejection fraction, shortening of mechanical ventilation time, lowering of inotropes' doses and shortening of the ICU stay.

CVS-004 - RUPTURE OF SINUS VALSALVA ANEURYSM ALONG WITH LEFT PERSISTENT SUPERIOR VENA CAVA: A CASE REPORT

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The incidence of aneurysm of sinus valsalva which is a rare anomaly either acquaired or congenital is 0,31–3,56% and it has an icreased incidence among Asian population. The rupture of these aneurysms is rare in newborn and elder periods while it is frequent between the ages of 20-40. Sudden onset of chest pain, dyspnea during rupturation and just after rupturation and strong and continuous cardiac murmur are characteristic. It is diagnosed via TTE or TEE. Cardiac catheterization can be performed to make the diagnosis certain, to seek for the haemodynamic effects of rupture and to visualise the coronary arterial vasculature. PLSVC generally causes no symptom and it has an incidence of 0.3-0,5% in general population while it has an incidence of 1.5 – 10% among congenital diseases. Clinically it causes no sypmtom untill the venous return gets impaired. The association of these two anomalies is rarely reproted in the literatures. Although TEE is gold standart for the evaluation of congenital anomalies like PLSVC and rupture of sinus valsalva aneurysm, it has a complementary role with cardiac catheterisation. The pre- and postoperatively diagnosis and evaluation of PLSVC which can accompany to congenital anomalies and its cannulation and clamping are very important points for providing a clear surgical field and preventing blood loss.

CVS-005 - ASCENDING AORTA AND TRIPLE VALVE REPLACEMENT IN MARFAN'S SYNDROME

Emirogullari Omer Naci[1], Tasdemir Kutay[1], Ceyran Hakan[1], Kahraman Cemal[1], Topsakal Ramazan[2], Akcali Yigit[1], Oguz Sonay[1], Ozbek Ali[1], Unlu Inanc[1], Tuncay Aydin[1], Polat Vural[1]
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°A 25 years old male applicated to a private hospital with angina pectoris. Echocardiography showed aortic root enlargement (80 mm), 3°-4° aortic, 2° mitral and 3° tricuspid valve insufficiency and then he referred to our hospital. TA 160/80 mmHg, heart rate 90/minute, 2/6 sistolic and 2/4 diastolic murmur was detected in physical examination. TEE performed for differential diagnosis of aortic dissection and there was no finding of dissection and aortic root determined 65 mm and 4° AY, 2° MY and 3° TY detected. The patient discussed at Cardiology and Cardiovascular Surgery Council and triple valve and ascending aorta replacement planned. Operation began with femoral artery and bicaval venous cannulation for CPB. Ascending aorta diameter was approximately 8-9 cm and aneurysm was limited to only ascending aorta. 31, 29, 27 numerous Sorin beleaflet mechanical valves replaceted to tricuspid, mitral and aortic position respectively. There was an intact and strong aortic segment at the upper of aortic annulus and coroner orifices. 32 mm dacron tubuler graft interposed to ascending aorta without using Bental and Cabrol procedure. There was no complication postoperative period and patient discharged with coumadin and in two years follow-up period he had not any complication.

CVS-006 - SURGICAL RESECTION OF A RIGHT CORONARY ARTERY ANEURYSM WITH GIANT FISTULA TO THE CORONARY SINUS

Ozler Azmi, Tarhan Ibrahim Arif, Kehlibar Tamer, Arslan Yucesin, Yilmaz Mehmet, Dumantepe Mert, Berkoz Kazim, Pancaroglu Cansin, Yigit Sinem
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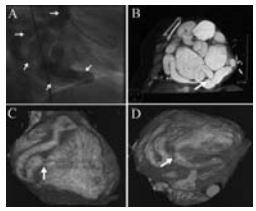
Coronary artery aneurysm with fistula is a rare entity. We report the successful surgical management of a challenging right coronary artery aneurysm with a giant fistula (1.5x1.5 centimeter) into the coronary sinus in a seventh decade, low ejection fractioned, obese, and right ventricle failured lady. Complete resection of the right coronary artery aneurysm with bypass to the posterior descending artery and fistula ligation was performed. An epicardial microwave ablation procedure was also applied.

Figure 1



Coronary angiography view A. Arrows show right coronary artery route. Multislice CT angiography views B. Arrow shows right coronary artery aneurysm and fistula into aneurysmal coronary sinus C. Right coronary artery aneurysm and elongation are shown, and arrow shows fistula site. D. Posterior surface of the heart arrow shows fistula site and aneurysmal coronary sinus are shown

CVS-007 - AORTA ASCENDING-DESCENDING BYPASS GRAFTING VIA LEFT POSTEROLATERAL THORACOTOMY FOR REPAIR OF HYPOPLASTIC DISTAL AORTIC ARCH AND PROXIMAL DESCENDING AORTA

Becit Necip[1], Ceviz Munacettin[1], Kocak Hikmet[1], Unlu Yahya[1], Kalkan Mehmet Emin[2], Kantarci Mecit[3]
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OBJECTIVE: Surgical treatment of aortic coarctation is performed with low postoperative complication rates. However, some patients may require additional surgical interventions due to re-coarctation or hypoplasia of the aorta. We present an adult patient with long-segment descending aortic hypoplasia, patent ductus arteriosus (PDA) and hypoplastic aortic arch who was successfully treated by ascending-to-descending aortic bypass via left thoracotomy without cardiopulmonary bypass. **MATERIAL-METHODS:** 19-year-old woman was admitted to our clinic with the complaints of headache, fatigue, vertigo and palpitation. Aortography and multislice computed tomography showed hypoplastic distal aortic arch segment with concomitant hypoplasia of proximal segment of descending aorta and PDA. Also, left common carotid artery and subclavian artery were not visualized. Operative technique consisted of PDA ligation and performing a PTFE aorta ascending-descending bypass graft parallel to aortic arch, size 16mm in diameter, through left posterolateral thoracotomy without cardiopulmonary bypass. **RESULTS:** Arterial pressure gradient between right upper and lower extremities was totally corrected. She had an uneventful recovery and was discharged home eight days after surgery. He was doing well at the four month follow up visit.
CONCLUSIONS: Ascending-to-descending aortic bypass via left thoracotomy approach without establishment of cardiopulmonary bypass may be an effective method for these patients with long-segment descending aortic hypoplasia and/or hypoplastic aortic arch

CVS-008 - AORTIC DISSECTION AND SURGICAL MANAGEMENT OF A 15-YEAR-OLD PATIENT WITH MARFAN SYNDROME: A CASE REPORT

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Aort dissection is a disease which is not common, seen mostly in the population over 40 years old and can progress with different clinical features. It is rare in young individuals and seen together with trauma, Marfan syndrome and pregnancy. In this study, we report the case of a 15-year-old patient with Type 2 aort dissection who was successfully operated in our clinic. A 15-year-old male patient with Marfan syndrome applied to our clinic with an acute back and chest pain complaint. In CT examining, the ascending aorta diameter was found to be 8 cm and there was a dissection up to the start of the arcus aorta. In the echocardiography, aortic failure and flep appearance in the ascending aorta were detected. The patient was taken under operation with the diagnosis of Type 2 aort dissection. There was an aneurism at the ascending aorta, the diameter of arcus was normal and no ruptures were determined. The patient had coronary anomaly. There was a dissection at the ascending aorta. Bentall operation was performed with 27 No aortic prosthesis valve and 32 mm Dacron tube greft. Patient was discharged on the 8 th day postoperatively.
Acute aort dissection is the most fatal case of human aorta and it has 1-2 % mortality per hour in the first 24-48 hours. In non-traumatic aort dissections, medial degeneration is the major predisposition factor, and the medial degeneration is the distinctive feature of hereditary connective tissue diseases, specifically of the Marfan syndrome. Aort dissection is seen mostly at ascending aorta. It appears that most of the identified ascending aort dissections are secondary to connective tissue diseases and congenital anomalies, and have a high mortality rate.
Aort dissection is rare, and although it is mostly seen in adults, it can rarely be seen in younger population and even in childhood. For the diagnosis of the aort dissection in time the clinician should not hesitate much. In young patients who applied to the clinical with a chest pain complaint and have Mafran syndrome, aortic valve anomaly and chest trauma aort dissection should certainly be taken into consideration.

CVS-009 - A MITRAL-AORTIC INTERVALVULAR FIBROSA FALSE ANEURYSM IN A PATIENT WITHOUT OVERT HEART DISEASE

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False aneurysms originating from mitral-aortic intervalvular fibrosa are clinically very rare. A 22-year-old male patient without overt heart disease was admitted to the cardiology department of the Gulhane Military Academy of Medicine, Ankara, Turkey, with a false aneurysm located between the left ventricular outflow tract and the anterior left atrium. The false aneurysm was repaired at the Department of Cardiovascular Surgery, and the patient was discharged 10 days after the surgery.

CVS-010 - TAKEUCHI PROCEDURE FOR BLAND-WHITE-GARLAND SYNDROME IN ADULT-CASE REPORT

Rudzinski Pawel, Piatek Jacek, Filip Grzegorz, Gaweda Boguslaw, Sadowski Jerzy
Cardiovascular Surgery and Transplantology Department, Jagiellonian University, John Paul II Hospital, Krakow, Poland

INTRODUCTION: Bland-White-Garland (BWG) syndrome is a congenital anomaly of left coronary artery (LTW) abnoremally originating, usually from pulmonary trunk. This irregular localisation of left coronary artery outlet results in extensive ischemia of left ventricle, that may be a cause of high mortality, reaching 90% in neonates. In case of BWG syndrome diagnosis, the only effective treatment is the operation consisting in reconstruction of the correct, two-vessel coronary arteries system. Case presentation: 44-year-old active patient, with periodic stenocardia, after pacemaker implantation in 2003. The diagnosis of BWG syndrome was established after echocardiography and coronary angiography. In 2004, in Cardiovascular Surgery and Transplantology Department, the surgical correction according to Takeuchi method was performed in the patient. Control angio-CT in the 12th month after the operation revealed a regular, properly functioning tunnel in the pulmonary trunk.
CONCLUSION: Operation of tunneling of pulmonary trunk by Takeuchi method is one of the effective of two-vessel coronary system reconstruction in the patients with BWG syndrome.

CVS-011 - CORONARY ARTERY FISTULA IN ADULT PATIENT WITH PULMONARY ATRESIA AND VENTRICULAR SEPTAL DEFECT; 26 YEARS OLD

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INTRODUCTION: Pulmonary atresia is a rare form of congenital heart disease, and may be considered as the latest grade of a broad range of the right ventricle outflow tract hypoplasia. Pulmonary blood flow in patients with pulmonary atresia is usually supplied by major aortopulmonary collateral arteries (MAPCA) or patent arteriel duct. Approximately 10% of these patients pulmonary blood flow is provided by a fistula from coronary artery. We herein report a late admission of the 26 years old woman with pulmonary atresia and ventricular septal defect whose pulmonary blood flow is supplied by left main coronary artery-pulmonary artery fistula (CAPA), multiple aortopulmonary collateral arteries originating directly from thoracic aorta and right subclavian artery.
CASE: A twentysix years old woman was admitted to our institution with complaints of dispnea, fatique with mild physical activity, and cyanosis. Transthoracic echocardiography revealed pulmonary atresia and large ventricular septal defect and severe pulmonary hypertension, no patent arterial duct is diagnosed. angiography showed multiple aorto-pulmonary collateral arteries originated from thoracic descending aorta, a large collateral arose from right subclavian artery radiated to upper and middle segment of right lung. Angiography also showed a fistula from ectatic left main coronary artery to central pulmonary artery which continues with right pulmonary artery.
DISCUSSION: The surgical treatment of PA/VSD is a major challenge for surgeons. In our case, we considered that our patient is not appropriate candidate for surgical correction secondary to pulmonary hypertension and severe heart failure caused by excessive collaterals grown over time and she was enrolled heart and lung transplantation waiting list. In literature transplantation experiences were rarely reported in patients with PA/VSD.

CVS-012 - THE ANEURISMAL DILATATION OF BOVINE JUGULAR VENOUS CONDUIT AFTER PULMONARY RECONSTRUCTION

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Bovine jugular venous conduit is one of the conduits used in various congenital right ventricular outflow tract anomalies. The main reasons of conduit dilatation are distal anastomosis technique and stenotic pulmonary artery branches.
9 year-old-male patient was admitted to an outside hospital with history of cyanosis after birth. He was diagnosed as tetralogy of Fallot (TOF) with pulmonary atresia. The patient had Blalock Taussing (B/T) shunt operation when he was 21 months old. He had total correction procedure with 18 mm bovine jugular venous conduit when he became 5 years old.
In his early postoperative echocardiographic follow up, stenotic pulmonary artery branches were detected. The use of intrapulmonary stent was not available, since the patient didn't have any social security at the time.
In his catheterization at 9 years old, right ventricle (RV), main pulmonary artery (MPA) and right pulmonary artery (RPA) pressures were measured as 81/0-3mmHg, 68/10(11) and 21/10(15) mmHg, respectively. The conduit's diameter was 40, 6 mm; left pulmonary artery (LPA) and RPA were highly stenotic. An endovascular procedure was seemed unlikely to perform, therefore the patient underwent operation. In the operation, patch plasty to the stenotic LPA and RPA with new pulmonary conduit was performed and 21 no Shelhigh pulmonary valve conduit was implanted. The postoperative course was uneventful.
When pulmonary artery stenosis is detected in patients with pulmonary artery conduits, early endovascular procedure should be the first choice. This approach may avoid the aneurismal dilatation of the conduit.

CVS-013 - DIRECT REIMPLANTATION TECHNIQUE VIA A RIGHT MINITHORACOTOMY FOR SCIMITAR SYNDROME: A CASE REPORT

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Scimitar syndrome (SS) is a rare congenital cardiac anomaly defined by an anomalous right pulmonary vein draining of the right lung into the inferior vena cava. We describe a direct reimplantation technique and atrial septal defect closure using cardiopulmonary bypass via a right minithoracotomy on a 24 year-old female SS patient who had an accompanying sinus venous atrial septal defect. This is the first report describing minimally invasive repair of SS. The aims of corrective surgery for SS in adults are to abolish the left-to-right shunt, reserve drainage of the right lung through the scimitar vein, and avoid thrombosis at the anastomosis. We have shown that the direct reimplantation technique and correction of combined pathologies can be accomplished safely via a right minithoracotomy in SS patients.

CVS-014- COMBINATION OF AORTIC AND PULMONARY ARTERIAL ANEURYSMS WITH A RARE CAUSE: ELASTIN DEGRADATION

Aydin Hakan[1], Koc Murat[1], Bolat Ali[1], Surer Suleyman[1], Isik Onur[1], Ayva Yasar[2], Ulusan Vildan[1], Ozisik Kanat[1], Kutsal Ali[1]
[1]Department of Cardiovascular Surgery, Dr.Sami Ulus Children's Hospital, Ankara, Turkey
[2]Erekul Pathology Laboratory, Ankara, Turkey

INTRODUCTION: A 10-year-old male patient was referred to our hospital for a cardiac operation He had been diagnosed with valvular heart disease at age 9, and at that time, aortic valve stenosis together with regurgitation, pulmonary artery regurgitation and distal pulmonary areterial stenosis were found by echocardiography.
CASE: At regular follow-up, a recent computed tomographic scan showed dilatation of both the ascending aorta and pulmonary trunk, and a ultrasound cardiography showed a gradual rise in the pressure gradient of the aortic valve.Thus cardiac operation was imminent. During the operation, a cardiopulmonary bypass was established with the left femoral artery and bi-caval cannulation. Anatomically both arterial trunks were dilatated, occupying the pericardial cavity. The aortic valve and dilated ascending aorta were excised and bicuspid mechanical valvular conduit was replaced.Right and left pulmonary artery were observed to be stenotic, and to relieve this, a pericardial patch was used for enlarging and main pulmonary artery was plicated to reduce the diameter. Histopathological investigation of aortic and pulmonary arterial wall revealed no distinct intima, and disappeared intimal-medial junction.Mild mixoid material collection was observed between collagen and straight muscle fibers at the arterial wall. Besides this, histochemical stain EVG showed decreased integrity of elastin fibers.
CONCLUSION: Our case was not associated with arteritis and any connective tissue disorders. There was still major conflicts why elastin was degraded in this patient which we could not explained.

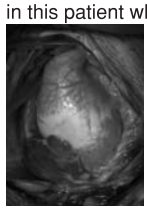
Figure-1
Gross Anatomy

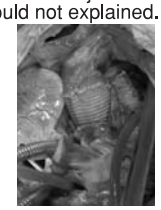
Figure-2
Completed operative view


Figure-3
Histopathology

CVS-015 - ANOMALOUS ORIGIN OF RIGHT CORONARY ARTERY FROM PULMONARY ARTERY ASSOCIATED WITH AORTOPULMONARY WINDOW: A DIFFERENT APPROACH

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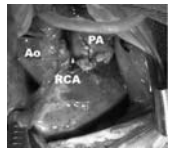
INTRODUCTION: Both anomalous origin of coronary artery and aortopulmonary window are unusual and serious anomalies. A case of aortopulmonary window associated wtih anomalous origin of right coronary artery from the pulmonary artery in a 4-month- old boy is reported in this paper with a different method of repair
CASE: A 4-month-old boy was referred to our department with a history of congestive heart failure and on examination he was found to be dyspneic with a continuous murmur on left border of the sternum. During surgery, after median sternotomy and pericardiotomy it was seen that there was a communication between aorta and pulmonary artery, and RCA originating from anterior aspect of pulmonary artery. The patient was discharged at 6th postoperative day. At control follow-up examination, the child was asymptomatic with no abnormal clinical findings and normal ECG.
DISCUSSION: Aortopulmonary window in association with anomalous right coronary artery from the pulmonary trunk is an extremely rare combination. In this clinical setting, persistent elevation of the pulmonary vascular resistance which can clinically mask the signs of anomalous coronary artery from pulmonary artery is a challenging part in such patients. Accurate preoperative diagnosis by any technique and full evaluation and understanding of the pathology is the key for an optimal surgical repair, which should be achieved as early as possible to prevent the development of irreversible pulmonary vascular disease.

Fig.1
Angiograhy

Fig.2
Gross-anatomy

Fig.3
Translocated RCA



CVS-016 - ASYMPTOMATIC BALANCED-TYPE DOUBLE AORTIC ARCH IN AN ELDERLY PATIENT: A CASE REPORT

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Double aortic arch is a congenital abnormality and sporadic cases have been reported in adult patients, who are usually diagnosed after complaining of asthma-like symptoms or swallowing difficulties because of the compression of the trachea or esophagus by the abnormal aortic arches. Only 4 asymptomatic adult cases have been reported in the English literature and this is the first case that was documented by 64-multislice computed tomography.
We present the case of a 67-year-old male patient with double aortic arch, found coincidentally during coronary angiographic examination. Three-dimensionally reconstructed 64-multislice computed tomography revealed a double symmetric aortic arch in both the left and right sides. The patient had neither respiratory symptoms nor dysphagia. In this particular case, the trachea and esophagus were placed in the middle of the aortic ring without compression because the right and left aortic arches were almost the same size (balanced) and the inner space of the ring was large enough to fit them both insideand there was no tracheal compression identified on native tomography images.

CVS-017 - A NEW SHUNT METHOD IN A PATCH PLASTY OPERATION FOR ADULT TYPE OF COARCTATION OF AORTA

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PURPOSE: A forty-one-year-old man presented with hypertension, chest pain and dyspnea on exertion. Cardiac catheterization revealed coarctation of aorta and normal coronary arteries. Coarcted segment was located at distal to the left subclavian artery with a 40 mmHg of pressure gradient. A prosthetic patch plasty operation was decided.
METHODS: The coarcted segment was exposed with a left posterolateral thoracotomy. When descending aorta was clamped, blood pressure in the right femoral artery fell down below 20 mmHg. Due to risk of medulla spinalis ischemia, a shunt placement between proximal and distal to the coarcted segment was decided. After heparinisation, aortic arch and descending aorta was cannulated with a 7 mm and a 6 mm Calmed® aortic cannula, respectively. Later, two cannulas were joined with a connector. When descending aorta was clamped again, blood pressure in the right femoral artery was between 60-70 mmHg. After an aortotomy in the coarcted segment, the coarctation ridge was excised. The coarcted segment was enlarged with a 4x10 cm, diamond-shaped Dacron patch. After the procedure, pressure gradient between the right radial artery and right femoral artery was 10 mmHg.
RESULTS: The patient had no paraplegy or any other complication in the perioperative period.
CONCLUSION: In the surgical treatment of adult type coarctation of aorta, paraplegy due to cross-clamping develops in 2-3 % of the patients. A shunt replacement between the proximal and distal to the coarcted segment helps to prevent this complication. We think this new shunt method that we described is safe, cheap and effective.

CVS-018 - ECHOCARDIOGRAPHIC STUDY OF SUPERIOR INFERIOR VENTRICLES AND CRISS-CROSS HEARTS

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[2]Hacettepe University Department of Thoracic and Cardiovascular Surgery, Ankara, Turkey

Superior-inferior ventricles are characterized by abnormal relationship of the ventricles, in which the ventricles lie one above the other instead of side-by-side. Consequently the interventricular septum is more or less horizontal (Figure 1). This anomaly is very rarely seen and is almost always associated with complex cardiac abnormalities. Here we present 12 patients with superior-inferior ventricles aged 4 months to 12 years. Two of the patients had in utero diagnosis. Eight patients had usual atrial arrangement (2 of them have isolated dextrocardia), 3 had mirror-imaged arrangement and 1 had left atrial isomerism. Two of the patients had isolated levocardia. Seven patients had discordant atrioventricular connections, and 5 had discordant ventriculoarterial connections. Criss-cross hearts were present in 5 patients. Frequently associated anomalies included ventricular septal defect (10 patients), pulmonary outflow tract stenosis or atresia (7 patients),and double outlet right ventricle (5 patients). One patient had severe left ventricular outflow tract obstruction. In conclusion superior-inferior ventricles are rare anomalies associated with complex cardiac malformations. Correct diagnosis is feasible with echocardiographic study.

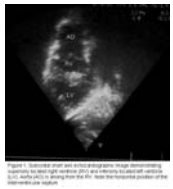

Figure 1

CVS-019 - OUR ARTERIAL DUPLICATION CASES: A RARE ANATOMICAL ANOMALY

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OBJECTIVE: Congenital vessel disorders term includes all congenital organic diseases of the vessel system. The disorders of the arteries are; agenesis,aplasia,displasia,location anomalies,diameter anomalies, duplication,stricture and ectasies and rarely aneurysms.
MATERIAL-METHODS: Our first patient was a 33 years old man and 15 days before his admission he had a CABG operation in our clinic.After discharging, he smoked heavily and didn't use his drugs properly.In the last 12 hours he had pain,numbness and coldness at left hand and distal part of front arm where radial artery catheterization was performed during CABG.An emergent embolectomy was planned.
Our second patient was a 45 years old man.He had hypertension, which responsed partially to triple antihypertensives, claudication under 100 meters and occasionally rest pain at both feet.Further investigations were performed because of the negative pulses at femoral arteries and the ASO anamnesis.
RESULTS: In first case,the exploration with local anesthesia showed duplication of left brachial artery. In second case, terminal aortography showed Leriche syndrome beside the left renal artery duplication anomaly.At left accessory renal artery and main renal artery level, high-grade stenoses of osteal parts were found.
CONCLUSION: In 15-20% of the population there are multiple renal arteries.Two hilar arteries are seen in 10%,they arise from aorta as two seperate branchs and insert into renal hilus. Diagnosis and treatment of congenital arterial anomalies are developed in plan and step by step.The first step in diagnosis is clinical examination.Invasive(especially peroperatively) and non-invasive several methods help in diagnosis.

CVS-020 - THE RESULTS OF SURGICAL CORRECTION OF PARTIAL ATRIOVENTRICULAR CANAL

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OBJECTIVE: Retrospective analysis of the results in patients with partial atrioventricular canal (pAVC).
METHODS: The results of surgical correction of 60 patients who underwent operations from 1978 to 2005 in our clinic were retrospectively analyzed. Mean age was 18 years (17.5±6.8; range from 6 to 29 years), 37 (61.6%) – of patients were males; 23 (38.4%) – were females. Six patients (10%) were in NYHA functional class III, these patients were older than 20 years. 36 (60%) patients had ostium primum defect with mitral valve cleft; 3 (5%) patients had primary ASD with tricuspid valve cleft; primary ASD with cleft of both valves were observed in 7 (11.7%) cases; in 2 (3.3%) cases canal of Gerbode defect type were observed; common atrium was in 6 (10%) patients. Associated cardiac anomalies were present in 6 patients. In 4 cases (6.7%) pAVC associated with secondary ASD; 1 (1.6%) patient had pAVC with partial anomalous pulmonary veins return; another 1 (1.6%) – pAVC associated with coronary-right atria communication.
All patients underwent surgical correction with cardiopulmonary bypass and under hypothermia. Mean cardiopulmonary bypass time was 101.4±26.4 min, and aorta clamp time – 73.3±17.7 min. We used autologous pericardial patch for closure of primary ASD, and suturing of the valves cleft in all cases. In associated anomalies its correction, the closure of secondary ASD; correction of anomalous drainage of pulmonary vein and coronary-right atria communication were performed. The competence of corrected valves was controlled by transthoracic EchoCG.
RESULTS: The hospital mortality was 5% (3/60); all of these patients were in NYHA functional class III. 23 (38.3%) patients had residual minimal mitral regurgitation (MR) after operation; 2 (3.3%) patients had mild MR. There was no incidence of complete AV block.
CONCLUSION: Accurate correction of AV valve regurgitation is the key for good therapeutic effect. Congestive heart failure before operation may deteriorate the postoperative results.

CVS-021 - COARCTATION OF THE AORTA ASSOCIATED WITH LEFT SUBCLAVIAN ARTERY ANEURYSM

Inan Kaan, Goksel Onur Selcuk, Temizkan Veysel, Erden Tuncay, Tatar Tolga, Ucak Alper, Guler Adem, Ugur Murat, Alp Ibrahim, Arslan Gokhan, Us Melih, Yilmaz Ahmet Turan
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BACKGROUND: Aneurysm of left subclavian artery in association with coarctation of aorta is a rare phenomenon especially in the younger population. Occasional reports have been presented from the adult population and aortic/aneurysmal complications were suggested to be less than 3% of the patients with coarctation under the age of 20.
CASE: A 19-year old male patient was admitted for lower extremity varices but was diagnosed as coarctation upon physical examination and plain chest radiogram. Digital substraction angiography demonstrated severe coarctation of the aorta and a 45 mm left subclavian artery aneurysm.
RESULTS: A left posterolateral thoracotomy from 4th intercostal space was performed for surgical exposure. Upon aortotomy, a discrete ring-like coarctation tissue was observed in the aorta just below the level of the subclavian artery orifice. Complete excision of the coarctation tissue was followed by aortoplasty with Dacron patch. Additionally, the subclavian aneurysm was completely excised and a 10 mm Dacron (Gelweave, Sulzer Vascutek, Renfrewshire, Scotland, UK) tube graft interposition was performed. Patient was extubated at postoperative 2nd hour and discharged on day 6 after an uneventful postoperative period on antihypertensive medication.
CONCLUSIONS: Isolated aneurysms of subclavian artery are rare in especially teenager/young adult population and usually associated with atherosclerosis or thoracic outlet syndrome. Prompt diagnosis and surgical treatment in particularly hypertensive patients such as ours precludes a significant risk of rupture and compression of adjacent structures usually observed in these patients.

Figure 1

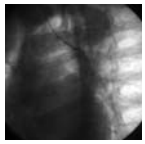

Figure 2

Figure 1
Plain chest X-ray of the patient with left subclavian artery associated with coarctation of the aorta. Note the intercostal notching and the pale opacification of the left upper aspect of the aortic arch.

Figure 2
Coarctation of the aorta and the left subclavian artery aneurysm.

CVS-022 - CREATION OF A MODIFIED AORTOPULMONARY WINDOW FOR PULMONARY ATRESIA AFTER FAILURE OF A CENTRAL SHUNT

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BACKGROUND: The main objective in the case of cyanotic heart disease is to establish adequate pulmonary flow for a future total corrective procedure as early as possible.
CASE: We report a 9-year old female patient with tetralogy of Fallot and pulmonary atresia presented with cyanosis and an occluded central aortopulmonary shunt.
RESULTS: We created a modified aortopulmonary window with a 5 mm Gore-Tex® tube graft with end-to-end anastomosis to pulmonary trunk and a side-to-side anastomosis to aorta.
CONCLUSIONS: A modified aortopulmonary window for palliation of cyanotic heart disease allows adequate and even blood flow to both lungs while avoiding direct pressure conduction on the pulmonary artery may lower the risk of overflow phenomena and progression of pulmonary vascular disease. It promotes rapid pulmonary artery maturation with earlier corrective surgery.

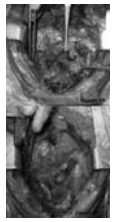

Figure 1
Occluded aortopulmonary shunt (A). Creation of a modified aortopulmonary window with a synthetic graft (B).

CVS-023 - SUCCESSFUL SURGICAL REPAIR OF SUPRAVALVULAR AORTIC STENOSIS WITH WILLIAMS SYNDROME: A CASE REPORT

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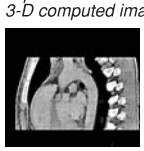
Williams syndrome is a rare genetic condition (estimated to occur in 1/7500 births) which causes cardiovascular, developmental and intellectual problems. Syndrome is characterized by varying degrees of left ventricular outflow tract obstruction beginning superior to the aortic valve. The vascular lesions of William's syndrome are characteristic: supravalvular aortic stenosis, coarctation of the aorta, peripheral pulmonary artery stenosis, and stenosis of the renal and coronary arteries.
We presented a successful surgical repair in which a 17-year-old boy with an elfin face, heart murmur, and supra valvular aortic gradient underwent extended patch aortoplasty using Dacron patch for significant supravalvular aortic stenosis. In addition there was supra valvular ridge above left coronary sinus.
The preoperative peak systolic pressure gradient between the left ventricle and ascending aorta was 110 mmHg.
Bisinusal Y incision was made between non coronary cusp and right coronary cusp; and the ridge was removed with sharp dissection above the left coronary sinus. Resulting defect on the aorta was then repaired with Dacron patch. Peroperatively the gradient between the main pulmonary artery and right pulmonary artery was 24 mmHg. The gradient was 10 mmHg on the left. These gradients did not require surgical correction.
Postoperatively peak systolic pressure gradient between the left ventricle and ascending aorta decreased to 22 mmHg.
We conclude that inverted Y patching method may be an effective and suitable choice for correction of the supravalvular aortic stenosis.

Computed tomographic image of supra valvular aortic stenosis. 3-D computed images are avaible



Operative image Dacron pacth positioned to aortotomy

CVS-024 - ENTRAPPED THROMBUS IN PFO COMPLICATING PULMONARY EMBOLISM WITHOUT PARADOXICAL EMBOLISM IN A PATIENT WITH DEEP VENOUS THROMBOSIS

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[1]Ataturk University Medical Faculty, Department of Cardiovascular Surgery, Erzurum, Turkey
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[4]Ataturk University Medical Faculty, Department of Radiology, Erzurum, Turkey

We report a case of bilateral acute pulmonary embolism and deep venous thrombosis with hemodynamic instability, and there was a thrombus trapped in a PFO and mobile thrombus on both sides in the right and left atrium.
A 47-year-old man was admitted with dyspnea, chest pain, and tachycardia. Physical examination revealed swelling of the bilateral leg. The ECG revealed S-I, Q-III, T-III pattern. TEE was performed in bedside, and showed a right atrial mobile and a entrapped thrombi in PFO (Fig 1A). Computed tomography showed bilateral acute pulmonary embolism (Fig 1B). Due to large and mobile thrombi in both atrium and worsened hypoxemia, without insertion of a vena cava filter, emergent surgical thrombectomy was underwent. Under extracorporeal circulation, the right atrium was incised. We found a thrombus in right atrium (Fig 2A) and entrapped in the PFO. Most of the thrombus was floating in the right atrium and a long end was found in the left atrium (Fig 2B). The thrombus was removed. PFO was extended and left atrium was controlled in terms of remnant thrombi. Then PFO was closed by direct suture. The left and right pulmonary arteries were incised and the pulmonary vessels were cleaned to the level of the segmental arteries (Fig 3A). He had an uneventful postoperative recovery. There was no thrombus in postoperative period in echocardiography (Fig 3B). The vena cava filter was inserted in postoperative 10 days. The patient is now well and free from recurrence of embolic disease 6 months after surgery.

Figure 1A/B

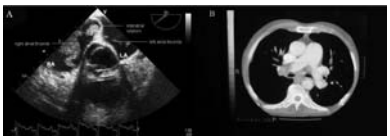


Figure 2A/B

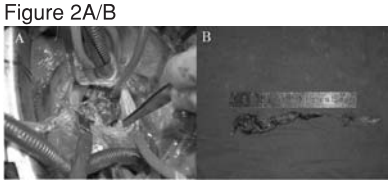
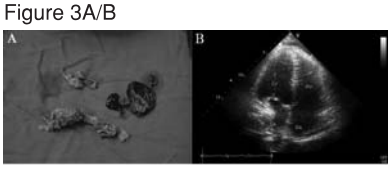


Figure 3A/B



CVS-025 - CONTROLLED MODIFIED BLALOCK-TAUSSIG SHUNT IN THE TWO-STAGED SURGICAL STRATEGY FOR TETRALOGY OF FALLOT

Makhmoudov Maruf, Babadjanov Kalandar, Abrolov Khakim, Mustaev Muslim
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Objective To study possibility of utilizing the controlled Blalock-Taussig shunt (BTS) in the two-staged strategy for Tetralogy of Fallot (TOF). Material and Methods Eleven patients with TOF underwent total repair. Indications to the BTS were 'small' left ventricle with end-diastolic volume (EDV) < 15 ml and indexed EDV < 30 ml/m2, hypoplasia of the pulmonary artery and its branches (Nakata index < 150 mm/m2). BTS was made up of the synthetic allograft of diameter 20-25% more than required. The silk ligature was placed around the allograft and was secured on the tourniquet. The blood volume passing through the BTS was controlled by the tourniquet. Doppler-Echo was performed in the postoperative period; 6-15 days after the BTS on achieving required EDV and indexed EDV, the patients were operated on totally. Results Of 11 patients, 4 developed right ventricular insufficiency and pulmonary oedema. The BTS was narrowed by the tourniquet, and the patients recovered. In the rest patients the tourniquets were freed on 3rd-5th days after the operation. On 6th-15th days after the BTS, initial values of EDV increased on 40-44%; mean EDV was 28.2+/-0.4 ml, mean EDV index was 39.3 ml/m2. Total correction of TOF was uneventful because adhesions were smooth, and the ligature around the BTS was a point for mobilization. There were no mortality.
Conclusion Controlled BTS allows preparing small left ventricle in 10-15 days for total correction of TOF. This strategy prevents from tough adhesive process, pulmonary artery kinking and functional atresia of the right ventricle outflow tract.

CVS-026 - SINGLE-STAGE REPAIR OF ADULT AORTIC COARCTATION AND CONCOMITANT CARDIOVASCULAR PATHOLOGIES: A NEW ALTERNATIVE SURGICAL APPROACH

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[2]Istanbul Bilim University Florence Nightingale Hospital, Department of Cardiovascular Surgery, Istanbul, Turkey

BACKGROUND: Coarctation of the aorta in the adulthood is sometimes associated with additional cardiovascular pathologies that require intervention. Ideal approach in such patients is uncertain. Anatomic left-sided short aortic bypass from the arcus aorta to descending aorta via median sternotomy allows simultaneuos repair of both complex aortic coarctation and concomitant cardiac operation.
MATERIALS: Four adult patients were underwent Anatomic left-sided short aortic bypass operation for complex aortic coarctation through median sternotomy using deep hypothermic circulatory arrest. Concomitant cardiac operations were Bentall procedure for annuloaortic ectasia in one patient, coronary artery bypass grafting for three vessel disease in two patient, and patch closure of ventricular septal defect in one patient.
RESULTS: All patients survived the operation and were alive with patent bypass at a mean followup of 36 months. No graft-related complications occurred, and there were no instances of stroke or paraplegia.
CONCLUSION: We conclude that single-stage repair of adult aortic coarctation with concomitant cardiovascular lesions can be performed safely using this newest technique.

SURGERY FOR CORONARY ARTERY DISEASE

CVS-027 - CORONARY ARTERY BYPASS GRAFTING IN RENAL TRANSPLANT RECIPIENTS

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I.U. Cerrahpasa School of Medicine, Department of Cardiovascular Surgery, Istanbul, Turkey

A successful kidney transplant offers enhanced quality and duration of life and is more effective (medically and economically) than chronic dialysis therapy. Coronary artery disease is a major problem for a renal transplant patient during late period. The number of patients undergoing open heart surgery has increased due to improved survival following renal transplantation. In this report, we present the early postoperative results of 3 patients who had coronary artery bypass surgery in our institution between January and March, 2007. One patient was operated without cardiopulmonary bypass. Severe respiratory distress was noted for 2 patients after extubation which prolonged intensive care unit stay. Atrial fibrillation occurred in 2 patients, one of them also had respiratory distress. There was no allograft failure requiring dialysis therapy also no infection. All three patients were discharged from the hospital. Coronary artery bypass surgery and especially beating heart surgery can be performed to renal transplant recipients with an acceptable and predictable complication rate in early postoperative period.

CVS-028 - FLUTED CORONARY PROBE

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[3]Divison of Cardiovascular Surgery, Mayo Clinic, Rochester, USA

Vascular anastomoses in general and graft-to-coronary anastomoses in particular have two potential “trouble spots”: The “toe and the heel”. While most of the time the anastomosis in these two critical areas are managed with no special difficulties the process always requires awareness and increased attention.
The authors describe a modified easy to use soft-alloy probe, which in our practice proved very useful to make graft-to-coronary anastomoses both safer and easier, particularly in off-pump bypass surgery.

CVS-029 - ENDOSCOPIC VESSEL HARVESTING: IS THE LEARNING CURVE WORTH THE EFFORT?

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2nd Department of Cardiac Surgery, Evangelismos General Hospital, Athens, Greece

OBJECTIVE: Modern trends in Cardiac Surgery incline toward minimalization of operative techniques. The introduction of EVH in Europe, led us to the application of the EVH System (Guidant®, Vasoview 6) in our hospital. We present our learning experience, analyzing technical and functional factors.
METHOD: In a 1 month period, 20 patients (16 male, 4 female) with a m.a. of 67±7 yrs underwent CABG, using the Vasoview 6® System, for SVG harvesting. The IMA was used in all patients. Harvesting time was 45±15 min, with a steadily decreasing rate, for a mean graft length of 17.5±5cm for 1.5±5 SVGs harvested.
RESULTS: Inexperience was the primary reason to conversion in 2 early cases. One hematoma was observed at the early stage of the learning curve. Patient satisfaction and cosmetic results were remarkable with no wound infections observed. Antibiotics were reduced by 30% and analgesics by 50%, compared to patients with the open technique. Postoperative hospitalization was not prolonged (7±2 days). Difficulties observed included negative reactions by the OR staff to the introduction of the EVH System. Familiarization with the set-up of the endoscopic tower, within our space limited OR, was a barrier encountered. Reimbursement was also a major obstacle we stumbled upon.
CONCLUSION: Despite the significant learning curve (25 cases) for each surgeon and the multilevel obstacles encountered, we believe that cosmetic and medical benefits induce the use of the EVH Vasoview 6® System. With proper training it can be reliable in everyday use to the satisfaction of our patients.

CVS-030 - SUPRACORONARY MYOTOMY FOR MYOCARDIAL BRIDGING IN THE SETTING OF HYPERTROPHIC CARDIOMYOPATHY: OFF & ON-PUMP EXPERIENCE IN THE YOUNG

Altin Husnu Firat[1], Bilal Mehmet Salih[1], Bakir Ihsan[1], Aydemir Numan Ali[1], Enc Yavuz[1], Polat Tugcin Bora[2], Erdem Abdullah[2], Celebi Ahmet[2]
[1]Department of Cardiovascular Surgery, Siyami Ersek Thoracic and Cardiovascular Surgery Training and Research Hospital, Istanbul, Turkey
[2]Department of Pediatric Cardiology, Siyami Ersek Thoracic and Cardiovascular Surgery Training and Research Hospital, Istanbul, Turkey

Myocardial bridging is a rarerly observed but well known pathology of the major epicardial coronary arteries which are embedded by overlying myocardial tissue. It is found with high frequency in young patients with hypertrophic cardiomyopathy. Myocardial bridging is associated with myocardial ischemia and infarction, cardiac arrythmias and sudden death. The present case series reports the outcomes of four symptomatic patients with hypertrophic cardiomyopathy who underwent myocardial muscle debridging. Three patients were operated using beating heart technique without cardiopulmonary bypass. One patient had concomitant debridging and septal myectomy under cardiopulmonary bypass in order to release severe left ventricular outflow obstruction. We conclude that off-pump supracoronary muscle myotomy is a feasible treatment modality in young age group with non-obstuctive hypertrophic cardiomyopathy.

CVS-031 - DIRECT CIRCULAR REPAIR FOR LEFT VENTRICLE ANEURYSM

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Special Hospital for Cardiosurgery Fillip II Skopje, Macedonia

BACKGROUND: Most patients with large left ventricular aneurysm undergo either linear resection of the dyskinetic area or endoventricular patch repair. Both techniques have numerous beneficial effects, but also several adverse ones. In order to avoid these imperfections, direct circular repair (DCR) was created.
METHODS: After median sternotomy total revascularization was performed. With inspection the aneurysm localization was marked and the incision was started at the apex of the aneurysm, forwarded toward the border zone with a vital myocardium. For geometric reconstruction, a prolene purse string suture was placed within fibrous sewing ring and pulled to reduce the new created orifice to 1cm. Next, a prolene suture was used over two pericardial stripes to bring the circular cuff together. In case of aneurysmal septal involvement, incision is extended toward the posterior wall, followed by a profound circular suture; so dyskinetic septum is completely excluded. The final continuous over-and-over suture was applied over pericardial strips for definite hemostasis. Including criteria for our prospective study were: severe CAD, large LV aneurysm diagnosed by transthoracic and transoesophageal ultrasound.
RESULTS: From 03/00-12/06, 175 pts with anterior or aneteroapical aneurysm have been operated. Evident haemodynamic improvements were noted: decrease of EDV from 316.5 on 182 ml, ESV from 250 on 102 ml, increase of EF from 20.5% on 37.2%, and CI from 1.8 on 3.2. Valvular reconstructions were performed when indicated. 160pts had been operated under total warm cardioplegia. Mean intubation time was 9±2.3h, mean dosage of cathecholamines was 0.03 μcg/kg/min, average inhospital stay 10±4,6 days. Early mortality rate was 6.9% (12pts).
CONCLUSIONS: Direct circular repair ensures geometric reconstruction of the LV, without use of foreign body after maximal resection and exclusion of the non-viable myocardium. In combination with total myocardial revascularization and valvular reconstruction improves patient's condition with a good clinical benefit.

CVS-032 - A CASE OF HEPARIN INDUCED THROMBOCYTOPENIA WITH THROMBOSIS SYNDROME FOLLOWING CABG: HOW TO MANAGE IT?

Guler Adem, Gunay Celalettin, Sahin Mehmet Ali, Kaya Erkan, Ozker Emre, Demirkilic Ufuk
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INTRODUCTION: Heparin induced thrombocytopenia-thrombosis syndrome (HITTS) is a rare immune mediated coagulation disorder that may manifest with multi organ failures due to thrombotic events. Herein we present a CABG patient who developed early onset HITTS postoperatively and resulted in limb amputation.
PATIENTS AND METHODS: 62-year-old male underwent CABGX3 (LIMA-LAD, Ao-SVG-RDP, Ao-SVG-OM2) operation because of 3-vessel-disease. On postoperative day 4 (PO4), he complaint of severe chest pain. In his ECG, there were ST segment changes in the anterior and inferior precordial leads. His cardiac enzyme assays were indicating an ischemic cardiac event. Clopidogrel and LMWH treatment were initiated immediately. On PO5, the patient complaint of a cold and numb left leg with loss of pedal pulses in his physical examination. The patient underwent thrombectomy procedure and thrombus material was extracted. On echocardiography, large thrombi material in both atria were seen. The platelet counts decreased to 39,000/dl. HITTS was suspected and LMWH treatment was discontinued. Fondaparinuks Sodium treatment was initiated. Between PO6 ad PO19 left leg had been operated for recurrent thrombi for 6 times. On PO18, Lepuridin infusion was administered. On PO19, below-the-knee amputation was performed.
RESULTS: Following Lepuridin treatment, the platelet counts started to recover. In the control echocardiography, the cardiac thrombus dissappeared and ST segment elevation returned to the base line. Warfarin treatment was began. The patient was discharged home on PO 36. In his 3rd month follow-up, the paletlets count reached the preoperative level and he hasn't experienced any cardiac or pulmonary problem.
CONCLUSION: If HITTS is suspected, it is vital to discontiune heparin or LMWH immediately, and initiate an alternative anticoagulant since these of group of patients are highly susceptible to life threatening complications of thrombosis. Lepuridin provides reliable anticoagulation and alloves rapid recovery of platelet count.

CVS-033 - CORONARY ARTERY BYPASS SURGERY IN WOMEN

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We want to present our coronary artery bypass operation experiences in females. Between October 1994 - March 2007, 290 women were operated. The younger was 35 years old, the oldest was 85 years old and the mean age was 60.8. One hundred and thirtyeight of them had three vessel disease, 104 of them had two vessel disease and 48 of them had single vessel disease. Sixteen of them had LMCA lesion. Beating heart technique was used in 17 cases, and classical cardiopulmonary bypass technique was used for the others. Mean bypass number was 2.8. Among them, 226 patients had isolated coronary artery bypass grafting, 4 had AVR, 17 had MVR, 2 had mitral annuloplasty, 13 had aneurysmectomy, 1 had apical plication, 1 had ASD repair, 4 had VSD repair, 21 had coronary artery endarterectomy, and 1 had carotid artery endarterectomy combined with coronary artery bypass grafting. Hospital mortality was 8.6% (25 cases). Cardiac failure (15 cases), perioperative MI (6 cases), mediastinitis (2 cases) and renal failure (2 cases) were the mortality reasons. Fourteen cases underwent reoperation due to haemorrhagie. MI was detected in 13 cases and neurological deficide was seen in 2 cases at postoperative period. Although female gender noticed as a risk factor for coronary bypass operations at different studies, we think that early period risks are acceptable.

CVS-034 - A PACEMAKER COMPLICATION NOTICED AT CORONARY BYPASS OPERATION: RIGHT VENTRICLE RUPTURE. CASE REPORT

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65 years old male patient referred to emergency unite with the symtoms of angina pectoris and syncope. He hospitalized to coronary intensive care unit with the diagnosis of coronary artery disease and 3th degree A-V block. He had rejected coronary artery bypass operation two months ago. Comorbid illnesses were hypertension and diabetes mellitus. He was active smoker. Transvenous pacemaker was implanted to him. Two days later pacemaker was removed. At preoperative period transvenous pace was needed again and implanted. When pericardium was opened at operation, we saw that the pace electrode ruptured posterolateral wall of right ventricle, but there was no hemorrhagie in pericardium. Pace electrode was removed and rupture in the right ventricle was repaired primarily with pledget sutures. Then LAD, OM1, and OM2 anastomoses were made. Epidural pace electrodes were implanted and operation was completed. A-V block continued and postoperative 15th day permanent pace maker was implanted and he discharged healthy. At the and we must be careful for differential complications of transvenous pace implantation and determine carefully.

CVS-035 - THE MANAGEMENT OF POSTOPERATIVE CORONARY SUBCLAVIAN STEAL SYNDROME

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6 years after coronary artery bypass grafting with a left internal mammary arter (LIMA) to LAD, safenous veins to the dioganal and RCA. a 56 years old male had a progressive anginal pain, shortness of breath and left arm pain.
Coronary angiography revealed retrograd flow through the LIMA graft and dioganal safenous vein to to the sbclavian artery and complete obstruction of the left subclavian artery at it's origin.
Restoration of antegrade flow through the LIMA graft to the coronary arteries was achived by a carotid_subclavian bypass surgery, The patien did very well after surgery and dischaged on the 5 th post op day. The paper will discuss the usufullness of the proper evalutoin of subclavian artery and carotid artery in patients candidates for Aorto-coronary bypass surgery.

CVS-036 - A MODIFIED " REVERSE J-SHAPE "STERNAL SKIN INCISION IN THE CORONARY ARTERY BYPASS GREFTING CONCOMITANT WITH TRACHEOSTOMY

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OBJECTIVE: Performing tracheostomy concomittant with median sternotomy is a well known risk factor for increased rate of both mediastinal and sternal infections. We report aplying " reversed J-shape" skin incision for preventing infection in a patient who underwent tracheostomy concomittant with coronary bypass surgery. A 59-year-old man with unstable angina was refered for CABG. Difficult intubation was predicted at the routine preoperative examination. Intubation could not be done neither with conventional method nor with flexibl broncoscopy. Therefore, the operation was postponed. Then, we planed CABG concomitant with tracheostomy. After tracheostomy, a median linear sternal skin incision was made from inferior of the manibrium to the xifoid process. Later, an reverse J-shape proximal incision from the proximal end of he previous incision to the approximately 4cm lateral to the left sternal edge was done (Fig 1). Full median sternotomy and bypass to the 4 vessels were done. Tracheostomy cannula was removed on the postoperative third day and the resultant defect was repaired with primer technique.
RESULTS: There was no any complication and the patient was discharged on the postoperative seven day.
CONCLUSIONS: The presence of a tracheostomy imposes a considerable risk for infection in cardiac surgical procedures. The distance from the area of tracheostoma to the sternal skin incision should be enough in order to minimize the risk of mediastinal infection. We think that, modification of sternotomy with J- shape skin incision may be used when tracheostomy is needed in open heart operations.

Figure-1
Postoperative skin incision

CVS-037 - A CASE OF DIFFUSE ATHEROSCLEROSIS PERFORMED BEATING HEART

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INTRODUCTION: Atherosclerosis is a systemic disease causing of most important mortality in elderly patients. 22 % carotid, 12 % renal, 30 % peripheral atherosclerosis accompany with coronary atherosclerosis. Diffuse atherosclerosis is a rare clinical syndrome with 3 % incidence. We aimed to present 2 vessels coronary beating heart operation of our patient who had diffuse atherosclerosis.
CASE: Patient was 70 years old, diabetic, male. HbA1c was %10.4. He had not history of MI or hypertension. Sedimantation was 8/h. He had angina pectoris for 15 days and intermittent claudication for 6 months. He had not a history of cerebro-vascular event. Hepatic and renal functions was normal. Angiographic findings are seen on. First, coronary bypass surgery was planned.
PROCESS: Midline sternotomy was performed. After 3 mg/kg heparin was given, aortic and two-stage venous cannulation were done. Because of 70 % stenosis on left subclavian artery, LIMA was not prepeared. Two proximal anastomose of sapheneus grafts were anastomosed after ascenden aorta was clamped partially. Ascenden aorta wall was not atherosclerotic.
Sapheneus greft distal anastomoses were performed previously to middle part of LAD, and then to PDA using Medronic Octobus®. Intra-coronary shunts used 2 mm for LAD, 1.5 mm for PDA anastomose. Hypotensive attack or EKG changes were not observed. Pump didn't used. No complication was observed in the postop period.
DISCUSSION: Aortic arch syndrome means formation of atherosclerotical stenosis on branches of arcus aorta. Another progressive disease of the aortic arch is Takayasu arteritis observing frequently in young women in 2- 3 decade.

Angiographic findings

Arterlies	Lesion (%)
LAD-proximal	95
Cx- proximal	100
RCA- crux long lesion	95
Left common carotid artery	50
Left internal carotid artery	100
Right internal carotid artery	100
Right vertebral artery	50
Left subclavian artery	70
Right renal artery	80
Left renal artery	90
Abdominal aorta (infrarenal)	100

CVS-038 - SEVERITY OF CORONARY ARTERY DISEASE IS INDEPENDENTLY ASSOCIATED WITH PLASMA BUT NOT PLAQUE OXIDATIVE STRESS MARKERS IN PATIENTS UNDERGOING CORONARY ARTERY BYPASS SURGERY

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OBJECTIVE: Oxidative stress is known to have major role in the initiation and progression of atherosclerosis. We compared the total antioxidant capacity (TAC) and total oxidative status (TOS) in plasma and atherosclerotic plaques of patient's undergoing coronary artery bypass surgery.
METHODS: In 30 patients who were candidates for coronary artery endarterectomy and in 30 age- and sex-matched controls, plasma levels of TAC, and TOS were measured. Atherosclerotic plaque TAC and TOS levels were evaluated in atherosclerotic plaque specimens in patients group. The severity of CAD was calculated with Gensini score index.
RESULTS: The plasma TAC was significantly lower in patients than in controls (0.65 ± 0.25 mmol Trolox Equiv./L versus 0.83 ± 0.25 mmol Trolox Equiv./L, p=0.008). Plasma TOS was also significantly lower in patients than in controls (10.9 ± 3.7 mmol Trolox Equiv./L versus 14.2 ± 4.8 mmol Trolox Equiv./L, p=0.004). The plaque TAC was 0.11 ± 0.03 (range 0.06-0.18) mmol Trolox Equiv./L and TOS was 0.80 ± 0.46 (range 0.23 - 1.49) mmol Trolox Equiv./L. Multiple linear regression analysis show that Gensini score index was independently associated with plasma TAC levels (r=-0.542, p=0.030).
CONCLUSIONS: An imbalance between plasma oxidative stress and antioxidant status rather than plaque oxidative parameters was related with atherosclerosis.

CVS-039 - USE OF LEPIRUDIN DURING ON PUMP CABG IN A PATIENT WITH HEPARIN INDUCED THROMBOCYTOPENIA: CASE REPORT

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A 75 years old man was transferred to our department with triple vessels coronary heart disease and unstable angina pectoris. Patient had thrombocytopenia 90.000 per cubic millimeter. We suspected heparin-induced thrombocytopenia (HIT). Anti heparin –platelet factor 4 test was positive. The patient operated with Cardiopulmonary bypass with Lepirudin. CABG was performed with usual maneura. The patient discharged postoperative 9th day.
In conclusion, if signs of HIT occurs in a patient receiving heparin,the heparin should be discontinued immediately and CABG under CPB can be perform using Lepirudin.

CVS-040 - SINGLE DOSE WARM BLOOD CARDIOPLEGIA – EFFECTIVE MYOCARDIUM PROTECTION IN CORONARY SURGERY?

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OBJECTIVE: To evaluate single dose use of blood cardioplegia in coronary artery bypass grafting procedures (CABG) patients operated on in normothermia.
MATERIAL-METHODS: There were 204 patientsin the years 2004-2005 who underwent CABG operations performed on cardiopulmonary bypass in normothermia.
Mean age was 65 years (43 – 83 years), mean left ventricular ejection fraction was 50%.
Mean number of performed grafts was 2.8 per patient. In all patients myocardial protection was achieved by antegrade, single dose of warm blood cardioplegia.
Mean aortic cross clamp time was 29 min., and average Intensive Care Unit stay was < 48 hours. In 6 patients perioperative myocardial infarction was diagnosed and two of them required intraaortic contrapulsation. Overall perioperative mortality was less than 1%.
CONCLUSION: One dose of blood cardioplegia in patients undergoing CABG procedures provides effective and safe protection of the heart when the ischemia is less than 30 minutes.

CVS-041 - DIFFERENT REACTIVITY TO VASOCONSTRICTOR FACTORS OF THE PROXIMAL AND DISTAL SEGMENTS OF RADIAL ARTERY IN PATIENTS UNDERGOING CABG

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INTRODUCTION: Total arterial myocardial revescularisation (TAMR) with the use of radial artery (RA) may be a promising way of treatment of coronary artery disease. Despite of favourable long term results, exceptional vulnerability of RA to vasoconstrictor factors is a key factor limiting its use. It is still not clear which segments of RA are more prone to constrict in response to vasoconstrictor factors. The aim of this study was to compare the vasoreactive properties of proximal and distal section of RA grafts.
METHODS: Proximal and distal segments of RA were obtained at operation from 27 patients undergoing CABG and mounted in organ baths for isometric recording of changes in smooth muscle force production. Responses to cumulative additions of phenylephrine (PE), angiotensine II (AT-II), prostaglandine F2alfa (PGF2 alfa) and endothelin-3 (ET-3) were evaluated.
RESULTS: One observed the distinctive vasospasm of both the proximal and distal segments of RA in response to KCL, PE, AT-II, PGF2 alfa and ET-3. The proximal segments of the RA demonstrate the significantly greater spastic response to unspecifically acting KCl, and also to mediated by the stimulation of suitable receptors PE and AT-II. It was noticed that reactivity of both segments of RA to increasing cumulative doses of PGF-2alfa and ET-3 was similar. CONCLUSION: More susceptible to angiospastic factors, in particular to KCl, PE and AT-II, is the proximal section of RA, what should be taken into account in the clinical planning of CABG operations with the usage of RA.

CVS-042 - PERMANENT PACEMAKER IMPLANTATION CONCOMITANT WITH CORONARY ARTERY BYPASS GRAFTING

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PURPOSE: Coronary artery disease is one of the most common causes of complete atrioventricular block in adults. We report management of the patients who had complete atrioventricular block of acute onset and severe coronary artery disease (CAD) in our clinic.
METHODS: In total 4 patients (4 males, mean age of 67.50 ± 4.04) underwent permanent pacemaker implantation concomitant with CABG between June 2005 and June 2007. All patients had severe coronary artery disease that required CABG and had newly developed complete atrioventricular block that required transvenous temporary pacing in the preoperative period.
RESULTS: The mean number of the diseased and bypassed coronary artery was 2.25 ± 0.50 and 2.00 ± 0.8, respectively. Two patients underwent on-pump CABG whereas two patients underwent off-pump CABG due to poor left ventricular functions (ejection fraction of 18% and 30%, respectively). There was one in-hospital death due to stroke in the early postoperative period.
CONCLUSION: In the patients with severe CAD, a complete atrioventricular block of acute onset that requiring pacemaker implantation may coexist. In these patients, we think that permanent pacemaker implantation concomitant with CABG may be preffered instead of a staged operation. In the preoperative period, a good communication with the cardiologist helps to confirm the need for a permanent pacemaker and to select the proper type of the pacemaker. In addition, permanent pacemaker (DDI) implantation concomitant with beating heart CABG may be preferred when the left ventricular functions are poor.

CVS-043 - CORONARY TO CORONARY BYPASS WITH FREE LIMA GRAFT TO PATIENTS WITH MULTIPLE DISTAL LAD LESIONS

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AIM: In patients with multiple lesions in their LAD arteries, if LIMA is not long enough to be used in a sequential by pass, distal LIMA may be cut and used as an isolated graft to bypass the distal lesion.
PATIENTS AND METHOD: In 5 of our patients who were CABG candidates, we detected advanced proximal and distal stenosis in LAD arteries in the preoperative angiographic evaluation.
In the operation, under moderate hypothermia and cardiopulmonary circulation support, cardiac arrest was maintained with isothermic blood cardioplegia following the cross clamping. The proximal lesion in the LAD was bypassed with LIMA. However the length of LIMA was not long enough to perform a sequential bypass for the distal lesion. Therefore two arteriotomies to LAD, one proximal and the other one distal to the distal LAD lesion, were performed. The distal LIMA was cut and the free LIMA graft was anastomosed to these arteriotomies in an end-to-side fashion. The insitu LIMA was declamped and the flow through the distal bypass was seen to be efficient. The operation was carried on in the conventional way.
RESULTS: The postoperative period in every patient was uneventful. All patients were discharged on postoperative 7th day. In the control angiographies, all bypasses were patent.
DISCUSSION: In the revascularization of LAD artery, use of LIMA is widely accepted. On the other hand, in patients with additional distal lesions, LIMA length may not be long enough to perform sequential bypasses. In such cases, bridge bypasses using distal LAD as free graft can be preferred.

CVS-044 - THE USE OF TITATNIUM PLATE AND ITS SCREWS FOR FIXATION OF STERIL STERNAL NONUNION IN CORONARY BYPASS GRAFTING PATIENTS

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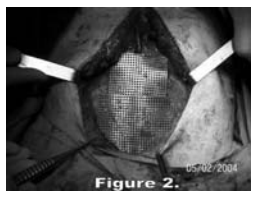
OBJECTIVES: Eventhough various techniques have been described for median sternotomy closure sternal dehiscence, malunion or nonunion due to intrinsic or extrinsic factors can develope after the operation. Todate, only a few studies have addressed the entity of sternal nonunion and its treatment.
MATERIAL-METHOD: The Leibinger plaque system has been first described for the fixation of cranium or mandible fixation in the orthopedic surgery. In the present study, we used different method for correction and reduction of sternal nonunion with the use of locking multiperforated titanium plates with screws (Stryker-Leibinger) for sternal reconstruction it accompanied steel wires as an alternative technique in 6 patients following coronary artery bypass grafting.
RESULTS: There was no complication due to closure material. Sternal stability, reduction and fixation were achieved successfully.
CONCLUSION: Stainless steel wire is being used for sternal closure in a standart fashion after cardiothoracic surgery.Induration due to local allergic reactions which might deteriorate the comfort of the patient, chest pain, and sternal nonunion due to wire from cutting into the sternal bone are the most common complications of sternal wire complications. Healing complications occur in 0.3 % to 5 % of cases, and are associated with a 14-47 % mortality rate if mediastnitis supervenes. Sternal nonunion and dehiscence may cause prolonged hospitalization and increased mortality and morbidity if the patient is not treated. This device system may protect the wire from cutting into the sternal bone. We propose that this technical approach may be used easily, safely and very effectively in repair of sternal nonunion.

Figure 1.

This figure shows that sternal fractures and cutting into the sternum due to sternal wire.

Figure 2.



This figure illustrate the Titatnium Plate wiev after the sternal reapproxymation.

Figure 3.

In that picture, postoperative lateral chest roentgenography is being showed.

CVS-045 - CORONARY BYPASS FOR A PEDiATRiC PATiENT: A CASE REPORT

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INTRODUCTION: Coronary bypass operations at pediatric age group was mostly mandatory because of high cholesterol levels leading to serious stenotic lesions at coronary arteries. In this patient we performed coronary bypass without any complication followed by effective attempts for lowering lipid levels.
CASE: A 13 year old girl was addmitted to our clinic without any anginal complaints but with high cholesterol levels with peak values 1000 gr/dL. Standart double coronary bypass operation was performed by using left internal mammary artery and left great saphenous vein. Postoperative course was uneventful and patient was discharged at sixth postoperative day. After the operation both medical and interventional methods are used in order to lower the lipid level.
DISCUSSION: In general terms, these are not standart operations for pediatric age groups. Patients with anginal attacks and asymptomatic patients with proved stenotic lesions with angiography, were strong candidates for coronary bypass operation if interventional methods are not feasible.

CVS-046 - MYCOTIC ASCENDING AORTIC PSEUDOANEURYSM AT THE AORTIC CANNULATION SITE AFTER CORONARY ARTERY BYPASS SURGERY

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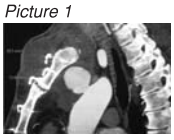
Mycotic aneurysms of the ascending aorta are rare but important complications of coronary bypass artery surgery. The aneurysm can originate on anastomotic sites, suture lines or cannulation sites. Concomitant sternal wound and mediastinal infection predispose to pseudoaneurysm formation.
A 49-year-old man was admitted to our hospital because of a mass on the two-third upper part of the sternum. He had undergone elective coronary artery bypass surgery six months ago in another hospital. However, it was complicated by an infection of the sternum and mediastinum. Multi-slice computed tomography revealed an 9x4,5-cm mycotic pseudoaneurysm of ascending aorta that arose from the aortic cannulation site which eroded sternum and was related to a second mass (3,8x5,2 cm) on the sternum (Picture 1). The patient underwent reoperation through femorofemoral cardiopulmonary bypass under deep hypothermia. Then, the sternum was reopened. The pseudoaneurysm was repaired, under short time circulatory arrest, using 3-0 polypropylene sutures with a pericardial patch. Cultures of the mediastinal tissues were positive for Staphylococcus Epidermidis. His postoperative course was uneventful and he was discharged from the hospital on antibiotics therapy for 3 months. Multi-slice CT scan which was performed after one month postoperatively was normal (Picture 2). On the fifth month, he was at good health and no evidence of recurrent infections were detected.
Deep hypothermia and circulatory arrest through the femoral access are safe and effective tecniques for this rare situation and may prevent fatal surgical complications.

Picture 1



Picture 2

Picture 1
Multi-slice CT scan showing an mycotic pseudoaneurysm of ascending aorta that arise from the aortic cannulation site and a second mass on the sternum.

Picture 2
The control Multi-slice CT of the patient after one month postoperatively.

CVS-047 - VACUUM-ASSISTED WOUND CLOSURE OF MEDIASTINITIS IN PATIENTS AFTER CARDIAC SURGERY

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Poststernotomy mediastinitis is one of the most feared complications in patients undergoing cardiac surgery.Although overall incidence of poststernotomy-mediastinitis is relatively low,it is associated with a significant mortality. There is no accepted consensus regarding the appropriate approach to mediastinitis. Vacuum-assisted closure is a new treatment modality.This technique is based on the application of negative pressure to wound.It was demonstrated that the VAC therapy stimulates blood flow in the peristernal region after poststernotomy mediastinitis.We presented the effect of VAC in two cases in the treatment of poststernotomy mediastinitis.
Case-1:61-year-old woman underwent CABG procedure with using LIMA. Her postoperative course was complicated by severe sternal wound infection requiring extensive tissue and bone debridement.On postoperative 12th day VAC system was applied for 58 days.
Case-2:83-year-old man developed deep sternal wound infection 8 days after CABG surgery combined with left ventricular aneurysmectomy.On postoperative 9th day sternal tissue debridment was performed and VAC system was applied and continued 14-days.
In the first case; at the end of VAC therapy the reconstruction with a pectoralis major flap was performed.She was discharged on the postoperative 85th day.This patient has been free from recurrent sign of mediastinal infection on outpatient clinic follow-up.The therapy with VAC system has still been continued for second patient. In both cases, during the VAC treatment period rapid granulation formation and neovascularization on wound region was observed. After the open heart surgery,VAC system is an efficient method for the treatment of postoperative wound infection.We offer VAC therapy for treatment of poststernotomy mediastinitis in clinical practice.

CVS-048 - LATE ONSET LIMA FIRST BRANCH STEAL SYNDROME AFTER CORONARY ARTERY BYPASS SURGERY

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LIMA is widely used in coronary artery bypass surgery as the first choice of graft in revascularization of left anterior descending artery. Occasionally, a LIMA branch that is left untied during harvesting may redirect the blood flow toward the thoracic wall and can cause angina pectoris postoperatively. In this report, we present a patient who showed up with late onset of angina pectoris related to the untied first branch of LIMA 2 years after CABG operation. The patient was operated using a minimally invasive technique and the LIMA branch was ligated with a hemoclip. The angina pectoris disappeared and no symptoms were observed at the 6th month follow-up postoperatively. Although there hasn't been any consensus on the description and the possible effects of the steal syndrome, we believe that the surgeon should keep this syndrome in mind and ligate all the side branches while harvesting the LIMA.

CVS-049 - INTERNAL MAMMARY ARTERY- THE GOLD STANDARD IN CABG OPERATIONS. WHY CAN'T WE ALWAYS USE IT ?

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INTRODUCTION: The aim of this study was to assess the reasons of not implanting the internal mammary grafts (IMA) during coronary artery bypass grafting operations (CABG).
MATERIAL-METHODS: Retrospective analysis of perioperative data of 291 patients who underwent CABG without IMA grafts between September 2005 and January 2007 at our institution. That group of non-IMA pantients (W 28,2%;M 70,8%;mean age 69,8, range 41-83) comprised 16,5% of the CABG patients operated on during that time. All operations were performed on CBP or as OPCAB,through a median sternotomy and IMA grafts were prepared within pedicle of surrounding tissue after wide opening of pleural cavity.
RESULTS: The most common condition for not implanting IMA grafts were hemodynamical instability (12 patients were after cardiac arrest) requiring inotropic support (35,4% of all non-IMA patients). The second most common reason was angiographically confirmed critical stenosis of left subclavian artery, inadequate flow in the IMA or anomally of its origin (22%). Another group of non-IMA patients constitute those who suffered from serious respiratory problems as COPD with poor respiratory results (16,5%). The less frequent group of reasons were inadequate length of IMA graft (9,5%), advanced age (6,2%), direct injury to the IMA (4,8%), reCABG operations (1,4%) and others.
CONCLUSION: IMA has become the conduit of choice for myocardial revascularisation beacuse of the long term patency rate. At the same time more and more CABG patients have severe comorbidities and are at high periopreative risk what casuses that IMA grafts can not be implanted in every case.

CVS-050 - IN-HOSPITAL DIAGNOSIS AND MEDICAL MANAGEMENT OF DIABETES MELLITUS IN PATIENTS UNDERGOING CORONARY BYPASS SURGERY; A SINGLE CENTER EXPERIENCE

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INTRODUCTION: Diabetes mellitus is a risk factor for coronary artery disease. It is associated with increased mortality and morbidity during coronary bypass surgery. The aim of this study was to determine the prevalence of in hospital diagnosis and optimum medical treatment modality of diabetes mellitus in patients undergoing coronary bypass surgery.
METHODS: Between 2005 and 2006; 594 consecutive patients underwent isolated coronary bypass operation in our center. The patient data were recorded in the institutional database consecutively. Patients with blood glucose levels of >126 with or without a diagnosis of diabetes mellitus were determined preoperatively. They were followed at the postoperative period with measurements of glucose and HbA1c. Antidiabetic treatment is applied to those with ongoing hyperglycemia postoperatively.
RESULTS: Diabetes mellitus was diagnosed in 132 (22,2%) patients. Among them 64 (10,8) were new diagnosed during the hospital stay period. The mean age of the total diabetic patients, new diagnosed ones and without diabetes mellitus were 58,08 ± 13,09, 62,52 ± 8,34, 61,00 ± 9,20 respectively. Optimum blood glucose levels were achieved in patients with already diagnosed diabetes mellitus by dietary regimen in 5,3 %, oral antidiabetics in 59,8 %, insulin in 31,8 %, combined oral antidiabetics and insulin in 3% of the patients. The treatment modality were; 48,4%; 31,3%; 6,3%; 12,5% in the new diagnosed group respectively.
CONCLUSION: There is an important number of patients with a new diagnosis of diabetes mellitus during coronary surgery. Optimum medical treatment may differ from the ones who were already diagnosed preoperatively.

CVS-051 - AORTO-SAPHENOUS VEIN-CORONARY VEIN BYPASS GRAFT A NEW GATE IN CORONARY BYPASS SURGERY

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52 years old male patient who presented to our clinic with dyspnea and chest pain. On echocardiography ejection fraction was 45% with global hypokinetic movement. On coronary angiography there was 80% stenosis in both left anterior descending and circumflex artery with 95% stenosis in the right coronary artery. The right coronary artery seen very delicate and unbypassable. On postoperative follow up patient developed recurrent ventricular fibrillation which demand an emergency operation for revision of the coronary bypass. The right side of the heart akinetic and we failed in weaning from cardiopulmonary bypass machine. The right coronary artery was delicate and unbypassable so we decided to perform an aorta to right coronary vein bypass with ligation of vein proximal to ligation site which gave the chance of retrograde feeding of the right system without creation of arteriovenous fistula. After that we succeded in weaning with minimal inotropic support. Postoperative agitation ended with a tragedy of self extubation. We lost the patient without confirming our operation by angiography.

Fig.1

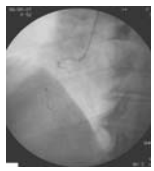

Fig.2

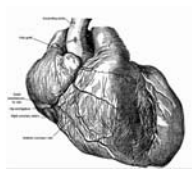

Fig.1 *The angiographic picture of the delicate unbypassable right coronary artery*

Fig.2 *Aorto-anterior coronary vein bypass graft (illustrated by L.QARADAGHI)*

CVS-052 - IMPORTANCE OF EARLY HEMODIALYSIS FOR ACUTE RENAL FAILURE AFTER OPEN CARDIAC SURGERY

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INTRODUCTION: Coronary artery disease is a major cause of death in patients with renal dysfunction. Among the patients who undergo coronary artery bypass grafting, renal dysfunction is known to be a major predictor of in-hospital and remote mortality. Aim of our study is to study effects of early hemodialysis for acute renal failure seen after open cardiac surgery on morbidity and mortality.
MATERIAL-METHODS: Two thousand three hundred and eighty patients who has no chronic renal failure before were operated electively by cardiopulmonary bypass between May 2004- April 2007 in our clinic. Out of these patients 185 patients in whom acute renal failure was developed and hemodialysis was done were enrolled to the study. Patients were seperated into two groups as late dialysis group (n=90), and early dialysis group (n=95).
RESULTS: In late dialysis group mean age was 62.3±6.4 (range 60-78) and there were 32 female and 58 male patients. In early dialysis group mean age was 64.5±5.2 (range 63-81), and there were 36 female and 59 male patients. There were no significant difference for preoperative variables between two groups. We have seen acute renal failure in 7.7% patients out of 2380 patients to whom open heart surgery was done by cardiopulmonary bypass. Hospital mortality rate was 5.9% in those patients and it was significantly high in late dialysis group from early dialysis group (<0.05). As a result; we think that early dialysis in shortest period of time for acute renal failure seen after open heart surgery, decreases mortality and morbidity.

CVS-053 - PLATELETS DAMAGE CAUSES IMMUNOSUPPRESSION FOLLOWING CARDIOPULMONARY BYPASS

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INTRODUCTION: One of the most potent Immunosuppressive cytokines 'Transforming growth factor beta-1 (TGF-b1) is stored in large amounts in the platelets. The release of TGF during cardiopulmonary bypass (CPB) may explain some of the CPB immunosuppressive effects.
OBJECTIVES: To study the effect of CPB on the release of TGF-b1, we compared this group of the patients with the patients undergoing major thoracotomy to exclude the effect of surgical stress on the release of TGF-b1.
METHODS: 5 blood samples were collected at the beginning of CPB, at 60 min, 120min, 180 min and 360 min from 50 patients undergoing routine CABG. Blood also was collected from 40 patients who underwent major thoracotomy for lung cancer at the beginning, 60 min, 120 min and 180 min intervals. Enzyme-Linked Immuno Sorbent Assay (ELISA) for total human TGF-b1 was then performed.
RESULTS: There was a massive release of TGF-b1 during CPB (figure1). Surgical stress of having major thoracotomy did not show significant changes in TGF-b1 levels at the end of thoracotomy. We also observed high levels of TGF-b1 in patients with lung cancer.
CONCLUSIONS: The massive release of TGF following CPB may be contributing to the immunosuppression and susceptibility to the infection associated with CPB. Reducing platelet damage, using TGF antibodies or filters may reduce the incidence of infection following CPB.

CVS-054 - THE EVALUATION OF THE EFFECTS OF PREOPERATIVE NEBIVOLOL TREATMENT ON PERIOPERATIVE MYOCARDIAL PROTECTION IN CORONARY ARTERY BYPASS SURGERY USING BRAIN NATRIURETIC PEPTIDE(BNP)

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AIM: The aim of this study is to investigate the perioperative effects of preoperative nebivolol treatment in coronary artery patients on the cardiac functions that have been damaged by the heart-lung pump machine during the open heart surgery by using Brain Natriuretic Peptide (BNP) measurements.
PATIENTS AND METHODS: 38 volunteers among coronary artery patients were randomly divided into two groups. Control group was consisted of 18 patients and the second group was the study group who has been given preoperative nebivolol treatment (20 patients). The study group was given 5 mg/day nebivolol for 1 week prior surgery. At the end of the week, blood samples were again drawn in the study group. Blood samples at the 6th, 12th, 24th hours and 7th day of the postoperative period were drawn in both groups and Troponin I, Creatinin Kinase MB and BNP levels were measured from the samples. All patients had control echocardiographic investigation at the first month postoperatively.
RESULTS: The enzyme levels measured at the 0th, 6th, 12th, 24th hours and 1st week postoperatively in two groups were compared. No statistically meaningful difference were found (p>0,05).
CONCLUSION: 1 week of nebivolol treatment prior coronary artery bypass surgery was found to be ineffective in decreasing the amount of peroperative cardiac damage. We believe longer preoperative nebivolol treatments, more perioperative BNP measurements, more echocardiographic followups in the postoperative period in a larger patient groups will give more precise results in defining the true effects of the drug.

CVS-055 - EVOLUTION OF ROUTINE IMMEDIATE EXTUBATION OF THE ELDERLY PATIENT UNDERGOING OFF PUMP CORONARY ARTERY BYPASS SURGERY IN THE COMMUNITY HOSPITAL SETTING

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PURPOSE: We evaluated the evolution of techniques that allowed immediate extubation (IE) versus postoperative extubation (PE) in the majority of patients > 70 y.o. undergoing OPCAB at a community hospital.
METHODS: All patients > 70 y.o. undergoing OPCAB during a 2 year period were evaluated (112 patients). A number of techniques were utilized to minimize perioperative pain.
Patients were divided into 2 periods: Implementation phase (12/1/03-7/31/04); Adoption phase (8/1/04-12/31/05). We compared STS risk and postoperative course in IE, PE and reintubated patients.
RESULTS: Implementation phase: 24/51 patients (47%) had IE. Average age=77. STS risk in IE versus PE group was 3.55% versus 4.19%. Reintubation occurred in 5/24 IE patients (20.3%) versus 3/27 PE patients (11.1%). Reintubated IE patients were more likely to have CHF and DM, but their STS risk was not significantly different (3.8%). The mean LOS was 18.6 days in this group. Adoption phase: 39/61 (64%) had IE. Average age=76. IE versus PE STS risk was 2.0% versus 6.06%. Reintubation occurred in 3/39 (7.7%) of the IE group and none of the PE group. Postoperative LOS was 6.7 days in the IE group versus 8.0 in the PE group.
Risk factors not affecting IE: smoking history and obesity. Risk factors negatively affecting IE: preoperative IABP, diabetes, CHF and EF<35% and COPD.
CONCLUSION: IE in elderly patients undergoing OPCAB can be safely performed. A multidisciplinary approach to perioperative pain management and appropriate patient selection are required. Commitment from anesthesia, ICU nursing and respiratory therapy is imperative.

CVS-056 - LEFT ATRIAL MASS PROLAPSING INTO THE LEFT VENTRICLE IN A PATIENT WHO HAD UNDERGONE PREVIOUS CORONARY ARTERY BYPASS SURGERY

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BACKGROUND: Surgical treatment for left atrial myxoma combined with redo coronary artery bypass grafting (CABG) has been rarely reported.
CASE: A 64-year-old man was admitted to our hospital, complaining of chest pain and paroxismal nocturnal dysnea over a three-month period. He had undergone off-pump CABG including the left internal mammary artery (LIMA)-the left anterior descending artery anastomosis 7 years ago.
Coronary angiogram demonstrated open of LIMA graft and 70% stenosis of the right coronary artery (RCA). A large (70x45 mm) mobile and pedunculated left atrial mass prolapsing into the left ventricle in diastole was incidentally detected by echocardiography.
Left atrial myxoma was resected at first, and then the saphenous vein graft was anastomosed to the RCA. The postoperative course was uneventful.
CONCLUSIONS: We should bear in mind the concomitance of coronary artery disease and left atrial myxoma. It is therefore recommended that, to exclude the left atrial mass, echocardiography be routinely performed on all patients undergoing CABG. The surgical priority for cardiac myxoma is an important issue from the point of view of prevention of myxomal fragment embolus.

CVS-057 - THE EFFECT OF COMPETITIVE FLOW ON BOTH THE FLOW AND THE VELOCITY IN VENOUS GRAFTS

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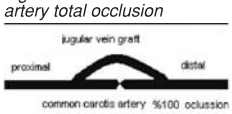
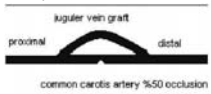
BACKGROUND: The term "competitive flow" imply a flow from a partially stenoses native coronary that "competes" with graft flow to perfuse the distal tissues. The purpose of our study, using a rabbit model and performing a different ratio of stenosis in their common carotis artery, is to investigate the effects of competitive flow by measuring both the volume of flow and the velocity in the venous graft.
MATERIAL-METHODS: A thirty-three individual rabbits were divided in three separate groups. In Group I, the common carotis artery was ligated to form a total occlusion. In group II, performed ligation to the common carotis was to achieve only a %50 of stenosis, in Group III, common carotis artery was fully patent. The jugular vein was reversed and anastomosed with proximal and distal common carotis arteries using end to side anastomosis technique. With the Doppler US the total flow and velocity in the venous graft were measured.
RESULTS: The average velocity in the groups (group 1, 16.8 +/- 7.7 cm/sec, group II, 14.1 +/- 6.1 cm/sec, group III, 12.1. +/- 6.7 cm/sec), and the average flow volume in the graft (group I, 33.9 +/-11.5 mL/min, group II, 29.0 +/- 8.3 mL/min., group III, 24.4 +/- 12.8 mL/min.) were recorded (p>0.05)
CONCLUSION: As the ratio of the stenosis decrease in the carotis artery, even if the rate of volume flow in the grafts is reduced in accordance to the competitive flow, statistically the variation is insignificant

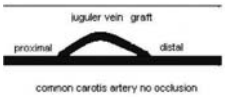
Figur 1A:Common carotid artery total occlusion



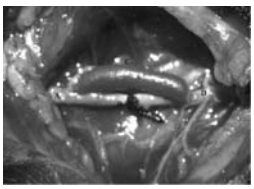
Figur 1B:Common carotid artery 50% occlusion



Figur 1C:Common carotid artery no occlusion



Figur 2: It is shown the image of completed anastomosis of juguler vein graft to common carotis artery. A: Proximal carotis artery B: Carotis artery between two anasthomosis C: Juguler vein graft D: Distal carotis artery



Figur 3:The doppler US image of venous graft and artery anasthomosis. A: Juguler vein graft B: Carotis artery before anasthomosis site C: Anasthomosis site D: Carotis artery after anasthomosis site

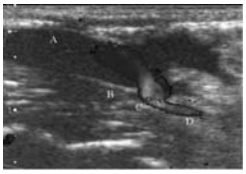


Table 1: Postoperative venous graft measurements results by Doppler US

Groups	Velocity (cm/sec)(average)	Volume (ml/min) (average
Group I (Total occlusion)	16.8 +/- 7.7	33.9 +/-11.5
Group II (%50 stenosis)	14.1 +/- 6.1	29.0 +/- 8.3
Group III (Full patent)	12.1. +/- 6.7	24.4 +/- 12.8
P value	0.165	0.141

CVS-058 - THE PROGNOSTIC VALUE OF BRAIN NATRIURETIC PEPTID IN PATIENTS UNDERGOING TO CORONARY ARTERY BYPASS SURGERY

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AIM: Brain natriuretic peptid (BNP) is a ventricular hormone that is sensitive and specific marker of changes in ventricular function.It is sample screening test for symptomless left ventricular failure. The aim of this study was examine there is a coralation between the preoperative plasma level of BNP and early morbidity in patients undergoing to coronary artery bypass.
METHODS: During the 11 month period,we prospectively evaluated 22 consecutive patients who was operated on for coronary artery bypass. Patients had not have other system and cardiac disease and EF>= 40. Preoperative plasma BNP values was statisticaly compired with early postoperative morbidity findings.BNP analysis was made by 'Electrohemoluminescent immunassay method and Roche Diagnostic Indianapolis,Indiana proBNP Elecsys 1010 autoanalyzer with tecnique and >=125 pg/ml was accepted sign for cardiac function disorder.
Postoperative morbidity criterious were accepted as;staying longer than 4 day in intensive care unit and longer than 10 days in hospital,mechanic ventilatory support longer than 48 hours,necessity for inotrops or IABP support.All analysies were done by using SPSS 9.0 statistical software pocket.
RESULTS: One or more of above criterias for morbidity are established in 12 of 22(%54) patients.
There were no significant differance for demografic findings between the patients who morbidity were established and was not.Preoperative plasma BNP level was 763±53 pg/ml in 12 patients with morbidity while 113±47pg/ml among 10 patients witkh no morbidity.(P<0.05)
CONCLUSION: With the results it is concluded that preoperative plasma BNP levels is a reliable indicator for early postoperative morbidity in patients undergoing coronary artery bypass.

CVS-059 - DO WE HAVE A SAFE TOOL FOR GREAT SAPHENOUS VEIN HARVESTING IN THE GROUP OF PATIENTS AT HIGH-RISK OF LEG-WOUND COMPLICATIONS?

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OBJECTIVE: This study sought to determine whether outcomes of endoscopic vein harvesting are independent on the presence of risk factors for leg-wound complications such as obesity, diabetes, female gender, peripheral vascular disease and chronic immunosupression.
METHODS: From June 2005 to March 2007, endoscopic vein harvest for coronary artery bypass grafting was performed in 250 consecutive patients. Based on the presence of the risk factors the patients were divided in the group RISK (n=170) and the group non-RISK (n=80). Patients were evaluated prospectively for leg-wound complications on 7th post-operative day and after 3 months.
RESULTS: On 7th post-operative day were no differences in terms of leg-wound complications: haematoma (28% vs. 26%, p=0.83), necrosis (0% vs. 0%), lymphatic discharge (2% vs. 1%, p=0.53), infection (0% vs. 0%) and dehiscence (1% vs. 0%, p=0.51). No differences were found in residual edema (11 vs. 10%, p=0.82), pain (12% vs. 13% p=0.72) nor saphenous neuropathy (4% vs. 4%, p=0.93). At the 3-month follow-up, identically, decreased incidence of residual leg edema (7% vs. 6%, p=0.98), pain (5% vs. 6%, p=0.83) and saphenous neuropathy (3% vs. 2%, p=0.82) was identified. No significant differences were recorded in harvesting characteristics: harvesting time (43.7±10.2 vs. 44.4±10.6 min, p=0.67), graft length (31.3±9.6 vs. 35.4±10.1 cm, p=0.06) and conversion rate (1% vs. 2%, p=0.76).
CONCLUSIONS: Outcomes of endoscopic vein harvesting are not dependent on the presentation of traditional risk factors. Endoscopic vein harvest should become the standard of care particularly in the group of patients at high risk of leg-wound complications.

CVS-060 - EARLY RESULTS OF COMBINED AND STAGED CORONARY BYPASS AND CAROTID ENDARTERECTOMY IN ELDERLY: FACTORS EFFECTING THE MORTALITY AND MORBIDITY

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AIM: Aim of this study is to decide whether to do staged or combined surgery to the CABG candidates with serious carotid stenosis and to study the factors affecting mortality and morbidity.
METHOD: Between 2004 and 2007, 120 patients with predominant ischemic heart disease were included. Prospectively studied patients were seperated into three groups. Group 1: Patients to whom only CABG was done (n=40). Group 2: Patients to whom CABG and CEA was done as a combined procedure (n=40). Group 3: Patients to whom CABG and CEA was done as a staged procedure (n=40).
RESULTS: Mean age of the patient groups were 56±6, 69±3, 71±2 respectively, and there were 23 female and 97 male patients. There were 8 mortality 7 was seen among CEA+CABG group and the difference from CABG group was statistically different (p<0.001). From the frequent preoperative risk factors, diabetes mellitus, systemic hypertension, hyperlipidemia, unstabil anjina pectoris, left main coronary arterial disease, cerebrovascular accident and chronic obstructive pulmonary disease were significantly different only from patients to whom only CABG was done, in both staged and combined CEA +CABG patient group. Out of 120 patients mortailty was occured among 8 patients. According to these results we can say that whether we do staged or combined CEA+CABG, it increases the mortality. We can say that if staged or combined CEA+CABG surgery is done according to protocols for the patient himself, in patients with severe carotid stenosis and advanced coronary disease, results of this great surgery are satisfactory.

CVS-061 - GIANT LEFT ATRIAL THROMBUS FORMATION IN PATIENT WITH A PREVIOUS CORONARY ARTERY BYPASS GRAFTING

Erdil Nevzat[1], Nisanoglu Vedat[1], Kaynak Murat[1], Yagmur Julide[2], Cihan Hasan Berat[1], Secici Serkan[1], Kosar Feridun[2], Battaloglu Bektas[1]
[1]Inonu University, Turgut Ozal Medical Center, Dept. of Cardiovascular Surgery, Malatya, Turkey
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OBJECTIVE: Occurrence of thrombus formation in the left atrium is rare without accompanying abnormalities at the mitral valve. Only a few cases of giant and thromboses in the left atrium have been reported in the literatures. These cases are related with mitral valve disease and atrial fibrillation. Floating atrial thrombus is important because of its potentially fetal effects. In this case report we reported a giant left atrial thrombus in a patient with previous coronary artery bypass grafting.
METHODS: A 58-years old man who had undergone a coronary artery bypass grafting one year ago. One year after the surgery at the time of routine control examination transthoracic echocardiography has been performed for evaluation of ventricular functions. Transthoracic echocardiogram showed a left atrial thrombus with dimensions of 3.0x2.8 cm. He had no evidence of valvular heart disease and atrial fibrillation. The reoperation was planned.
RESULTS: Cardiopulmonary bypass was established with femoral arterial cannulation and right atrial venous drainage. Left atriotomy was performed and a thrombus with dimensions of 4x4 cm has been removed from the orifice of the left atrial appendix. Postoperative course was satisfactory. After 2 days in ICU the patient discharged in the 6th day.
CONCLUSION: Our experience with this patient suggests that early diagnosis is life-saving and surgical intervention for giant left atrial thrombus is safe and satisfactory even in cases with previous coronary artery bypass grafting.

CVS-062 - CORONARY ARTERY BYPASS SURGERY IN HIGH RISK PATIENTS AGED OVER 65 YEARS (EUROSCORE >= 6)

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Inonu University, Turgut Ozal Medical Center, Dept. of Cardiovascular Surgery, Malatya, Turkey

OBJECTIVE: Coronary artery bypass surgery on cardiopulmonary bypass is associated with significant morbidity and mortality, which may be more marked in high-risk and elderly patients. We evaluated our results of on-pump coronary artery bypass in high-risk patients aged over 65 years old and compared them with low risk patients results.
METHODS: Between January 2004 to March 2007, 342 patients aged over 65 years underwent on-pump coronary artery bypass surgery in our clinic. We classified them into two subgroups: high risk (EuroSCORE >= 6, n= 166, male 107 (64.5%), age 71.8±4.9 (65-85) years) and low risk (EuroSCORE <6, n=176, male 129 (73.3%), age 68.8±4 (65-82) years).
RESULTS: Hospital mortality was 1.5% in high risk and 1,1% low risk patient groups respectively (p>0.05). There was no significant difference in the number of grafts between the groups (2.93±0.95 vs 2.95±0.75; p=0.772). EuroSCORE high risk patients showed significantly higher rates of inotropic agent using (p<0.0001), intraaortic balloon pump insertion (p<0.006), atrial fibrillation (p=0.013). ICU and hospital stay was significantly longer in the high risk group (p=0.003, P<0.0001; respectively). There was no difference significantly with regard to major complication such as postoperative renal failure, neurologic complications, gastrointestinal complications, respiratuary failure in both groups.
CONCLUSION: Especially in selected patient groups, on-pump coronary artery surgery can be safely performed in high-risk patients aged over 65 years old. Operative mortality is comparable with low risk patients.

CVS-063 - THE EFFICACY OF GLUTAMATE/ASPARTATE SUPPLEMENTATION DURING CARDIOPULMONARY BYPASS ON POST-OPERATIVE NEUROCOGNITIVE FUNCTION

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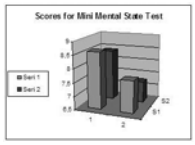
Kocatepe University, School of Medicine, Afyonkarahisar, Turkey

INTRODUCTION: Despite remarkable progress in surgical, cardiopulmonary bypass (CPB) and anesthetic tecniques, neurocognitive damage still remains an important cause of postoperative morbidity in cardiac surgery. In this randomized trial, glutamate and aspartate has been tested evaluating to cognitive dysfunction be provided as energy substrate contribute in cardiac surgery.
PATIENTS AND METHODS: Seventy patients undergoing coronary artery bypass surgery by a single cardiothoracic surgical team were randomized to receive glutamate and aspartate or no glutamate and aspartate in their bypass procedure. The Mini-Mental State Examination (MMSE) was administered the day before surgery and three days later. The MMSE was performed patients exhiting a postoperative defect > or = 2 points were compared to those without changes or with improved results. Statistical analysis was performed using Student's t-test and Chi-square test.
RESULTS: 70 patients completed both tests. The two groups were comparable with respect to demographics and MMSE Scores. The mean MMSE score was not statistically significant.
CONCLUSION: This prospective randomized study to show statistically no significant glutamate that provided as energy substrate during cardiac surgery.

Scores for Mini Mental State Test



CVS-064 - CHECKING AORTIC CROSS CLAMP BY PERFUSIONIST DURING CARDIOPULMONARY BYPASS: A NEW METHOD

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INTRODUCTION: Sometimes the aortic clamp during cardiopulmonary bypass is not able to occlude the aorta in a proper way, which will result in leaking of systemic blood into the heart. This leak can not only make the myocardium warm but also can wash out the cardioplegic solution. There are several reasons for aortic clamp to fail to work properly:
• Disproportion of size and length of clamp and aorta
• Calcified aortic wall
• Clamps that are old and worn out
• Trapping of cardioplegic canula tip between clamp and aorta
• Difficulty in releasing aorta in re-do cases
With this method, any leak through aortic clamp can be detected and dealt with quickly.
METHOD: A pressure gauge is placed at the end of cardioplegic tube (perfusionist side). When antegrade cardioplegic solution is given, intra-aortic and gauge pressures should be 50-70mmHg and 125-150mmHg, respectively in order to give 300-350 ml of cardioplegic solution per minute. After the heart has arrested, the perfusionist reduces the systemic flow for a few seconds, while keeping cardioplegic solution flow constant. With proper aortic clamping, there will not be any fall in the pressure of gauge. However, when the aorta is not clamped completely, a fall in the gauge pressure can be measured as the cardioplegy solution leaks through aortic clamp into systemic flow.
RESULTS: We have used this method in our University Hospital in more than 1000 patients during the last two years. Among them, in about 70 of patients (7%), the perfusionist has informed the surgeon about the leak. There has been no increased rate of stroke by using this method.
CONCLUSION: While the surgeons should use all their knowledge and conventional methods to check the aortic clamp, this simplified method is reproducible and can give extra reassurance to them during the operation. Summarized advantages and disadvantages of this method are:
Advantages:
• This method seems to be the quickest method of detecting aortic clamp leak (just a few seconds after cardiac arrest).
• It is an easy method and does not need expensive equipment.
• It does not interfere with the surgeon or operating table.
• Better myocardial protection can be achieved.
• Lesser amount of cardioplegic solution is used.
• Cross-clamping time can be reduced.
Disadvantage:
• This method is not accurate in patients with severe aortic valve regurgitation.

CVS-065 - SIMULTANEOUS OPEN HEART SURGERY AND LAPAROSCOPIC CHOLECYCTECTOMY

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INTRODUCTION: Abdominal procedures in patients with coronary artery disease or severe valvular disease have high risk of mortality and morbidity. In this study we describe our experience about two patients who managed successfully by laparoscopic cholecyctectomy and open heart surgery at the same session.
METHODS-MATERIALS: A 60-year-old female was referred to our center due to exertional dyspnea and abdominal pain. The final diagnosis turned out to be gallstones by sonography, and then she underwent coronary artery angiography in which three vesels involvement was observed; laparoscopic cholecyctectomy and Coronary Artery Bypass Grafting (CABG) performed under general anesthesia at the same time. The second patient was a 45-year-old female that due to acute pulmonary edema was referred and in cardiography, mitral valve stenosis was diagnosed. In addition, she complained from abdominal pain for one year which in further evaluation it was diagnosed as gallstone. She underwent laparoscopic cholecyctectomy and open heart surgery at the same time.
RESULTS: Simultaneous classic laparoscopic cholecystectomy was successfully performed on two different open-heart patients, one with coronary artery disease for coronary artery bypass surgery and the other with severe mitral valve disorder for mitral valve replacement. The postoperative course was uneventful for both of them and discharged without any problem.
CONCLUSION: In order to reduce mortality and morbidity, hospitalization course, and prevent bile peritonitis after cardiac surgery, it is suggested that in patients with coronary artery or severe valvular disease, laparoscopic abdominal procedures can be done with cardiac surgery at the same time.

CVS-067 - LEFT RETROPERITONEAL APPROACH FOR AORTO-BIFEMORAL GRAFT BYPASS OPERATION

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INTRODUCTION: Aorto-bifemoral graft bypass operation is performed in the surgical treatment of bilateral iliac artery occlusive disease. Generally, median laparotomy is used for this operation. The aim of this presentation is to report a case in whom aorto-bifemoral synthetic graft bypass performed via left retroperitoneal approach.
CASE: 59 year-old man presented with intermittent claudication who had a history of hypertension and three vessel coronary bypass operation. Left internal carotid artery was totally occluded. The distal segment of left internal carotid was not suitable for anastomosis. There are multiple atherosclerotic lesions in bilateral iliac arteries and bilateral superficial femoral arteries in the peripheral angiography. We performed 16 x 8 dacron aorto-bifemoral Y-graft bypass via left retroperitoneal approach under general anesthesia. First, common femoral arteries were prepared for distal anastomosis of Y-graft. A 12-13-cm incision in the left lower quadrant of the abdomen was made. The distal part of abdominal aorta and iliac bifurcation were explored without opening the peritoneum. Side clamp was placed to the distal abdominal aorta. Proximal anastomosis was performed using a prolen suture 4/0 with continue technique. A tunnel was opened using a finger between right femoral and abdominal aorta through the trace of right iliac artery. The right leg of Y-graft was passed from this tunnel using a tunneller clamp (fig.1). Any complication was not seen during this process. Than, the left leg of Y-graft was passed easily to the left femoral area thougth the trace of left iliac artery. Distal anastomosis were performed using a prolen suture 4/0 with continue technique. Oral feeding was given 8 hours after the operation. He was discharged to home 4 days after sugery.
DISCUSSION: A lot of complications can be occurred due to median laparotomy such as evisceration, incisional hernia, peritonitis, birid ileus. We believe that left retroperitoneal approach for aorto-bifemoral graft bypass operation in the patients with bilateral iliac artery occlusive disease is a less invasive operation than the median laparotomy approach.

fig.1

SURGERY FOR VALVULAR HEART DISEASES

CVS-068 - EUROSCORE EXPECTED MORTALITY CORRELATION FOR AVR+MVR PATIENTS REAL MORTALITY

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OBJECTIVES: This study is done retrospectively on 133 patients who were operated between january 2003-january 2005 for MVR.All euroscores mortality scores were figure outed by pre operative datas of patients and compared post operative real mortality.
METHODS: All these 133 patients were divided to three groups;group1 euroscore between 0-2(low risk group),group2 euroscore between 3-5(mid risk group) and group3 euroscore between 6 or higher(high risk group).And then these expected mortality ratios were compared with postoperative real mortality.
RESULTS: At group1 there were 24 patients and 2(%8.33) exitus and group1 expected mortality euroscore was %1.50.At group2 there were 89 patients and 2(%2.25) exitus and group2 expected euroscore mortality was %3.17.At group3 there were 20 patients and 1(%5) exitus and expected euroscore mortality was %12.32
CONCLUSIONS: For All these three groups there is no significant differance between p valu of expected mortality and real mortality.That means for these three groups euroscore is a good predictor of mortality risk stratifications for AVR+MVR patients

CVS-069 - 35 YEARS SURVIVAL AFTER AORTIC VALVE REPLACEMENT WITH A LILLEHEI-KASTER PROSTHESIS: CASE REPORT

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A patient who underwent aortic valve replacement with a 17 mm Lillehei-Kaster prosthesis and open mitral comissurotomy 35 years ago, developed mitral insufficiency and restenosis, and there was elevated trans aortic gradient (77 mmHg peak to peak, 45 mmHg mean). In operation, aortic old prosthesis had good opening and closing function but aortic mismatch. We performed aortic and mitral valve replacement with St. Jude Medical mechanical valve. Postoperative period was uneventfully.
Up to 30 years survival in aortic valve prosthesis is rare.

CVS-070 - FIBROELASTOMA OF THE MITRAL VALVE: SIMPLE SHAVEOFF OR COMPLEX REPAIR SURGERY?

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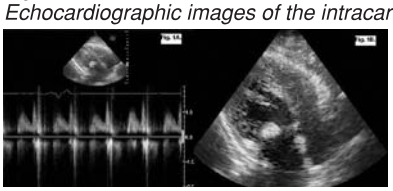
OBJECTIVES: A papillary fibroelastoma is a rare and benign primary tumor of the heart diagnosed usually accidentally during echocardiography or following a thromboembolic phenomenon. A valvular involvement, mostly aortic and mitral, is usually observed. Usually anterior mitral leaflet is involved; posterior leaflet involvement is even rarer. Most of the scarce data have been reported from patients older than 50 years old, it may be found at any age, from the neonate to the nonagenarian. We present rare cases of papillary fibroelastoma in two patients.
METHODS: Two asymptomatic patients at ages of 38 and 52 years were operated for fibroelastoma of the mitral valve.
RESULTS: Both tumors were located on the posterior leaflet with extension to subvalvular apparatus. The younger patient underwent a staightforward valve replacement after excision of the 12x15x8 mm tumor. The other patient was intended to have a repair rather than replacement, following the excision of the 10x8x6 mm solitary verruceous tumor, but development of SAM and LVOT obstruction with elevated mitral gradients led the surgeons to replace the valve. A modified posterior augmentation technique was adapted for the patient.
CONCLUSIONS: Cardiac papillary fibroelastoma is a rare benign tumor that involves most commonly heart valves and may cause thromboembolism or mechanical interference with the valvular function. Irrespective of the presence of symptoms, prompt excision with preservation of the valvular anatomy and function whenever possible is the primary goal of the surgery; valve replacement is, however, results in safe and effective cure with good results.

CVS-070

Figure 1
Echocardiographic images of the intracardiac tumor.



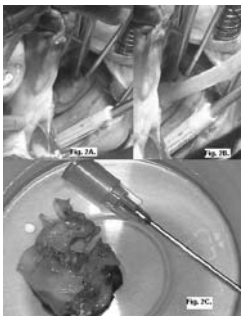


Figure 2
Tumor on the mid-posterior mitral leaflet (A and B). Note the aspirated material around the tumor in B. Gross appearance of the tumor excised with the leaflet tissue involved.

Figure 3
Augmentation of the posterior mitral annulus with Teflon felt strips from two sides for valve replacement.

CVS-071 - FATAL DEHISCENCE OF AN AORTIC VALVE PROTHESIS WITH ROCKING MOTION

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Valvular pathology should be suspected in the differential diagnosis of the patients with clinical deterioration who have had prosthetic valve replacement. Valvular pathology can be due to either valve dehiscence, valvular obstruction, or prosthetic valve endocarditis. Aortic valve dehiscence necessitating reoperation occurs in approximately 5% of patients. This complication typically occurs early and was associated with an elevated 30-day operative mortality. This is probably related to preoperative heart failure.
A 54-year-old man presented with increasing shortness of breath, chest pain and palpitations who underwent bileaflet aortic valve replacement seven months ago with LITA-LAD coronary by-pass at the same operation. Permanent pace maker was implanted because of complete atrioventricular block occurred post-operatively. On initial examination, a third degree systolic ejection murmur and early diastolic murmur were obtained. His heart rate was 80/minute, and his blood pressure was 100/60 mmHg. The ECG showed pace-maker rhythm and was unchanged from previous ECG tracings. His INR level was 3.4 IU. He underwent transthoracic echocardiography to evaluate the etiology of clinical deterioration. The transthoracic echocardiography demonstrated aortic prosthetic valve dehiscence within the septal aspect of the aortic annulus, with severe aortic regurgitation and a vegetation on the aortic side of the prosthetic valve was suspected. Radiographic valve screening was performed and demonstrated ''rocking'' motion of the aortic valve prosthesis. Coronary angiography revealed severe stenosis in middle portion of the right coronary artery and LITA-LAD anastomosis was found patent. While the preparations for the emergent operation was made, the patient's respiratory and clinical status acutely deteriorated, clinically consistent with cardiogenic shock and cardiopulmonary arrest and concurrently the patient died.
The suggested treatment of valve prothesis dehiscence is re-operation but the operation's mortality is high. Echocardiography and radiographic valve screening are simple and quick methods which can be chosen as first-line diagnostic methods in these cases.

CVS-072 - MANAGING SEVERE MITRAL INSUFFICIENCY DUE TO COMPLICATED PERCUTANEOUS BALLOON MITRAL VALVOTOMY IN A PREGNANT PATIENT

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The incidence of heart disease in pregnant women has been reported to range from 1% to 4% and mitral disease is the responsible pathology in most of these cases.Use of high flow rate, high pressure, normothermic cardiopulmonary bypass for the shortest period possible is thought to decrease fetal risk.
A 34-year-old pregnant patient(G2,P1. at 18 weeks gestation)was admitted to this hospital with a diagnosis of pulmonary edema(New York Heart Association functional class III).She was evaluated by our Cardiology Clinic and diagnosed as rheumatic mitral stenosis.Echocardiography showed a very fibrotic mitral valve.The mitral orifice area was 1.2cm^2 and 0.9 cm^2 with planimetric diameter.She was in sinus rhythm with pliable valve leaflets without any mitral calcification,mitral regurgitation,left atrial thrombus.There was grade II-III LASEC. Despite optimal doses of medications,her clinical and hemodynamic condition did not normalize over the course of 10 days.After this insufficient medical therapy,urgent Percutaneous Balloon Mitral Valvotomy(PBMV) was considered.The patient was counseled about the perioperative and postoperative risks to herself and the fetus and consented to the procedure.PBMV was performed by our Cardiology Department.Severe mitral insufficiency was occured during balloon inflation due to chordaes and papillar muscles' ruptures.After this procedure,urgent mitral valve replacement was performed.Peroperatively a rupture was determined at 3 cm depth and 1/2 cm to annulus and it was close to anterolateral commissure of mitral leafletTwo chordas were arised from the middle segment of leaflet and papillary muscle at the tip of one chorda was included by the ruptured chorda structure.A hypertrophic papillary muscle under the posteromedial commissure directly adhered to a wide surface including both anterior and posterior leaflets without chorda and because balloon couldn't open the leaflets due to adherence,it caused rupture.Native valve was resected.She expected another baby a bioprosthetic mitral valve(Edwards Lifesciences,size 29mm,model 6625,Porcine Tissue Heart Valve) was replaced.A right atriotomy was performed.Iatrogenic ASD was 2-3 cm. over the fossa ovalis and at muscular field level of interatrial septum's central part.It was primarily repaired with 2/0 pledget prolen sutures.Fetus was dead and wasn't expelled from the uterus spontaneously,medical abortion was performed after three days. The hospital stay was 8 days. PBMV is associated with lower trauma than cardiac operations, however early restenosis and risk of radiation hazard limits its use during pregnancy and there is a risk of emergency surgical intervention in case of the failure of the procedure.The basic principles for the peroperative management of the gravid patient undergoing cardiac surgery and CPB are identical to those for gravidae requiring any type of surgery;attention to maternal safety,avoidance of teratogenic drugs,avoidance of intrauterine asphyxia,and prevention of preterm labor.Assessment of fetal viability and heart rate by ultrasonographic evaluation of the fetus early after surgery is also important.

CVS-073 - MINIMAL INVASIVE ATRIO-VENTRICULAR VALVE SURGERY: PROGRAM DEVELOPMENT AND LEARNING CURVE ISSUES

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BACKGROUND: Minimal invasive AV-valve surgery is an increasingly popular procedure in cardiac surgery, but - due to the complexity - still reserved to few selected centers. Aim of this study was to present learning curve issues for program introduction.
MATERIAL AND METHODS: A total of 93 minimal invasive AV-valve procedures were performed by a single surgeon and were successful in 92 (98.9%). Seventy five patients (81.5%) underwent valve repair, 6 (6.5%) received mitral valve replacement. In 11 patients (12.0%), concomitant ASD closure and/or tricuspid valve repair had to be performed. One intraoperative conversion to valve replacement had to be performed due to residual MR. For calculation of learning curves, regression models with logarithmic curve fit for operating time (OT), aortic cross-clamp (AXT) and cardio-pulmonary bypass time (CPBT) for all patients and for patients with PML prolapse were applied.
RESULTS: Within approximately 30 consecutive minimal invasive procedures, a steady decline of either OT, AXT and CPBT could be observed for the overall surgical population even despite the increasing number of concomitant procedures and was similar in patients with posterior mitral leaflet prolapse. After overcoming this learning curve, a mean AXT of 110 ± 40 min, a CBP time of 170 ± 45 min and a total OT of 285 ± 57 min is required to treat isolated posterior leaflet prolapse.
CONCLUSION: Minimal invasive AV-valve surgery can be safely introduced into a heart surgery program. However, sufficient number of cases per year are required per surgeon to come over this learning curve.

CVS-074 - MITRAL VALVE REPLACEMENT IN A PATIENT WITH IDIOPATHIC HYPEREOSINOPHILIC SYNDROME AND PULMONARY HYPERTENSION

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PURPOSE: Idiophathic hypereosinophilic syndrome, a rarely seen systemic disease, may cause multiple organ failure by eosinophilic infiltration. Cardiac involvement is characterized by endocardial fibrosis, restrictive cardiomyopathy and valvular lesions. Herein we describe management of a patient with idiopathic hypereosinophilic syndrome, severe mitral stenosis and pulmonary hypertension.
METHODS: A 25-year-old woman with a diagnosis of hypereosinophilic syndrome presented with haemoptysia and progressive dyspnea on exertion. Echocardiography showed severe mitral stenosis with a 0.6 cm2 of valvular orifice area and pulmonary hypertension with an 80 mmHg of pulmonary artery systolic pressure. Cardiac catheterization confirmed pulmonary hypertension (60 mmHg systolic and 33 mmHg diastolic) with a 16 mmHg pressure gradient across the mitral valve.
RESULTS: The patient was hospitalized, anticoagulated and received cytoreduction therapy with 1 mg/kg prednisolon. After haematological stabilization, she underwent mitral valve replacement using a no 27 bovine pericardial valve (Edwards Lifesciences, Irvine, CA, USA). In the early postoperative period, she had a pulmonary hypertensive crisis which ameliorated gradually with the continuous intrapulmonary artery infusion of nitroglycerin via Swan-Ganz catheter. She was extubated on the second postoperative day and was discharged on the postoperative seventh day.
CONCLUSION: Eosinophilic cardiac disease is rarely seen in cardiac surgical practice. Fibrosis, thrombosis and eosinophilic infiltration have been reported in cardiac valves necessitating valve replacement. However, mechanical valves have a high incidence of recurrent obstructive thrombosis. Therefore, in the patients with idiopathic hypereosinophilic syndrome and severe cardiac valvular involvement requiring valvular replacement, we think bioprosthetic valves would be the appropriate choice of valvular prosthesis.

CVS-075 - REPAIR OF LEFT VENTRICULAR MYOCARDIAL RUPTURE FOLLOWING MITRAL VALVE REPLACEMENT BY DACRON PATCH AND CYANOACRYLATE APPLICATiON

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The incidence of left ventricular(LV) myocardial rupture following mitral valve replacement is 1-2 %. Although it is a rare entity, its mortality is approximately 50 %. This report presents a case of type 3 LV myocardial rupture following a mitral valve replacement repaired successfully by Dacron patch and cyanoacrylate application.

Sekil 2
Dakron yamanin postoperatif ekokardiyografik goruntusu

Sekil 1
Ruptur bolgesinde siyanoakrilatli dakron yama

CVS-076 - ANEURYSM OF THE INTERVENTRICULAR MEMBRANOUS SEPTUM OBSERVED INCIDENTALLY IN A PATIENT UNDERDOING AORTIC VALVE REPLACEMENT

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BACKGROUND: Aneurysm of the interventricular membranous septum(AIMS) is a very rare abnormality which occurs in 0.3% of patients with congenital heart disease and in up to 19% with ventricular septal defect(VSD). The exact anatomic basis for such an aneurysm alters. AIMS may develop idiopathically or as a consequence of spontaneous closure of a VSD.
CASE: A 22-year-old man was admitted to our hospital, because of very poor exercise tolerance, palpitation, and dyspnea for six months. Echocardiography demonstrated severe calcific aort valve stenosis, moderate aortic valve insufficiency, mild dilated aorta, and left ventricular hypertrophy.
The patient underwent surgery. The ascending aorta was dilated mildly and opened in an oblique fashion with incision carried down into the noncoronary sinus. The aortic valve was bicuspid and severe calcific. After resection of the aortic leaflets, AIMS was incidentally observed during operation. An unruptured aneurysm was approximately 6x10x5 mm in size. AIMS was closed by direct sutures. Interrupted and pledgeted mattress stitches were applied to close the aneurysmal tissue through the aortic side. Aortic valve replacement was performed with the bileaflet mechanic prosthetic valve. Postoperative recovery was uneventful. At 5-year follow-up, he had been doing well.
CONCLUSIONS: The patients with AIMS without any symptoms must be followed closely. They might get potential cardiac complications, such as aortic valve prolapse, right ventricular outflow obstruction, tricuspid valve insufficiency, arrhythmia, rupture, thromboembolism and bacterial endocarditis. This disorder alone is rarely treated surgically. Concurrent heart diseases, hemodynamic abnormalities, and aneurysm-related complications require surgical intervention.

CVS-077 - ACUTE MESENTERIC ISCHEMIA DUE TO LEFT ATRIAL MOVABLE THROMBI IN A PATIENT WITH MITRAL VALVE REPLACEMENT

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A 47-year-old man was transferred to our hospital for investigation of mesenteric ischemia thought to be cardiogenic in origin, 3 years after mitral valve replacement, performed at another hospital. He was initially admitted to Department of General Surgery after sudden abdominal pain and a diagnosis of mesenteric ischemia was made. The transesophageal echocardiogram showed a mechanical mitral valve and a movable and protruding thrombus in the left atrium and the valve leaflets opened and closed simultaneously. An emergency open heart operation was performed. The protruding thrombus was found to originate from the left auricula and removed. Postoperative recovery was uneventful and she discharged in good condition.
Mesenteric ischemia associated with left atrial thrombosis is a serious complication that can occur after a mechanical mitral valve replacement. Therefore, life-time follow-up and appropriate anticoagulant therapy is recommended after the mechanical mitral valve replacement.

CVS-078 - SUBANNULAR AORTIC PSEUDOANEURYSM FOLLOWING VALVE REPLACEMENT WITH MECHANICAL PROSTHESIS

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BACKGROUND: Annular abscesses are serious complications of infectious native and prosthetic valve endocarditis.
CASE: In this patient, we isolated Stenotrophomonas maltophilia, a rare cause of subaortic abscess with high mortality/morbidity rates although virulent gram-positive cocci, S. Aureus in particular, have been the most commonly isolated agents.
RESULT: We treated this case of endocarditis and the subannular abscess observed 1 year after the initial operation with aortic root replacement with resternotomy in addition to appropriate antibiotics.
CONCLUSION: Appropriate antibiotherapy and prompt surgery with utmost effort to eradicate all infected tissues are the keystones to favorable outcome.

Figure 1

Figure 2

Figure 1
Color doppler study of the aortic root demonstrating the pseudoaneurysm associtated with left ventricular cavity (A.) and the short axis view showing the septations within (B.).

Figure 2
Echocardiographic image of the aortic root and the pseudoaneurysm. Mechanical prosthesis is visible.

CVS-079 - MODIFIED DE VEGA ANNULOPLASTY FOR FUNCTIONAL TRICUSPID VALVE REGURGITATION

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OBJECTIVE: Modified De Vega annuloplasty is one of the most effective methods used in the surgical correction of functional tricuspid valve regurgitation (FTVR). This study evaluates the long term results of modified De Vega annuloplasty for FTVR at the National Cardiothoracic Centre.
METHOD: From March 1993 to July 2005, 298 patients underwent open heart surgery with mitral and/or aortic valve replacement. Of these, 64(21.5%) had modified De Vega annuloplasty and the long term results of the procedure were analysed. The procedure was performed using 3-0 or 4-0 pledgeted prolene suture with double needle. The initial suturing was from the anteroseptal commissure to the posteroseptal commissure similar to the original De Vega procedure. From the anteroseptal commissure the second suturing was carried out counter clockwise in a spiral fasion around the annulus and the first suture. The two ends of the suture through a pledget were adjusted and the valve tested by injecting saline into the right ventricle. The suture was tied when leakage from the tricuspid valve was judged negligible.
RESULTS: The average follow up period after tricuspid valve repair was 63.6+/-41.2 months. Postoperatively, 6(9.4%) patients had grade two tricuspid valve regurgitation (TVR) and 17(26.5%) patients had grade one TVR. Postoperative regurgitation was absent in 41(64.1%) patients. There were three deaths during the period of review and none was lost to follow up.
CONCLUSION: Modified De Vega annuloplasty for FTVR is still an effective, safe, comparatively cheap and simple procedure to perform in a developing country like ours.

CVS-080 - MINIMALLY VERSUS MEDIAN STERNOTOMY FOR AORTIC VALVE REPLACEMENT

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The aim of this study was to compare the post operative outcome obtained in patients undergoing aortic valve replacement either through ministernotomy or conventional sternotomy.
METHODS: Sixty patients undergoing isolated aortic valve replacement were randomized into two equal groups: Patients in group 1 (30 patients) undergoing conventional sternotomy approach, and group 2 (30 patients) undergoing ministernotomy (reversed L shaped). Pain was evaluated on a daily basis, pulmonary function tests were performed preoperatively, one week, and one month, postoperatively, in all patients.
RESULTS: Mechanical ventilation time was significantly longer in group 1, 6.43±1.14 hours while 2.00±0.83 hours in group 2, P =0.001). Seven days after surgical procedures Spirometric data analysis demonstrated a significantly lower total lung capacity (60.50±0.51 liter versus 65.50±0.51 liter and FEV1 (80.50±0.51 to 80.12±.24 liters after one week and 78.47±0.51 to 80.47±0.51 liters after one month, (P= 0.001).Pain evaluation was more demonstrated in sternotomy group where 96.7% experienced severe pain in first group to 3.3% of second group. Length of stay was 17.70±8.70 days in group 1 to 8.00±0.83 days in group 2, P = 0.001), Also ICU stay was 27.60±14.53 hours, in group 1 and 6.75±3.78 hours in group 2, (P = 0.001). Cosmetic appraisal was better in group 2 where 80% of patients were satisfied about their wound and 20% experienced no difference.
CONCLUSIONS: Ministernotomy improves cosmetic advantage, reduce blood loss, transfusion, improve sternal stability,accelerate recovery in respiratory functions and allow earlier hospital discharge.

CVS-080

TABLES Table (1) preoperative patient's characteristics Characteristics Group 1 No=30 Group 2 No=30 P value Age 23.83±3.49 22.93±2.35 0.044 Sex(M:F) 15 male 51 females 16 male 14 female 0.031 0.031 BSA (m2) 1.6±0.5 1.5±0.4 Aortic stenosis Aortic regurge 50%AS 50%AR 50%AS 50%AR 0.044 LVEF (%) 55±2.55% 56±2.32% 0.031 Differences are not statistically significant. BSA=body surface area, LVEF= left ventricular ejection fraction.Group 1, fullsternotomy.Group2, ministernotomy. Table (2) operative data Variable Group 1 No=30 Group 2 No=30 P value Length of incision(cm) 24.50±2.57 7.17±1.26 P=0.001 Sternotomy time (min) 14.83±2.57 7.17±1.26 P=0.001 Closing time(min) 50.17±8.15 30.67±1.73 P=0.001 Total operation time(hrs) 3.583±0.695 2.550±0.422 P=0.001 Cross clamp time (min) 45.50±4.02 44.33±3.05 (P=0.044) Cardiopulmonary bypass time(min) 90.00±8.30 85.67±6.79 (P=0.031) Results as mean ± standard deviation Group1: sternotomy group Group2: ministernotomy group Table (3) postoperative data Variable Group 1(no=30) Group 2(n0=30) P value Intubation's hours 6.43±1.14 2.00±0.3 (P=0.001) Mediastinal drainage(ml) 590.00±164.74 233.33±47.95 P=0.001 Transfusion units 3.13±0.78 1.77±68 P=0.001 Inotropic support 50% 0% P=0.001 NSAI gm 2.50±0.51 1.17±0.38 P=0.001 ICU stay(hrs) 27.60±14.53 6.75±3.78 P=0.001 Hospital stay(days) 17.70±8.70 8.00±0.83 P=0.001 FEV1 one weak 78.47±o.51 80.47±o.51 P=o.oo1 FEV1 one month 80.50±o.51 80.12±o.24 P=o.oo1 FVC 86.60±0.95 91,50±0.51 P=0.001 TLC 60.50±0.51 65.50±0.51 P=0.001 Significant difference between groups, p value <0.05, NSAI= non steroidal anti-inflammatory drugs. FEV1=forced expiratory volume first second. FVC= forced vital capacity, TLC= total lung capacity, expressed as % of predicted value. TABLES Table (1) preoperative patient's characteristics Characteristics Group 1 No=30 Group 2 No=30 P value Age 23.83±3.49 22.93±2.35 0.044 Sex(M:F) 15 male 51 females 16 male 14 female 0.031 0.031 BSA (m2) 1.6±0.5 1.5±0.4 Aortic stenosis Aortic regurge 50%AS 50%AR 50%AS 50%AR 0.044 LVEF (%) 55±2.55% 56±2.32% 0.031 Differences are not statistically significant. BSA=body surface area, LVEF= left ventricular ejection fraction.Group 1, fullsternotomy.Group2, ministernotomy. Table (2) operative data Variable Group 1 No=30 Group 2 No=30 P value Length of incision(cm) 24.50±2.57 7.17±1.26 P=0.001 Sternotomy time (min) 14.83±2.57 7.17±1.26 P=0.001 Closing time(min) 50.17±8.15 30.67±1.73 P=0.001 Total operation time(hrs) 3.583±0.695 2.550±0.422 P=0.001 Cross clamp time (min) 45.50±4.02 44.33±3.05 (P=0.044) Cardiopulmonary bypass time(min) 90.00±8.30 85.67±6.79 (P=0.031) Results as mean ± standard deviation Group1: sternotomy group Group2: ministernotomy group Table (3) postoperative data Variable Group 1(no=30) Group 2(n0=30) P value Intubation's hours 6.43±1.14 2.00±0.3 (P=0.001) Mediastinal drainage(ml) 590.00±164.74 233.33±47.95 P=0.001 Transfusion units 3.13±0.78 1.77±68 P=0.001 Inotropic support 50% 0% P=0.001 NSAI gm 2.50±0.51 1.17±0.38 P=0.001 ICU stay(hrs) 27.60±14.53 6.75±3.78 P=0.001 Hospital stay(days) 17.70±8.70 8.00±0.83 P=0.001 FEV1 one weak 78.47±o.51 80.47±o.51 P=o.oo1 FEV1 one month 80.50±o.51 80.12±o.24 P=o.oo1 FVC 86.60±0.95 91,50±0.51 P=0.001 TLC 60.50±0.51 65.50±0.51 P=0.001 Significant difference between groups, p value <0.05, NSAI= non steroidal anti-inflammatory drugs. FEV1=forced expiratory volume first second. FVC= forced vital capacity, TLC= total lung capacity, expressed as % of predicted value.

SURGERY FOR INFECTIVE ENDOCARDITIS

CVS-081 - AUTOTRANSPLANTATION FOR TREATMENT OF A GIANT LEFT ATRIUM

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We performed autotransplantation on 2 cases. Case1: 54-year-old male in end-stage heart failure due to end-stage of the mitral valve insufficiency and severe tricuspid insufficiency. Patient had enormous enlargement of left atrium (LA) (14x16cm) with interatrial septum aneurysmatically deformated (EF=30%, EDV=225ml, ESV=138ml).Case2;56yold woman with severe mitral stenosis and LA 15x16cm. Previous data for rheumatic fever in both. Using transthoracic echocardiography the enormous left atrium due to primary severe mitral stenosis and secondary insufficiency and tricuspid regurgitation has been visualized. Diagnosis was confirmed with transoesophageal echocardiography. Basic X-ray, showed extremely enlarged left atrium. The patient developed cardiac cahexia, and atrial fibrilation during last eleventh months. There were laboratory parameters for initial liver failure in both cases.
With aortottomy and complete heart excision, left atrium was large excided, in order to decrease its volume and reconstruct the interatrial septum. Mitral and tricuspid valve had been reconstructed (in case 1). In second case using a biological prosthesis, replacement of the stenotic valve was performed.The heart was reimplanted. Operation underwent without any complications. Postoperatively both ptswere in sinus rhythm, left atrium was significantly decreased (6x4cm), valvular apparatus was competitive.
1stpat. was 26hours on assisted ventilation, and 2nd 13hours. Both were mobilized first postoperative day.Pericardial effusion and light liver failure appeared as a postoperative complications.After 5 months follow up there was significant improvement of patient's hemodynamics with normal left ventricular morphology and decreased volume (EF=47%, EDV=167ml, ESV=78ml), as was assessed by ultrasound.Pericardial effusion and liver failure has been completely recovered. 1st pat.after 2 years developed bradyarhhythmia and we put him on a permanent pace makerThe 2nd patient is still in sinus,whiout any other complications (NYHAclass 1).
CONCLUSION: Autotransplantation seems to be an efficient method to reduce extreme LA dilatation. Eventually should be considered as a method of choice for patients with atrial fibrillation due to extremely enlarged left atrium. Further study and longer follow-up are required.

CVS-082 - CAN A MECHANIC VALVE PROSTHESIS BE SAFELY USED IN COMPLICATED INFECTIVE ENDOCARDITIS ?

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Despite the use of new and strong antibiotics, infective endocarditis might be still complicated by formation of paravalvular abscess. As a consequence of the latest developments in surgical techniques, more complex operations can be undertaken in patients with complicated IE. Unfortunately, the mortality rate is still high in these patients. We hereby report a case of infective endocarditis which was complicated by aorto-pulmonary fistula and aortic paravalvular abcess. The patient had suddenly hemodynamic deterioration during medical treatment for IE. Although he was still preoperative evaluation, the patient was operated under emergency condition. A hole occured after removing the necrotic and infected tissues and an aortopulmonary fistula was observed. The aortopulmoary fistula and this hole were closed and secured with pericardial patch which was placed in order to differentiate infected area and mechanic valve surface. After then a mechanic valve prosthesis was placed in aortic position taking suture from pericardial patch. The patient was discharged without complications and IE proflaxy was given for 45 days. After three months, the patient had no symptoms and signs regarding infective endocarditis.

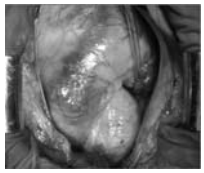

Figure 1

Figure 2

Figure 1:
paravalvular abscess

Figure 2:
paravalvular abscess and aorta-pulmonary fistula

CVS-083 - BRUCELLA ENDOCARDITIS AND SURGICAL TREATMENT

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Although its a rare illness, Brucella endocarditis is a mortal complication of human brucellosis. We want to present 5 cases whom went to operation with Brucella endocarditis. The ages of patients were 5 to 38 years. We performed AVR to 3 cases, and MVR to 2 cases after medical treatment. The Manughian procedure was performed to the smallest patient for aortic root enlargement. Clinical findings, echocardiographic findings, blood culture, and serological tests were used for diagnosis. We continued medical therapy at postoperative period. There was no mortality perioperative and postoperative period, and no relapse was seen between 2-8 years follow-up period. We think that medical and surgical treatment must used together for successful treatment of Brucella endocarditis.

CVS-084 - VALVE ENDOCARDITIS AFTER PERCUTANEOUS BALLOON VALVOTOMY

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Percutaneous balloon valvotomy for valve stenosis represents an alternative method to the surgical procedures in most cases. Infective endocarditis as a complication of percutaneous balloon valvotomy is very rarely published. This entity should be recognized as a fatal complication of percutaneous balloon valvotomy for mitral stenosis. We present two cases which infective endocarditis developed very early days after procedure. Both patients had to undergo surgery for the replacement of the infective devastated valve. We suggest prophylactic antibiotics might be recommended after percutaneous balloon valvotomy.

CVS-085 - ACINETOBACTER ENDOCARDITIS ON A PROSTHETIC AORTIC VALVE IN A PATIENT WITH AORTIC AND MITRAL VALVE REPLACEMENT

Ariturk Cem[1], Ciloglu Ufuk[1], Iyigun Taner[1], Komurcu Ibrahim Gurkan[2], Depboylu Burak Can[1], Erzurum Hamit[1], Dagsali Sabri[1]
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After the routine follow-up of a 17 years old male who admitted us with fatigue and palpitation; aortic and mitral insufficiency was diagnosed and the operation was planned. AVR (21 st.jude prosthetic valve) and MVR (27 st.jude prosthetic valve) was performed. With problem free clinical status and normal biochemical and haematological parameters he was discharged in the postoperative 5th day after normal transthoracic 2D echocardiography was seen. He followed the first control examination, 1 week after the discharge, without any problem. In the post-operative 24th day, he was taken to another hospital with cardiopulmonary arrest and transferred to our clinic after a successful cardiopulmonary resuscitation. When first met he was unconscious and entubated. The patient was taken under transesophageal echocardiography after the transthoracic 2D echocardiography suspected prosthetic aortic valve vegetation; the prosthetic mitral valve was proper. After the follow-up, acinetobacter baumani endocarditis was diagnosed. He awaked and was extubated. He was reoperated but neither macroscobic vegetation nor insufficiency in the prosthetic aortic valve was diagnosed and the valve was left in place. The patient was followed with appropriate antibiotics for 6 weeks. With 2 consecutive negative blood cultures and transesophageal echocardiography pointing functional prosthetic valves without vegetation, he was discharged. We followed him up for 6 months and he is now under the control of cardiologists.
Acinetobacter baumannii is a frequent cause of nosocomial infections. Infective endocarditis caused by Acinetobacter spp., although rare, has been reported previously in both native and prosthetic valves. But it is hopeful that early treatment with appropriate antibiotics can eradicate the infection. We decided to report this case because of its uncommon bacterial pathogene.

CVS-086 - ISOLATED NATIVE PULMONIC VALVE ENDOCARDITIS WITH MULTIPLE PULMONARY VEGETATIONS: A RARE ENTITY IN A CHILD WITH NOONAN SYNDROME

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INTRODUCTION: Isolated pulmonic valve endocarditis is extremely rare with an incidence of 1-2%. Virtually all of the previously reported pediatric pulmonic valve endocarditis cases had congenital cardiac anomalies. We herein report a case of pulmonic valve endocarditis with massive pulmonary artery vegetations in a girl with Noonan syndrome.
CASE: A 9-year-old girl was referred to our institution with a diagnosis of pericardial effusion. Transthoracic echocardiography revealed massive pericardial effusion and pulmonic valve vegetations filling the main pulmonary artery and its branches accompanying a fibrotic/dysplastic tricusp pulmonic valve. Four weeks after admission open heart surgery was performed. Valvar vegetations were cleaned and commissurotomy was performed resulting a competent pulmonic valve. Vegetations occupying the main, left and right pulmonary arteries were all removed. After recovery patient's examination including atypical facial apperance, chest deformity, dysplastic pulmonic valve led us to investigate an underlying genetic disorder. Patient was referred to Department of pediatrics division of genetics and Noonan syndrome diagnosis was made.
DISCUSSION: Vegetations in pulmonary artery usually occur at the pulmonary end of the patent arteriel duct and are hipothetized to grow retrogradely as a result of the jet flow, through the main pulmonary artery. Our case do not support this hypothesis with the abscence of PDA.

CVS-087 - MITRAL VALVE REPLACEMENT IN A CHILD WITH INFECTIVE ENDOCARDITIS AND THE SURGICAL REPAIR OF A PSEUDOANEURYSM OF THE ILIAC ARTERY

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[2]Kocaeli University School of Medicine, Department of Pediatric Cardiology, Izmir, Turkey

12-year-old male patient with infective endocarditis was referred to our institution for surgical treatment. The patient had mobile giant vegetation over the anterior leaflet of the mitral valve. The dimensions of the vegetation were 2.5 x 1.5 cm on echocardiography. On the day of operation arterial emboli occurred and right femoral embolectomy was done before cardiac surgery. The mitral valve was replaced with a mechanic valve. The postoperative period was uneventful until postoperative day 25 when fever and leukocytosis developed. A giant pseudoaneurysm of the iliac artery was diagnosed. The pseudoaneurysm was also repaired and graft interposition was performed successfully.

CVS-088 - OUR INFECTIVE ENDOCARDITIS CASES THAT DIAGNOSED SPLENIC INFARCTUS

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AIM: Following the endocarditis;many structural anomalies such as vegetations can be developed. Embolism due to vegetations or infected tissues is the most frequent complication that is closely related with prognosis. Post mortem studies showed that splenic embolization rate is up to 44 %.
MATERIAL-METHOD: The first case had an infective endocarditis was due to methicilline sensitive,coagulase negative Staphylococcus aureus. Our second case was 58 years old man and serological brucella tests were positive. Our last case was 60 years old man and treated for MSCONS prediagnosis.
RESULTS: The first case had three rare complications -leaflet perforation and bulging and septic embolic splenic infarction- at the same time. Thoracoabdominal tomography of our second case showed a triangular hypodense region covering medial splenic region and we thought that it was secondary to splenic infarctus.
Last case had splenic infarctus which was thought to be secondary to endocarditis.He had also a 1.5x1.5cm perforation defect at mitral anterior leaflet A2 region and a 2x2cm bulging lesion which was thinned and tended to rupture and prolapsed to left atrium.
CONCLUSION: Surgery for infective endocarditis is potentially life saving. Successful management requires a multidisciplinary approach involving microbiologists, cardiologists, and cardiothoracic surgeons. Antibiotic and surgery combination is the best and most effective treatment method.Survival is positively effected and quality of life is increased in long term.

SURGICAL TREATMENT OF PERICARDIAL DISEASES

CVS-089 - RETROSPECTIVE EVALUATION OF CHILDREN DIAGNOSED AS PERICARDITIS-PERICARDIAL EFFUSION

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A total of 22 (13 girls and 9 boys) patients with mean age was 5,9 years was followed with the diagnosis of pericarditis - pericardial effusion were retrospectively evaluated from January 2003 to January 2007 at the Behcet Uz Childrens' Hospital. Ten percent of the patients have fever (over 38.5°C) and respiratory distress and 6 of them additionally have productive coughing. Chest pain was the main complaint with 3 patients had malaise and a patient had dysphagia. Patients who were 3-24 months had feeding difficulty. Only one patient was attended with generalized edema. All patients went under hematological, biochemistry and microbiological evaluation all the telecardiograms shows the typical "water-bottle". Electrocardiography and follow up were made with Spodic criteria, and all of them have low voltage. Classification with echocardiography of pericardial effusion made with Horowitz criteria. After surgical closure of an ASD, patient attended with respiratory distress had a very good result with pericardiocentesis and NSAID. A secondary pericardial effusion due to autoimmune hepatitis treated with pericardiocentesis and supportive measures.Two of the three trisomy 21 patients with hypothyroidism have an excellent prognosis with medical treatment, only one of them with immunodeficiency managed with antibiotics against staphylococs and pericardiocentesis. Another patient with pulmonary hydatit cyst revealed scolex like structures in microscobic evaluation and accepted as ruptured hydatid cyst. Medical treatment with mebendazole cured the disease. A pericardial effusion in a SLE patient responds to steroids.

Etiology of pericardial effusion

ETIOLOGY	n:22(%)
Infection	16(%72)
Stapy aureus	3(%13)
Mycobact tbc	4(%18)
Coxsackievirus	1(%4.5)
Culture negative	8(%36)
Rheumatologic	1(%4.5)
Immunologic	1(%4.5)
Cystic Hidatic	1(%4.5)
Post-pericardioyotomy syndr	1(%4.5)
Hypotiroidi	2(%9)

CVS-090 - CONSTRICTIVE PERICARDITIS ASSOCIATED WITH A MASS MIMICKING PERICARDIAL CYST

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A 55-year-old man was admitted to our hospital due to shortness of breath, cough, chest pain, abdominal swelling, and edema of lower extremities. Computed tomography (CT) demonstrated a thickened calcified pericardium associated with a pericardial mass with a thick calcified shell (8x6x4.5 cm) compressing the right ventricle. Results of thoracic magnetic resonance imaging (MRI) were in compliance with the CT results. Based on these findings, a diagnosis of chronic calcified constrictive pericarditis associated with a pericardial cyst was made. At the time of surgery, extensive pericardial calcifications and a cystic mass containing only hematoma were found. The calcified pericardial sac was decorticated laterally at a level just above the course of the phrenic nerve on both sides. A pathological diagnosis of idiopathic constrictive pericarditis was made. The postoperative recovery was uneventful. Ten days after the operation, he was discharged in good condition.

CVS-091 - MANAGEMENT OF AN ENLARGING PERICARDIAL CYST

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Department of Cardiovascular Surgery, Gulhane Military Medical Academy, Ankara, Turkey

We report a case of 37 year old male with pericardial cyst, which was incidentally detected with routine health controls. The cyst's lenght and width were 4 and 2.5 cm, respectively. The initial decision was conservative. After two years, a surgical resection was performed because of a significant size enlargement of the cyst via a median sternotomy. In this study; pericardial cysts management options and their timing for surgical resection will be discussed.

Figure 1:
Telegraphy revealed a shadow on the right cardiophrenic sinus.

Figure 2:
Computed tomography showed a cystic mass on the right cardiophrenic sinus.

CVS-092 - IS IT ENOUGH THE LIMITED PERICARDIECTOMY IN CALCIFIC CONSTRICTIVE PERICARDITIS?

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INTRODUCTION: Surgical management of patients presenting for dyspne, fatigue, edema and cardiac failure with calcific constrictive pericarditis (CCP) has been confused. In this study, our results of comparison of limited pericardiectomy (LP) in front of the phrenic bundles (group 1) versus extensive pericardiectomy (EP) in addition to posterior and diaphragmatic pericardium (group 2) have been reviewed.
MATERIAL-METHOD: A retrospective chart review was performed in 17 patients with CCP, undergoing either limited and/or extensive pericardiectomy during the last 10 years in the Hospital of Ondokuz Mayis University. Responsible etiologies were tuberculosis only in five of the patients and nonspecific infection in the others. The decision of the EP were taken by the echocardiographic findings. Pericardiectomies were performed as LP in 10 (48%) and EP in 11 (52%) patients. Four of those were operated as LP previously. These patients couldn't relieved after operation although all medical therapy e.g. Diuretic, digitalis, ACE inh etc. There was no operative mortality in both groups. Left ventricular diastolic functions of the patients with EP were impaired preoperatively. Their clinics were shown definitely recovery after the operations.
RESULTS: Our results support the justification for performing EP those patients with especially left ventricular diastolic dysfunction and Pulmonary artery hypertension. Reoperations always bring the surgery in a condition more complicated. Our opinion, It should be thought that EP superior to LP in the patient with CCP


Figure 1


Figure 1


Figure 1

Figure 1. Radiograph of a patient with calcification in PA position
Posteroanterior radiograph showing circumferential calcification in the patient with calcific constrictive pericarditis

Figure 2. Radiograph of a patient with calcification in Right lateral position
Right lateral radiograph showing circumferential calcification in the patient with calcific constrictive pericarditis

Figure 3. Radiograph of a patient after extensive pericardiectomy
Posteroanterior radiograph showing cardiac shadow after extensive pericardiectomy

CVS-093 - DRAINAGE OF PERICARDIAL EFFUSIONS WITH GUIDANCE COMPUTED TOMOGRAPHY

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AIM: The purpose of the study was to evaluate safety and feasibility of CT guidance in the drainage of pericardial effusions.
MATERIAL-METHOD: Twenty five drainages were performed in Seldinger technique under CT fluoroscopy (15 female, 10 male). We used nephrostomy catheter (8 or 10 F) for drainage. All procedure were successfully. One epicardial laceration necessitated a surgical approach as subxiphoid tube drainage.
CONCLUSION: Drainage of pericardial effusions with guidance computed tomography using nephrostomy catheter is a safe and feasible method, especially in postoperative pericardial effusions.

CVS-094 - CHRONIC CONSTRICTIVE TUBERCULOUS PERICARDITIS WITH LARGE CALCIFIC DEPOSITS: 14 YEARS EXPERIENCE ON 39 CASES

Yetkin Ufuk[1], Yilik Levent[1], Kestelli Mert[1], Tetik Omer[1], Ozbek Cengiz[1], Calli Aylin Orgen[3], Yesil Murat[2], Gurbuz Ali[1]
[1]Izmir Ataturk Training and Research Hospital, Department of Cardiovascular Surgery, Izmir, Turkey
[2]Izmir Ataturk Training and Research Hospital, Department of Cardiology, Izmir, Turkey
[3]Izmir Ataturk Training and Research Hospital, Department of Pathology, Izmir, Turkey

BACKGROUND: In this study we're presenting a massive calcific pericardial heart disease due to tuberculosis.We're reporting the pathogenesis,clinical and surgical indications for operation,and the prognosis.
MATERIAL-METHODS: We reviewed 39 consecutive patients with constrictive tuberculous pericarditis with large calcific deposits who underwent surgery from January 1993 to January 2007. Twenty-seven of them were men (69.2%) and 12 were women (30.8%). The average age was 39.6 years. In all cases, our approach was via median sternotomy. All anterior pericardium was resected from phrenic nerve to phrenic nerve.One patient required cardiopulmonary bypass due to severe calcification and we did perform cardiopulmonary bypass in 6 patients who required additional cardiac surgery.
RESULTS: The early operative mortality rate was 10.2% (4 patients). In the 1st postoperative month, functional capacity improved dramatically. Postoperative the improvements in mean central venous pressure (from 15.0 ± 4.5 to 8.2 ± 2.3 mmHg) are significant. We found no postoperative recurrence of CCP in any of our patients during late follow-up.
CONCLUSION: Conventional open pericardiectomy via the median sternotomy, which enables a safer, wider, and more effective approach and it relieved the symptoms and altered the hemodynamic findings.

CVS-095 - NEEDLE IN THE PERICARDIAL SPACE IN POSTCARDIOTOMY PATIENT AS AN UNUSUAL IATROGENIC COMPLICATION

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72 years old male patient presented to our clinic with the possibility of a needle forgotten near the apex of the heart. Patient had a history of coronary bypass graft and benthall operation. One year ago at the postoperative follow up there was no evidence of any needle or instrument lefted behind in the thoracic cage. One year later in emergency room while the patient investigated for an abdominal pain, his lateral chest x-ray revealed a needle near the apex of the heart. The patient had no active complain related to the lefted needle and on physical examination there was no significant findings. He refered to our clinic for followup and management. The presence of the needle near the apex of the heart confirmed by echocardiography and thorax CT.Surgical operation for removing of the needle was advised but the patient refused it. Forgetting tools or sponges are rare complication of open cardiac surgery and diagnosed perioperatively or at early postoperative period. We repot a patient with needle forgotten near the apex of the heart with late presentation and without active complain

Fig.1 Fig.1

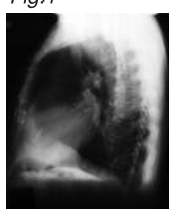

Fig.1 lateral chest x-ray reveal a needle near the heart in the chest cage

Fig.2 echocardiography reveal the needle in the pericardium (possibly in the apex of the heart)

CVS-096 - AN INTERESTING CAUSE OF CHYLOPERICARDIUM AFTER OPEN HEART SURGERY: A LYMPHATIC CHANNEL

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Chylopericardium is a very rare complication after open heart surgery performed by median sternotomy. It is defined as uncontrolable chylous fluid loss and may lead to hypoproteinemia, malnutrition, immune deficiency; hence overall increases postoperative morbidity. In this report, we present a case in which chylopericardium developed after coronary artery bypass grafting. The patient has been successfully treated; however, postoperative course was majorly complicated with the consequences of chylous fluid loss.
Interestingly the cause of the drainage was a lymphatic channel in the mediastinum. To the best of our knowledge this is the first report in the literature in which a lymphatic channel has been demonstrated sporadically in the mediastinum as a cause of chylopericardium following open heart surgery in the adulthood.

Figure 1
Exploratory sternotomy revealed an interesting unusual lymphatic channel leading to chylopericardium.

CVS-097 - TRANSAORTIC AND TRANSMITRAL EXTENDED MYECTOMY AND CONCOMITANT SUPRACORONARY MYOTOMY IN A GIRL WITH HYPERTROPHIC CARDIOMYOPATHY

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Concomitant idiopathic hypertrophic subaortic stenosis and disseminated myocardial bridging is an uncommon clinical entity with poor prognosis. The prevalence of idiopathic hypertrophic subaortic stenosis (IHSS) in general population is 0.2%.The co-existence of myocardial bridging in IHSS worsens the prognosis and is the one of the most common cause of sudden death in early adulthood. In this case report A 19 years old female patient was admitted to our clinic for progressive symptoms (dyspnea, chest pain and palpitation) which were resistant to medical treatment. The patient had concomitant myocardial debridging and transaortic and transmitral extended septal myectomy in the same surgical session. In conclusion in symptomatic patients with IHSS and MB which is resistant to medical treatment, preventing potential cardiac morbidity and sudden death is crucial and patients should be operated as soon as the diagnosis is confirmed. A favorable long term outcome is expected to be promising in the setting of concomitant treatment of obstructive IHSS and MB.

FURTHER EXPERIENCE IN THE SURGICAL TREATMENT OF CARDIAC TUMORS

CVS-098 - LEFT ATRIAL MYXOMA NEARLY CAUSING TOTAL OBSTRUCTION IN MITRAL ORIFICE

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A 64-year-old woman had an attack of presyncope approximately 1 month ago and then she was admitted to the department of neurology for possible causes of transient ischemic attack.Neurological examination,vertebral-carotid Doppler ultrasonography and cranial computed tomography showed no abnormality. So,an intracardiac mass(thrombus,vegetation,or myxoma)could be the reason.The patient was referred to our department.She had no history of any cardiac disease.On physical examination,the pathognomonic tumor plop and a pansystolic murmur of grade 2/6 were heard on auscultation.Normal sinus rhythm with a heart rate of 110 bpm was noticed on her electrocardiogram.Laboratory tests revealed an increased ESR of 92mm/hr and normocytic-normochromic anemia concerning a chronic disease.Thereafter the patient was referred to echocardiography laboratory.A real-time echocardiographic multi-plane(tri-plane)and three-dimensional scanning with volume rendering mode(4D)was performed(1.5-3.6 MHz 3V full matrix-array probe was used in GE Medical Systems,Vivid 7 Dimension,Horten,Norway).A large left atrial Myxoma(60 x 30 mm)attached to interatrial septum causing an obstruction and maximum/mean pressure gradients of 17/11 mmHg during diastole were demonstrated in various views(Figure).Surgical treatment was decided for the curative therapy.Cardiac myxoma is the most common benign tumor of the heart,comprising almost half of all cardiac tumors with female predominance.Although all cardiac chambers might be affected,most myxomas occur in the left atrium as a solitary mass.They might be sporadic or familial with autosomal dominant transmission.Although cardiac myxoma is generally benign,some clinical conditions like embolism,intracardiac obstructive states,and states related with neoplasm might occur.The first choice of therapy is surgical resection.In conclusion,all patients with transient ischemic attack/stroke should have an echocardiographic examination for possible intracardiac masses.

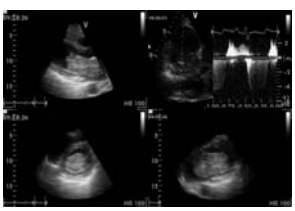

Figure
Four-dimensional transthoracic echocardiography showing the huge left atrial myxoma which has caused an obstruction and a mean transmitral pressure gradient of 11 mmHg.

CVS-099 - RECURRENT MULTIPLE CARDIAC MYXOMAS: A CASE REPORT

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BACKGROUND: Recurrence of cardiac myxoma after surgical excision is a rare condition. The mechanism responsible for recurrence remains unclear. Multifocal growth of a benign myxoma or malignant transformation,inadequate resection,intraoperative implantation or embolization,familial disposition, and the abnormal DNA ploidy patern play an important role in development of recurrent myxoma.
CASE: We report the case of a 24-year-old female with recurrence of multiple cardiac myxomas. She had a abortus 2 months previously. The patient had undergone resection of left atrial and right ventricular myxoma with extension to the right pulmonary artery 8 years ago. Preoperative echocardiographic examinations revealed recurrent left atrial and right and left ventricular myxomas.
The patient underwent redo-surgery and, in addition to a large myxoma in the right ventricle with involvement of the tricuspid valve and anterior papillary muscle,three including the both myxomas originating the top and the base of the posterior papillary muscle,respectively,the other myxoma between both papillary muscles in the posterior wall of the left ventricle, and 2 more small myxomas including 1 in the interatrial septum and the other on atrial surface of anterior mitral annulus were found in the left ventricle and atrium,respectively.
The myxomas were successfully excised through a transmitral approach with a combined bi-atrial incision.The tricuspid valve and mitral valve were repaired with annuloplasty.
She had an uneventful postoperative course and no residual myxoma was found by echocardiography.
CONCLUSIONS: We think that a long-term follow-up by echocardiography in all patients after the resection of myxoma is advised for early detection of any recurrence.

CVS-100 - RECURRENT LEFT ATRIAL MYXOMA

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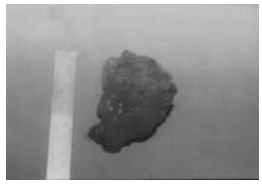
Myxomas are most frequent primary benign cardiac tumors in adults. Myxomas are frequantly in female and middle aged population and can relapse % 3-22 after surgery. A 45 years old male patient applicated to our hospital with respiratory distress, feebleness and weight loss complaints. Then about 5x5 cm left atrial myxoma detected and surgically resected. He applicate to our department again with same complaints. Approximately same sized recurrent myxoma detected and reoperatian performed. Postoperative 10'th day control echocardiography was normal and patient discharged healthy.

Fig.1
echocardiographic image of recurrent myxoma after one year from first operation

Fig. 2
macroscobic myxoma



CVS-101 - PULMONARY ARTERY ANGIOSARCOMA CAUSING SEVERE OBSTRUCTION OF THE PULMONARY ARTERY

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Pulmonary artery angiosarcomas are rarely seen.We report a case of pulmonary artery angiosarcoma which was caused severe obstruction of the pulmonary valve and main pulmonary artery with serious symptoms of right ventricular failure and tricuspid insufficiency.
CASE: A 37-year-old man who had progressive shortness of breath and fatigue for one year admitted to our hospital for the diagnosis of pulmonary artery embolism. Physical examination revealed normal pulmonary sounds on auscultation. The transthoracic echocardiogram revealed a severe pulmonary valvular stenosis with an elevated right-ventricular-systolic-pressure to more than 70mmHg and enlargement of right-chambers.Computed-tomography demonstrated a mass partially filling the main and the right pulmonary arteries. There were images of collateral circulation in the anterior mediastinum. These findings were confirmed by CT-angiography.These findings were concluded in favor of a pulmonary artery tumor or pulmonary artery thrombus.Coronary artery angiography was revealed normal coronary arteries.Pulmonary artery, right ventricular pressures and pulmonary valvular gradient were elevated. In the operation cardiopulmonary bypass was performed.After the main pulmonary arteriotomy, it was seen that the tumor was extended from pulmonary valve to the distal part of the right pulmonary artery. Additionally, the pulmonary valvular structures were involved. Intra-luminal mass was excised and pulmonary valve was resected because of the valvular infiltration.Pulmonary valve replacement with prosthetic valve was performed.The pathological examination was revealed pulmonary artery angiosarcoma. After the oncology department consultation,the patients' chemotherapy was planned. Since the pulmonary artery angiosarcomas mimic thrombus,the oncologic therapy may be delayed. The surgical management of pulmonary artery angiosarcoma can improve the patients' quality of life.

CVS-102 - COMPLETE ATRIOVENTRICULAR BLOCK DUE TO A HYDATID CYST LOCATED IN THE INTERVENTRICULAR SEPTUM: A CASE REPORT

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We report a case of complete atrioventricular block and tricuspid valve insufficiency due to a cardiac hydatid cyst located in the interventricular septum that occurred in a 19-year-old male patient. Surgery was carried out with the help of cardiopulmonary bypass. The cyst was excised, and the interventricular septum was closed with an autologous pericardial patch treated with glutaraldehyde. The tricuspid valve insufficiency was repaired with annuloplasty. A dualchamber epicardial pacemaker was implanted. The postoperative course was uneventful, and the patient was doing well 6 months after discharge.
This is the first report of a cardiac hydatidosis case for which the repair of the interventicular septum, tricuspid annulopasty, and permanent pacemaker implantation were performed during the same operation.

CVS-103 - A RARE ASYMPTOMETHIC INTRACARDIAC MASS: LIPOMATOUS HYPERTROPHY OF THE INTERATRIAL SEPTUM

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INTRODUCTION: Lipomatous hypertrophy of the interatrial septum(LHIS) is a benign rare abnormality characterized by large fatty tissue deposits in the interatrial septum(IAS). It usually remains asymptomatic and presents as an incidental echocardiographic or intraoperative or necropsy finding. Rarely it can be associated with atrial arrhythmias, obstructive flow symptoms and even sudden death.
CASE: A 82-year-old man with a history of hypertension and chronic obstructive lung disease admitted to our institution with complains of progressive shortness of breath and arrhythmia. Transthoracic echocardiography was performed for the etiology of arrhythmia but failed to show intracardiac chambers because of emphysema but transesophageal echocardiography revealed a 5–6-cm right atrial mass that appeared to arise from the IAS, suggestive of a right atrial myxoma. The thickness of the IAS was about 30 mm and the craniocaudal extend was 60 mm. We referred patient to radiology department displaying this mass and its relationship with cardiac chambers and great vessels. MSCT was showed sparing of the fossa ovalis and a prominent constriction of the central septum with resulting dumbbell shape of the lesion which suggested LHIS. The mass was large but not cause narrowing great veins inflow and hemodinamic alteration. Conclussion: Imaging techniques help to differentiate LHIS from other intracardiac masses thus limiting the need for biopsy and histologic confirmation. Hemodynamic alteration of the great vessels or severe rhythm disorders must be considered as surgical correction indication in patients with lipomatous hypertrophy of the interatrial septum.

CVS-104 - A CASE OF HUGE LEFT VENTRICULAR MYXOMA

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OBJECTIVES: Myxomas are the most common cardiac tumors. The incidence is between the third and sixth decades. 75-80% of myxomas originate from left atrial septum; 10-20% are in the right atrium; and 6-8% are biatrial, right ventricle, left ventricle, cardiac valve tissues. We present a case of two huge left ventricular myxomas originating from mitral anterior and posterior leaflets into the left ventricular cavity.
CLINICAL SUMMARY: A 64-year-old man presented to our clinic with a history of exertion dyspnoea and palpitation for sixteen years (NYHA III). We established two huge masses in left ventricular cavity with echocardiography (Figure1). The larger of the two myxomas (4.1x3.1 cm) originated from mitral anterior leaflet. It was attached to both the interventricular septum and posteromedial papillary muscle. The other one (1.4x1.3 cm) was originating from posterior mitral leaflet. This mass was mobile and causing obstruction in the left ventricular outflow tract. The peak gradient of aortic valve was 42 mmHg.
Midline sternotomy and bicaval cannulations were performed and cardiac arrest was induced by cardioplegia and moderate hypothermia. Left atriotomy was performed. After mitral leaflets were resected, the gelatinous and yellow-brownish big mass extracted. The big mass was seen to be attached to the anterior mitral leaflet, posteromedial papillary muscle and interventricular septum. Because the masses were fragile, mini aortotomy was performed. Ascending aorta, left ventricular outflow tract, left ventricle and left atrium cavity were controlled for embolic particles, and irrigated with serum saline. A MVR was performed. We did not encounter any postoperative complications. Normally functioning mitral valve and normal left ventricular cavity was observed by postoperative echocardiographic examination. Myxoma was confirmed by pathological examination.
DISCUSSION: Ventricular myxomas usually are approached through the AV valve or by detaching the anterior portion of the AV valve for exposure and reattachment after resection [1]. In our case, both the peduncle of myxomas were extracted with the resection mitral leaflets. The big mass was gently detached from interventricular septum. The mass was resected with the top of the posteromedial papillary muscle because of the attachment of the big myxoma to this papillary muscle. Consequently, we performed a successful surgical treatment of the myxoma in the left ventricular cavity with mitral valve replacement approaching by left atriotomy.
REFERENCES: 1. Bertolotty U, Mazzucco A, Valfre C, et al: Right ventricular myxoma: review of the literature and report of two patients. Ann Thorac Surg 1983; 33:277.

Figure1
EKO goruntusu

CVS-105 - RECURRENT MYXOMA IN A CHILD; SEEDING OR MULTIFOCAL DISEASE?

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A 3-year old boy was admitted for cerebrovascular accident with left sided hemiparesis in June, 2002. Oral anticoagulation therapy was started. Echocardiogram revealed a 4x2 cm mass in the left atrium protruding into the left ventricle attached 1 cm away from anterior leaflet of the mitral valve on the atrial septum causing restriction of mitral opening. The mass was surgically removed as far as the areas free of tumor and the myxoma was verified histologically. The patient was asymptomatic for 3 years until a diastolic murmur on the cardiac apex was detected in a routine auscultation. Echocardiography was performed. A new 3x3 cm mass originating from right superior pulmonary vein (RSPV) causing 2/4 mitral insufficiency was seen. In January 2005 the mass was removed with associated left atrial free wall also left atrium was excised from RSPV to left auricle and the defect was reconstructed with xenograft pericardial patch. Histological examination revealed myxoma and resection borders were free from tumor invasion. The patient was discharged from hospital on the 4th postoperative day without any gradient or insufficiency of the mitral valve in echocardiogram.The patient is free of symptoms and masses. Myxoma is the most frequent primary cardiac tumor accounting for about 50% of all such lesions. Recurrent myxoma after surgical excision is uncommon in sporadic forms. The frequency is estimated by 1-5% in sporadic forms. Incomplete resection and familial predisposition can lead to reoccurance. Intracardiac implantation of embolic fragments of the first tumor and also the existence of a sort of pretumoral focus in the myocardium are possible explanations.

CVS-106 - MITRAL ANNULAR MYXOMA IN AN OLD AGE PATIENT

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INTRODUCTION: Heart valves are extremely rare locations for cardiac tumors to originate, either as the primary site or the site of recurrence. Intracardiac myxomas with an estimated incidence of 0.5–1 per million, constitute about 50% of all primary heart tumors and cardiac myxoma arising from the mitral valve is extremely rare. The most common presenting symptoms of cardiac myxomas are obstructive symptoms, embolization, and constitutional symptoms.
CASE PRESENTATION: A 71-year-old female was admitted to the hospital with the complaint of fainting. She had a history of palpitation and exertional dyspnea. Cardiac examination revealed a grade II/VI pansystolic murmur heard at the apex. Her electrocardiogram and chest roentgenogram showed no specific changes. Transeosefageal echocardiography revealed mild to moderate mitral regurgitation with a 23x27 mm mass on the posterior mitral annulus and the mass was prolapsing into the left ventricle during diastole. The patient was operated. After left atriotomy, posterior leaflet and subvalvular components of the mitral valve were normal in configuration. The mass was excised from the P1 segment of posterior mitratral annulus.
DISCUSSION: Myxoma is the most common primary cardiac tumor of the heart accounting for almost 50% of the benign cardiac tumors in adults, but it is very rarely seen in valve annulus. Echocardiography has become the procedure of choice and the most important diagnostic tool for non-invasive detection of cardiac tumors and masses. Treatment as with all myxomas is surgical excision. Since intracardiac tumors, especially those involving heart valves, carry a significant risk of embolic events, early diagnosis and prompt surgical intervention can significantly reduce the possibility of complications.

CVS-107 - SURGICAL TREATMENT OF MULTYLOCULAR HYDATID CYST OF THE LEFT VENTRICLE - A CASE REPORT

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Echinococcus cyst in the heart, a life threatening condition, has rare incidence in localization of only 0.5-2%. We have described a case of a 23-year old patient with echinococcus cyst localized in the myocardium of the left ventricle. At the beginning completely asymptomatic, in a random x-ray examination a pathological formation in the left ventricle was found. Using a transthoracic echocardiography the existence of a multilocular cyst has been confirmed, located at the apex of the left ventricle with a diameter of 8cm. The diagnosis was confirmed with transesophagial echocardiography, computerized tomography and a magnetic resonance imaging. The existence of other noncardiac localizations of the echinoccosis was excluded. The coronary angiography was normal. The patient was treated for two years with benzimidazole. Three and a half years later, the patient was enrolled for a surgical treatment. Through medial sternotomy, in extracorporeal circulation with blood cardioplegy, we approached toward complete excision of the cyst. With apical opening, a multylocular cyst with dense coliquated mass was found. Following punctuation and aspiration of the cystic mass with instillation of hypertonic solution, the pericystic sheath was resected down to an intact myocardium. The septal defect was closed with two circular sutures. The operation underwent without any complications, and the patient's functions were stable following the intervention.

CVS-108 - PROSTHETIC BIATRIAL CONSTRUCTION FOR SECOND RECURRENCE OF LEFT ATRIAL MYXOMA

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We report a 19-year-old female patient who has undergone three open-heart surgeries in one and a half years for recurrent left atrial myxoma. The patient had admitted to our clinic on February 2007 with the diagnosis of recurrent left atrial myxoma. She had two previous surgeries at our hospital; the first on September 2005 and the second on May 2006. On December 2006, she had a transient ischemic attack that she recovered without any sequele. Tumoral emboli was suspected and echocardiography and thorax CT revealed a left atrial mass 2 cm in diameter. The mass was observed to have a two-fold increase in diameter one month later so the patient was referred to our clinic for surgery for the third time. At operation, the patient was put on cardiopulmonary bypass following aortic and bicaval canulations. Superior septal approach was preferred and septal incision after right atriotomy revealed a pale yellow, round and firm mass with a diameter of 7 cm. The mass was entirely filling the left atrial cavity and was blocking the mitral valve and the pulmonary vein orifices. Entire atrial endocardium had a greyish discoloration and had myxomatous lesions. Left atrium was completely resected exposing pulmonary vein orifices and sparing 5 mm tissue around the mitral valve. The same procedure was carried out for right atrium: complete resection was performed sparing minimal tissue around the caval orifices and around the tricuspid valve-coronary sinus cuff. Both atria are reconstructed using tubular Dacron grafts and seperate Dacron grafts were used to connect the pulmonary venous flow to the left atrium. The patient came off bypass with a junctional rythym of 100 per minute and did not need any inotropic support.
Echocardiography performed during her ward stay showed pericardial collection around right atrial prosthesis so she was taken to revision on postoperative day 10 to avoid complications of tamponade. The collection was removed thoroughly and she was given back to the ward overnight. Rest of her stay was uneventful and she was discharged from the hospital on aspirin and warfarin.
Recurrences tend to occur more fequently in Carney complex, an autosomal dominant disorder. To the best of our knowledge, our patient is the youngest patient with the fastest recurrences. She did not have a family history and cutaneous findings however our clinic strongly believes detailed evaluation is necessary for this fast and malignant course of a disease which is thought to be benign.
We believe complete resection of the atrial tissue and prosthetic atrial construction might stop recurrences in complex myxomas, however, since this is the first patient to undergo such a procedure, result that will be obtained during the follow-up of this patient will be demonstrative and decisive.

CVS-109 - SURGICAL TREATMENT OF HEART HYDATIDOSIS

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Echinococcosis is a parasitic disease which affects liver, lungs and spleen mostly. Heart is a rare location for hydatid cysts; there are a few reports on successful cystectomies with cardiopulmonary bypass use (Adnan C.M. et al., 2006).
MATERIAL AND METHODS: Twelve patients aged 8 to 28 (mean 22,25 ± 2,31 years) were operated on at the clinic. Diagnosis was made by echocardiography and CT-scan. In 8 patients hydatid cysts (HC) located subepicardially in the myocardium of the left ventricle; in 2 patients HC were situated subendocardially in the right ventricle cavity. One HC located in the outlet portion of the right ventricle hindering blood flow; two HC were in the interventricular septum. One patient presented multiple HC located in the right atrium, right ventricle and left ventricle. Of all patients, 4 underwent hydatidectomy from the liver and lungs in the past.
RESULTS: Mean size of HC was 4,3±0,6 mm. All operations were performed with cardiopulmonary bypass use. Operations included a number of steps as following: revision of the HC, puncture and suction, removing the cyst content, sterilization with glycerin and suturing the remaining cavity. Antihelminth therapy was applied after operations; there were no recurrent cases in the late postoperative period.
CONCLUSION: Echocardiography should be utilized in all cases when HC are present in any organ. Simultaneous hydatidectomy from the heart and other organs may be performed sequentially. Antihelminth therapy should be used after hydatidectomy in order to avoid the cyst wall destruction.

DISEASES OF AORTA AND PERIPHERAL ARTERIES

CVS-110 - THE TREATMENT OF INOPERABLE PATIENTS WITH VENOUS ULCERS WITH MEDICAL HONEY (HONEYSOFT®)

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We report our experience about medical honey at the treatment of inoperable patients with venous ulcers.
METHOD: When patients with venous ulcers was admitted to hospital,the operation is preferred as a first choice in our institution,medical honey was applied to all ulcers at inoperable patient group.The most commonly reported procedure is to clean the site first with saline,spread honey on the wound and cover with a dry dressing, which is changed daily. This technique is modified that saline is not used and not changed daily. HONEYSOFT® is the prepared dressing material that honey is embeded in it. All dressings were changed to provide an appropiate epithelising the day after. The becoming full thickness of skin is accepted as a complete healing. The control group was not established for ethical reasons.
RESULTS: 15 male,3 female.Two patients had venous ulcers at bilateral limbs. Mean age was 47,67,mean duration of ulcer was 11,5 months(1-30),mean ulcer field 99,61 cm2, mean honey traetment time 40,72 days(25-70), mean healing time was 44,73 days,Four patients with venous ulcers were secondly admitted to hospital so that after a car accident, an electric shockwave,too tight compresion stocking(2).Two ulcers was unhealed.patients with venous ulcers had also peripheral atherosclerotic occlusive disease,one of them was diabetic and heavily smoker. Four patients were diabetic, PAOD(2), smoker(16), obesity(8), morbid obesity(4), lateral malleol venous ulcer(2), Behcet Disease(1). Positive correlation was not found between ulcer duration and treatment time(Spearmans test),ulcer size and healing time. Between treatment time and healing time has showed pozitive correlation ($p < 0,001$) (Pearson correlation). There was no difference at age, diabetic, smoking patient group. Test was not done at PAOD patients because of ulcers unhealed.

CVS-111 - ONE STAGE OPERATION FOR ITERRUPTED AORTIC ARC AND ASCENDING AORTIC ANEURYSM IN ADULT PATIENT

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Interruption of the aortic arch with associated intracardiac disease in the adult population is an extremely rare entity. This kind of pathology pose a surgical challenge. There is no consensus on the optimal approach for these patients. Anatomic repair may be staged and complicated by the need for extensive mobilization of the aorta, control of collateral blood vessels, the possibility of parenchymal lung injury, damage to the recurrent laryngeal or phrenic nerves, chylothorax, and spinal cord ischemia. The most feared complication of aortic surgery is paraplegia and risk of spinal cord injury. The risk of these complications increase with prolonged aortic cross-clamp time and older age. Several extra-anatomic bypass grafting techniques have been described, including methods in which the distal anastomosis is performed on the descending thoracic aorta, supraceliac abdominal aorta, or the infrarenal abdominal aorta. Ascending-to-descending aortic bypass graft via the posterior pericardium allows simultaneous intracardiac repair We present a 32-year-old patient with interrupted aortic arch and ascending aorta aneurysm with severe aortic insufficiency. One stage surgical treatment consisted of a complete ascending aorta replacement with a valved composite graft and Ascending-to-descending aortic graft bypass via the posterior pericardium was performed simultaneously through median sternotomy.
Ascending-to-descending aortic bypass appears to be a safe flexible method that is particularly useful in adult patients when simultaneous intracardiac repair is required.

CVS-112 - GIANT POPLITEAL ANEURYSM WITH DEEP VEIN THROMBOSIS, FOOT DROP AND ARTERIOMEGALI: A CASE REPORT

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Popliteal artery aneurysms are the most common peripheral arterial aneurysms and the second most common aneurysm after abdominal aortic aneurysms. Popliteal artery aneurysm (PAA) effects mostly the elderly men and atherosclerosis plays the major role in the etiopathophysiology of this disease. The management of PAAs requires a great concern. Popliteal aneurysms are asymptomatic or otherwise present with intermittent claudication, pressure symptoms in the popliteal fossa, distal embolization, and, rarely, rupture. We present a patient with a remarkably large popliteal aneurysm of 8x11 cm presenting as a popliteal swelling with foot drop and deep vein thrombosis and limb ischemia. According to our literature search, it is one of the largest reported popliteal aneurysm with arteriomegali, and its corresponding symptoms are unusual. The diagnostic workup and treatment are presented.

CVS-113 - OUR RESULTS OF FEMOROPOLITEAL GRAFT BYPASS SURGERY

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INTRODUCTION: Femoropopliteal graft bypass (FGB) is performed in the surgical treatment of peripheral arterial occlusive disease of low extremities. Grafts choose is important in these operations with regard to graft patency and some postoperative complications as an infection. We aimed to declare the results of FGB performed in our clinic.
METHOD: We performed FGB in 30 patients, 26 of them were man (87%) and 4 were women (13%). Mean age was 62 (range 34 and 76). 8 of them were diabetic. We divided the patients to two groups. One group (group-1) performed synthetic graft (Dacron or polytetrafluoroethylene) include 18 (60%), the othe group (group-2) performed saphen vein graft include 12 (40%). Infragenuar bypass was performed additionally in 3 of 18 in group-2. While low molecular weight heparin was used in early postoperative period, only acetylsalicylic acid was used late period all patients.
RESULTS: We did not have any mortality in early postoperative period. The reocclusion formation due to graft thrombosis was seen in 1 patient (3%) in group-1. The infection was established in 3 (10%) in group-1. Hematoma was occurred in 1 patients in group-2. Seroma was observed in 1 patient (3%) in group-1.
DISCUSSION: The patency rates of both saphen vein and synthetic graft in supra genuar femoropopliteal graft bypass surgery are declared about 80 % following 2 years. Saphenous vein graft is better than other synthetic grafts on accont of early postoperative complications.

CVS-114 - ENDOVASCULAR REPAIR OF THE POST-TRAUMATIC PSEUDOANEURYSM OF THE DESCENDING AORTA: A REPORT OF THREE CASES

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Open repair of acute traumatic aortic transection has a very high risk of morbidity and mortality due to frequent occurrence of other severe associated injuries. For this reason, endovascular surgery has replaced it as the primary treatment modality. But the management of the chronic pseudoaneurysm which caused by undiagnosed rupture is controversial. Because these patients usually are very young, disadvantages of the open repair in the acute phase disappear in the course of time and long-term durability of the endovascular repairs remains unknown. But spinal cord injury is still major problem in the open repair and it has not been documented as a result of endovascular repair for aortic transection so far. Additionaly midterm results of endovascular treatment have shown no evidence of endoleak or stent graft migration in the patient with transection. In this report we present three patients with chronic post-traumatic pseudoaneurysm who treated by endovascular surgery. All of them are male and ages are 62,33 and 49 respectively. Vailant (Medtronic) thoracic endografts were used for each of the patients. Technically successful repair was achieved in 100% of patients.There were no instances of death or paralysis and access problems. Although there are no long-term results, we think that endovascular repair is more reasonable than open surgery for treatment of the chronic post-traumatic pseudoaneurysm.

CVS-115 - INTRAMURAL HAEMATOMA OF THORACIC AORTA

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Aortic intramural haematoma (AIH) is a variant form of aortic dissection. It is characterized with intimal tear and no association of flow between true and false lumens. This condition is caused by haemorrhage of vaso vasorums in the aorttic wall. These haematomas may include ascending aorta, arcus aorta or both(Type-A) or descending aorta (Type-B). AIH is classified as traumatic type which has good prognosis and nontraumatic type which has bad prognosis. Nontraumatic type is reported as a precursor of dissection. In the diagnosis of AIH, TEE has a very important role while aortography has a limited role. To diagnose AIH via TEE, there should be no dissection membrane, no association of flow between true and false lumens and the thickness of the halo or half-moon shaped aortic wall in the areas where haematoma is found should be >7 cm. In this report we presented a 45 years old man who has hypertension and had a diagnosis of aortic disection that began with the complain of sudden onset back pain. The CT revealed the appearance of true and false lumens. TEE did not reveal the intimal tear. The flow association between these two lumens could not be pointed out. Because the lesion was confined to the thoracic aorta, it is decided to follow up the patient with medical teratment of beta blocking and antihypertensive agents. Because AIH localized to ascending aorta has a higher risk of complication, it is suggested to treat with surgical therapy at the time of diagnosis while AIH localized to descending aorta is mostly suggested to treat with medical therapy. In AIH localized to descending aorta, if the complain of pain does not relieve with medical treatment and if the haematoma enlarges, surgical treatment should be performed without any hesitation.

Figure 1:
TEE revealing AIH

Figure 2:
CT images revealing AIH

CVS-116 - HOW TRUSTABLE IS MRA AND CONTRAST ANGIOGRAPHY FOR DIAGNOSIS AND MANAGEMENT OF ABDOMINAL AORTIC ANEURYSMS. A CASE REPORT

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BACKGROUND: Abdominal aortic aneurysms (AAA) occur in 5-7% of the population older than 60 years. AAAs are typically diagnosed by physical examination, ultrasound, or computed tomography (CT), but angiographic imaging is often desired before preoperative evaluation. The important information of angiography includes the upper extent of the aneurysm, the number and patency of the renal arteries, the patency of the mesenteric arteries, the inferior extent of the aneurysm, and aneurysmal or atherosclerotic disease of the iliac arteries. Contrast arteriography (CA) has been the standard approach for such preoperative evaluation. However, several studies of magnetic resonance angiography (MRA) for preoperative evaluation of AAAs have been published. CASE: A 73-year-old man with physical examination, ultrasonography and CT scanning AAA is defined, but with coronal cross section without axial cross section MRA and CA evaluation did not detect the aneurysm. Aneurysm covered with circular thrombus was obtained by the CT images and ultrasonography. Patient had undergone to the operation. Exploration confirmed the findings of CT images, and aneurysm resection and graft implantation was performed.
CONCLUSION: Coronal cross section without axial cross section MRA and CA imaging methods can be inadequate to define aneurysm covered with circular thrombus and arrange surgical treatment of abdominal aortic aneurysm as in our case, if other illustrative methods are unused.

CVS-117 - ACUTE AORTIC SYNDROME: THREE CASES PRESENTATION AND REVIEW OF THE LITERATURE

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Acute aortic syndrome is characterized clinically by aortic pain in a patient. Although aortic dissection is the most common etiology, other processes such as intramural hematoma, penetrating atherosclerotic ulcer, aneurysmal leak, and traumatic transection are being increasingly recognized.
We are presented three cases with acute aortic syndrome. Our patients experienced the sudden onset of severe chest pain which radiated to theirs back. Three cases have Stanford A, intraluminal hematoma in the false lumen, and pericardial effusions. One patient underwent graft replacement of her ascending aorta and aortic arc (hemiarcus), and other two patients underwent graft replacement of theirs ascending aorta. Postoperative periods were uneventfully, and discharged home. Increased attention to the different facets of acute aortic syndrome will lead to a more rapid diagnosis and an appropriate treatment of these patients.

CVS-118 - SURGICAL THERAPY OF AORTA-ILIAC DISEASE WITH RETROPERITONEAL MINI LAPAROTOMY; CASE REPRT

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65 year old male with aorta-iliac occlusive disease after the first examination and initial investigations peripheric and coronary angiography was performed and aorto-iliac occlusive disease was diagnosed. With Retro Peritoneal Mini Laparotomy(RPML) approach aorta-bifemoral by-pass operation was performed. Intestine functions, transition to oral nutrition, stay in intensive care unit and hospital was concluded.

Fig 1

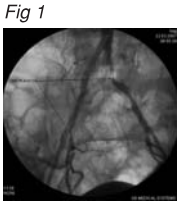

Fig 2

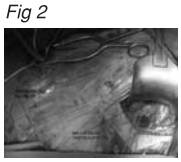

Fig 3

Fig 4

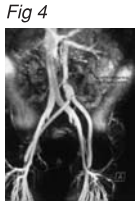

Fig 1
Sekil 1. Hastanin operasyon oncesi periferik anjiografisinde obstruksiyonlarin gorunumu.

Fig 2
Sekil 2. RPML teknigi ile icra edilmis operasyonun greftin aortik ucunun anostomoz edildikten sonra femoral bacaklarin her iki femoral bolgeye alindiktan sonra gorunumu.

Fig 3
Sekil 3. RPML teknigi ile opere edilmis hastanin operasyon sonrasi cilt insizyonlarinin gorunumu.

Fig 4
Sekil 4 RPML teknigi ile opere edilmis hastanin operasyon sonrasi cift fazli MR Anjiografisi.

CVS-119 - FULL RECOVERY OF PARAPLEGIA AFTER ENDOVASCULAR REPAIR IN A PARAPLEGIC PATIENT WITH ACUTE TYPE B AORTIC DISSECTION

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Lately, endovascular interventions are being frequently used in the treatment of patients with aortic pathologies. Open surgical treatment of acute pathology of the descending thoracic aorta is associated with significant mortality and morbidity. Endovascular repair of the thoracic aorta has shown reduced morbidity and mortality when compared with open surgery. It is also a less-invasive treatment method. In this article, we present our experience with a case where the development of paraplegia is observed after acute type B dissection and where paraplegia is fully recovered following endovascular repair.
The patient admitted to a hospital due to complaints about back pain which suddenly started and he was diagnosed as type B aortic dissection by thorax CT examination. His further examination revealed paraplegia. The patient was referred to our clinic for the treatment of type B dissection. At the digital subtraction angiography, a dissection, which started at left subclavian artery's distally and ended at iliac bifurcation, was revealed. The primary rupture at distal subclavian artery was closed by endovascular intervention. During the operation, a stent was placed in the right renal artery which was occluded by false lumen. The time that has passed until the beginning of complaints by patient and application of endovascular intervention was 12 hours. The paraplegia fully recovered in the first postoperative day. The patient was discharged in a good condition.
The most frightening complication in type B dissections is paraplegia and in these cases paraplegia can be recovered by maintenance of reperfusion in a short time. Endovascular treatment for acute thoracic aortic disease is feasible and associated with a reasonable outcome. In selected cases, it may be considered as a first option.

CVS-120 - ONE STAGE OPERATION FOR TREATMENT OF AORTIC DISSECTION WITH OPEN GRAFT: FIRST CASE IN TURKEY

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The treatment of complex aortic pathologies involving the ascending aorta, the aortic arch, and the descending aorta remains a challenging issue in aortic surgery. These types of pathologies of aorta are usually treated by sequential operations. Classic surgical repair consist of a two-stage strategy, whereby, in the first step, the ascending aorta and the aortic arch are replaced via a midline sternotomy. In the second step, via a lateral thoracotomy, the descending aorta is replaced. The two stages may sum up to a mortality of 20%; furthermore, the waiting period between the stages is associated with a mortality rate of 10% of its own. Additionally, the two-stage strategy has an inherent limitation, due to the comorbidity and advanced age of the majority of patients. Therefore, the second stage cannot be offered to up to 30% of patients. The frozen elephant trunk procedure (one stage operation) with E-vita open hybrid prosthesis (jotec) consisting of a proximal woven polyester tube and a distal self-expandable nitinol stent graft, effectively combines surgical and interventional technologies in the treatment of extensive aortic aneurysms and dissections.
We present 63 years old patient with complex aortic lesions (Chronic Type I Aortic Dissection) involving all three segments of the thoracic aorta. We preformed one stage operation with E-vita open hybrid prosthesis.
Though long-term results using this new method are not yet available, the initial promising results postoperatively are encouraging toward true one-stage repair by combining classic aortic surgery with open antegrade stent grafting utilizing the newly designed hybrid prosthesis.

CVS-121 - SINUS VALSALVA ANEURYSM RUPTURE INTO THE LEFT VENTRICLE: A RARE CLINIC ENTITY MIMICKING VALVULAR REGURGITATION

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A 46-year-old male patient who was previously treated with the diagnosis of pneumonia was reevaluated because of failure of healing. Echocardiography was performed and severe aortic regurgitation was diagnosed. Transesophageal echocardiography and angiography made the diagnosis definite. Before operation the patient was treated medically with digitalis and diuretics. Aortic valve was inspected at operation and right sinus valsalva aneurysm was detected. The aneurysm was ruptured to the left ventricle mimicking aortic regurgitation. Again there was a tear in the normal shaped left coronary sinus valsalva also connecting the ascending aorta to the left ventricle. Aortic valve was replaced repairing the sinus valsalva aneurysm and the defect in the left coronary sinus. Postoperative course of the patient was critical; inotropic support and diuretics were needed for 10 days.
Approximately 65-85% of sinus valsalva aneurysms originate from the right sinus of Valsalva, and the typical rupture is to the right chambers of the heart and pericardium, while rupture into left ventricle is rare. Rupture of sinus of valsalva to the left ventricle mimics pure leaflet and valvular pathology, and it is hard to differentiate these 2 lesions for better surgical and medical management of the patient.

CVS-122 - TEVAR: EXPERIENCE OF IZMIR ATATURK TRAINING AND RESEARCH HOSPITAL

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INTRODUCTION: Aim of the surgery in aortic pathologies, prevent of ruptur and save the patients life, prevent of complications of dissection such as malperfusion. Although improvement of the surgical techniques, mortality and morbidity rates are still higher than standard open heart surgery applications such as coronary surgery or valve surgery. Instead of the thoracic aortic surgery performed via major incisions, using of minimal invasive endovascular techniques are increasing recently.
Patients
Thoracic endovascular aortic repair (TEVAR) applications have been started in 2003 in our clinic. Fifteen thoracic aortic pathologies have been repaired up to day. Two patients have complex aortic pathologies. One of them (redo arcus aorta aneurysm and dissection) have been repaired by hybrid procedures and the other (chronic type I aortic dissection) treated by open graft technique. Among other patients, one patient has posttraumatic Type III dissection and one patient has traumatic pseudoaneurysm. Six patients have Type III dissection with false lumen expansion; five have degenerative descending aortic aneurysm.
RESULT: One patient died early postoperative period due to neurological complication and multi-organ failure. All other patients have been discharged with a good condition.
DISCUSSION: TEVAR has lower postoperative mortality and morbidity rates. Although long term results are not known, results of endovascular repair of the thoracic aortic pathologies are reliable.

CVS-123 - TRANSABDOMINAL PREPERITONEAL INGUINAL HERNIA REPAIR CONCOMITANT WITH PERIPHERAL ARTERY SURGERY

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PURPOSE: Since weakness in the musculotendinous barrier of the abdominal wall leads to inguinal herniation, inguinal hernia may develop in the aortailiac occlusive disease and after abdominal surgery. The incidance of inguinal herniation is significantly high in patients wih aortailiac occlusive disease. Vascular complications may develop during inguinal hernia repair operations. At this point, operative strategy is critically important in the patients undergoing concomitat aortailiac procedures and inguinal hernia repair.
METHODS: A 64 year – old man was admitted to our clinic with complaints of intermitant claudication and right inguinal hernia. Peripheral angiography showed total occlusion of the bilateral superfacial femoral arteries and 90 % stenosis in bilateral common iliac arteries. Firstly, we performed aortabifemoral bypass with a 16– 8mm syntetic polytetrafluoroethylene (PTFE) Y greft. Later, inguinal hernia was repaired with preperitoneal approach through median abdominal insicion. Periton was opened,and a 10x5 cm prolen mesh was entrenched on the Bogros area. Finally, bilateral over knee femoropopliteal bypass was completed with a 8 mm PTFE greft.
RESULTS: There were no complication and the patients was discharged on the postoperative 9 days.
CONCLUSIONS: We think that, simultaneous aortailiac – femoropopliteal bypass and inguinal hernia repair operation may prevent vascular complications due to inguinal hernia repair in the patients with aortailiac disease and inguinal hernia.

CVS-124 - A FIBROMATOSIS CASE REPORT WHICH SIMILITUDE ABDOMINAL AORTA ANEURYSM

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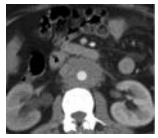
Abdominal aorta aneurysms are to rare among young adult womens. Aneurysms are generally seconder to Behcet Disease, trauma, infection or mixt connective tissue diseases in young adults. Aterosclerotic changes are increases at post menopousal period. Theese can diagnosed by clinical findings and radiologic findigs as arteriography, USG, CT or MRI angiography. At differantial diagnosis, tumors and cysts must recognized. Acording to abdominal USG and contrasted CT we diagnosed infrarenal abdominal aorta aneurysm at 41 years old female patient. Intraoperative we saw that it was a retroperitoneal situated fibromatosis which similar to abdominal aneurysm. It was surrounded abdominal aorta and seem to similar as a trombosed abdominal aorta aneurysm.

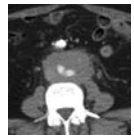
resim 1A
ultrasound image

resim 1B
ultrasound image

resim 2A
CT image of fibromatosis simulitated abdominal aorta aneurysm



resim 2B
CT image of fibromatosis simulitated abdominal aorta aneurysm



CVS-125 - REPAIR OF REDO ARCUS AORTA DISSECTIONS/ ANEURYSM WITH HYBRID PROCEDURE

Ozsoyler Ibrahim, Yilik Levent, Gunes Tevfik, Aksun Murat, Ergene Oktay, Gurbuz Ali
Izmir Ataturk Training and Research Hospital, Cardiovascular Surgery Department, Izmir, Turkey

INTRODUCTION: We have treated a patient who have been operated on (replacement of supracoronary ascending aorta by synthetic graft) 6 years ago due to type I aortic dissection with hybrid procedure. Patient had arcus aorta aneurysm and dissection.
PATIENT: Operations have been performed two sessions. Firstly, median redo sternotomy has been performed and branches of the arcus aorta transferred to old graft via 8 mm synthetic graft. Second, arcus aorta has been isolated with endovascular graft.
RESULT: Patient has been discharged at postoperative 7th day. There is no complication in out patient controls.
DISCUSSION: Complex pathologies of thoracic aorta have higher morbidity and mortality rates. Endovascular procedures can decrease the complication rates of the repair of the complex thoracic aortic pathologies.

CVS-126 - REPLACEMENT OF ASCENDING AORTA IN A REDO PATIENT DUE TO ANEURYSM: CASE REPORT

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Resternotomy of patients having ascending aortic aneurysms is a life threatening procedure because of possibility of rupture due to close proximity of aneurysm to sternum (1). In this report, we present a reoperated case due to ascending aortic aneurysm.
CASE: A 56 years old woman suffers fatigue and chest pain seven months after double valve replacement. We noticed nothing on physical examination. Chest roentgenogram reveals mediastinal enlargement. On computed tomography of thorax, an aneurysm of ascending aorta was detected in a close proximity to sternum. Coronary angiogram was normal.
She underwent resternotomy after full dose heparinisation and cardiopulmonary bypass with femoral cannulation under deep hypothermia (18 ºC). Aneurysm was located between sinotubuler junction and truncus bachiocephalicus. After clamping of ascending aorta at the truncus level, a dose of cardioplegy was delivered. Ascending aorta was replaced with a woven dacron greft (# 22 mm). On postoperative period, no complication was noticed. She was discharged with complete recovery.
DISCUSSION: Resternotomy of patients having previous cardiac procedures might have been concluded high morbidity and mortality because of rupture possibility of aneurysm due to fibrous adherence of sternum to ascending aorta (1). Femoral cannuation and cardiopulmonary bypass under deep hypothermia might be safe procedure in those patients before resternotomy. We thought that this procedure allowed us safely reentry on those patients who are generally considered as major surgical risk.
1.Bachet J et al. Reoperation for giant false aneurysm of the thoracic aorta: how to reenter the chest? Ann Thorac Surg 2007,83(5):1610-4.

CVS-127 - ASCENDING AORTIC ANEURYSM IN A YOUNG PATIENT

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BACKGROUND: Aortic aneurysm is rare in the pediatric and young adult population. Within the pediatric population, the rare aortic aneurysm is most often brought on by congenital cardiovascular malformation or connective tissue disorder, trauma, inflammatory disease, or infection.
CASE REPORT: We present a case of a 16-year- old male patient who suffer from dysphagia and chest pain. Diagnosis of ascending aortic aneurysm was established with the help of echocardiography, CT and aortography. The patient went to surgery.
Microscopically, the aortic sections showed intimal thickening and tearing, medial smooth muscle loss, which was replaced by fibrous tissue, fragmentation of elastic lamellae with widening of interlamellar spaces, and cystic medial degeneration. The morphological features represented degenerative changes of the aorta, which were unusual in such a young patient.
CONCLUSION: Due to the rarity of aortic aneurysm a high index of suspicion is required to reach the diagnosis in a timely manner. It should be considered in young patients complaining of chest pain.

CVS-128 - THE POPLITEAL ARTERIES' LARGE PSEUDOANEURYSMS: GRAFT CHOICE

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OBJECTIVE: Pseudoaneurysm of the popliteal artery typically results from penetrating trauma rather than blunt trauma. The civilian incidence of such pseudoaneurysms constitutes 0 to 3.5% of all popliteal aneurysms. Pseudoaneurysms (PSAs) must be treated as soon as possible whether acute or chronic after diagnosis with direct surgical procedure.
MATERIAL-METHODS: From January 2000 through December 2006, we performed revascularization eleven patients' PSAs at the popliteal arterial after gunshot(5 cases) and stab(6 cases) injuries in our Cardiovascular Surgery Department. All patients had large PSAs of more than 7cm filling the popliteal fossa with variable degrees of fixed flexion deformity of the knee.
RESULTS: We performed elective surgery, using generally the follow principles in all cases;with a medial approach to the popliteal artery aneurysm,it was determined with skin incision paralel to the popliteal artery course. Our surgical applications for 11 patients are in Table 1. Saphenous vein graft,that used for five cases was taken from contrlateral healthy extremity. Saphenous vein graft's diameter was not enough for interposition for two cases,so patency was constructed with 6mm ringed expanded polytetrafluoroethylene(e-PTFE:Gore-tex) tube graft interposition. There were no deaths or graft related complications.
CONCLUSION: Especially for popliteal and infrapopliteal injuries autogenous grafts must be used, because thrombosing risk is high in synthetic grafts with a diameter less than 6 mm.We must preferred the conduit e-PTFE for two cases because saphenous vein graft's diameter was not enough for interposition. We recommend the surgical repair routinely for aneurysms and performing revascularization selectively if necessary.

Table 1.

Case No	Surgical Technique
1	Aneurysmectomy+autogenous saphenous vein graft interposition
2	Aneurysmectomy+autogenous saphenous vein graft interposition
3	Aneurysmectomy+end to end anastomosis(primary repair)
4	Aneurysmectomy+autogenous saphenous vein graft interposition
5	Aneurysmectomy+end to end anastomosis(primary repair)
6	Aneurysmectomy+autogenous saphenous vein graft interposition
7	Aneurysmectomy+autogenous saphenous vein graft interposition
8	Aneurysmectomy+ primary repair of the arterial injury's defect
9	Saphenous vein graft's diameter was not enough for interposition,so patency was constructed with 6mm ringed expanded polytetrafluoroethylene tube graft interposition
10	Saphenous vein graft's diameter was not enough for interposition,so patency was constructed with 6mm ringed expanded polytetrafluoroethylene tube graft interposition
11	Aneurysmectomy+end to end anastomosis(primary repair)

Table 1.Our surgical applications' technique in eleven patients.

CVS-129 - PLAINING OPERATION WITH MR ANGIOGRAPHY IN THE ARTERIAL ANEURYSMS LOCALIZED AT THE NECK OR BRAIN

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OBJECTIVE: Magnetic resonance angiography facilitate the understanding of the vascular anatomy within lesions, thus, allowing improvement of diagnostic accuracy and potentially a safer surgical approach.
MATERIAL-METHODS: Our first case was a 47 years old woman that we diagnosed fusiform giant internal carotid arterial aneurysm with MRA. Our second case was a methicilline sensitive coagulase negative staphylococcal(MSCONS)infective endocarditis and had two very rare cerebral complications.
RESULTS: We operated the first case with a successful surgical technique.For the second case we performed ring annuloplasty and successful mitral valve repair with diagnosed bilobular saccular mycotic aneurysm at cerebral artery and frontal region infarction secondary to septic emboli. We're presenting our diagnostic approach and successful surgical technique.
CONCLUSION: Morphological and functional assessment of arterial aneurysms without requirement of ionized radiation and nephrotoxic contrast agent are the most important advantages of magnetic resonance angiography. We determine also those rare arterial aneurysms and their relations with adjacent tissues and structures,features and effects.

CVS-130 - THE IMPORTANT ROLE OF COLOUR DOPPLER ULTRASONOGRAPHY AT THE DIAGNOSIS AND TREATMENT OF LOWER EXTREMITY PSEUDOANEURYSMS

Bayrak Serdar, Yetkin Ufuk, Yakut Necmettin, Ozpak Berkan, Akyuz Muhammet, Ozcem Barcin, Tetik Omer, Gurbuz Ali
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OBJECTIVE: Color – flow Doppler ultrasonography (CFDU) is a noninvasive method that can provide sufficient diagnostic information to plan the surgical procedure CFDU has an excellent sensitivity and specificity spectrum and shows the blood filling the cavity as well as the jet flow passing through the pseudoaneurysmal sac with arterial defect. Its advantages are low cost, utility in various treatment choices and low time consumption.
MATERIAL-METHODS: Between January 2001 and December 2006, we performed revascularization for PSA in the femoral, popliteal and tibioperoneal lower extremity arteries of eight patients who had gunshot injuries. Lower extremity arterial and venous colored CFDU tests revealed a giant hematoma measuring 6-20 cm diameter and hemorrhagic liquid areas with various concentrations at the localizations of PSAs.The"to and fro" flow pattern was thought to indicate pseudoaneurysm. All patients underwent also selective lower extremity digital subtraction angiography.
RESULTS: In all patients, we performed aneurysmal resection and all patients were treated with optimal revascularization procedure. No deaths or graft related complications occurred in these patients and the early and late patency and limb salvage rates were 100%. The late postoperative follow-up examinations were performed at our clinic and Doppler ultrasonography was performed after 3 months.
CONCLUSION: We use CFDU in making the diagnosis, it provides detailed information about the dimensions, morphology and neck anatomy of the pseudoanurysms, the blood flow through the pseudoaneurysms and the relation of pseudoaneurysms with the adjacent vessels. Doppler ultrasonographic evaluation is sufficient for late postoperative follow-up evaluation

CVS-131 - SUBCLAVIO-CAROTID TRANSPOSITION FOR SUBCLAVIAN ARTERY STENOSIS CAUSING RECURRENT BRACHIAL ARTERY EMBOLISM: CASE REPORT

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INTRODUCTION: Subclavian artery stenosis constitutes a relatively lower rate for upper extremity emboli source. In this report, a patient with subclavian artery stenosis causing recurrent brachial artery embolism who was successfully treated using subclavio-carotid transposition is presented.
CASE: A 56-year-old female patient was referred to our institution with sudden onset right arm pain. She was operated twice for brachial embolism in two days. On angiography she had a proximal subklavian artery stenosis with a floating thrombus (Fig1,2). She had pulses on radial and ulnar arter on admission. She was taken to urgent operation for recurrent embolism. Brachial artery pulse was lost just before the operation. Under general anaesthesia right subklavio-carotid transposition was done besides brachial embolectomy (Fig3). She was discharged on the forth of surgery.
DISCUSSION: Upper extremity embolism of noncardiac origin especially due to stenosis has been reported in a small number of reports. However, which surgical technique to be preferred has not been described exactly. Thrombosis at the side of the stenotic lesion besides the contralateral subclavian artery stenosis made us to prefer subclavio-carotid transposition. Being a simple technique which also can be applied under regional anaesthesia, subclavio-carotid trasposition is an effective and low complication having procedure for subclavian stenosis.

figure 1 *figure 2* *figure 3*

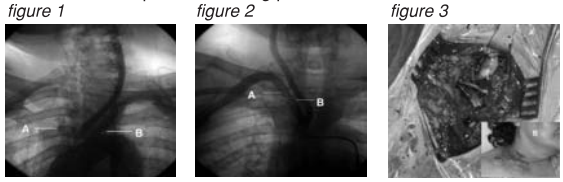

Fig1
Preoperative angiography, right subclavian artery calsification (A), left subclavian artery stenosis(B)

Fig2
Preoperative angiography, thrombus localized distal to the left subclavian artery stenosis (A), stenotic flow in left subclavian artery (B)

Fig3
Completed subclavio-carotid transposition (A), operative incision (B)

CVS-132 - MIMICKING OF CAROTID BODY TUMOR

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INTRODUCTION: Carotid body tumor is derived from chemoreceptors and generally locates carotid bifurcation. The rates of malignancy is approximately % 3. Early diagnosis and treatment should be performed.

FINDINGS: 24 year old man with applied with complaining with right lateral neck mass which showed growth during 1.5 year. There was not trauma or operation in patient history. Mass which was pulsatile, very little mobile was detected in juguler region of right neck with physical examination. Dupplex scanning and magnetic resonance(MR) showed a approximately 5.2 x 3.9 cm dimensions of mass in adjacent carotid artery bifurcation. Mass was explored by surgery and after the operation, pathologically analysis of mass showed small cell adenocarcinoma. Because of this, our case was investigated with computed tomography(CT), MR, biochemical tumor markers, endoscopy and syntigraphy for metastasis. All results were negative.
DISCUSSION: Paraganglioms are quitely vascularise and surrounded by extremely important neurovascular tissues. In generally, patients remains asymptomatic for years because of growth of tumor is slow. Preference of treatment should be done according to the age of patient, dimensions of tumor, speed of growth of tumor and complications of surgery.Radiotheraphy or embolization might be chosen alternatively and /or asisstant to surgery.
CONCLUSSION: Carotid body tumors can exist with other neck paraganglioms and malign tumors. Also, It can be bilateral and multiple. Because of this, if one patient complain one side mass in the neck, non invasive and/ or invasive diagnostic methods and appropriate surgical treatment should be performed.

CVS-133 - WHY PREFFER SURGICAL APPROACH FROM MEDIAL LEG TO THE POPLITEAL ARTERIES' LARGE PSEUDOANEURYSMS?

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OBJECTIVE: Lower extremity pseudoaneurysms develop after penetrating traumas leading direct vessel injury. Generally traumatic aneurysm term is used for pseudoaneurysm. Pseudoaneurysms(PSAs) must be treated as soon as possible whether acute or chronic after diagnosis with direct surgical procedure.
MATERIAL-METHODS: From January 2000 through December 2006, we performed revascularization eleven patients' PSAs at the popliteal arteries after penetrating injuries. We evaluated the lower extremities for ischemia, asked the patient for a medical history and performed a physical examination, all of which contributed to the diagnosis. Because of inadequate information about the distal runoff vessels, we performed conventional arteriography and found the localized PSAs,and adequate distal runoff.
RESULTS: We performed elective surgery, using generally the follow principles in all cases;with a medial approach to the popliteal artery aneurysm,it was determined with skin incision paralel to the popliteal artery course. Exploration showed that adjacent vein and nerve structures weren't damaged and only artery was injured. All patients were able to completely straighten the leg at the time of discharge. Doppler ultrasonography was performed after 2 months. The early and late graft patency rate was 100%.
CONCLUSION: We preferred the surgical approach from medial leg,because it is easy and when patient is supine position,there are many choices.Beside tibial vessels,also vena saphena manga can be exposed easily with this method.It is very important to reach posterior and peroneal vessels for distal artery by pass.In addition,if upper the patella,popliteal arter is worse than expected,this approach obtains enough inflow from superficial or common femoral artery.

CVS-134 - OUR GRAFT CHOICE IN LOWER EXTREMITY PSEUDOANEURYSMS

Yetkin Ufuk, Bayrak Serdar, Tetik Omer, Ozpak Berkan, Gunes Tevfik, Bademci Mehmet, Ozbek Cengiz, Gurbuz Ali
Izmir Ataturk Training and Research Hospital, Department of Cardiovascular Surgery, Izmir, Turkey

OBJECTIVE: Today, many clinics prefer autogenous grafts which are more resistant to infection and have an elongated patency for extremity vessel injuries.
MATERIAL-METHODS: Between January 2001 and December 2006, we performed revascularization for PSA in the femoral, popliteal and tibioperoneal lower extremity arteries of eight patients who had gunshot injuries. We classified our patients into three groups: Group I consisted of two patients with femoral artery PSA, Group II consisted of four patients with popliteal PSA and Group III included two patients with tibioperoneal PSA.
RESULTS: The surgical procedures that we performed in 8 patients are presented in Table 1. The diameter of the saphenous vein graft was not enough for interposition in patients no:2 and 4, so patency was constructed with 6mm ringed expanded polytetrafluoroethylene (e-PTFE:Gore-tex) tube graft interposition. In all patients, a pulsation was positive upon digital examination at the distal anterior tibial and posterior tibial arteries during the early postoperative period. The late postoperative follow-up examinations were performed at our clinic and Doppler ultrasonography was performed after 3 months.
CONCLUSION: Autogenous vein grafts have advantages only if there is infection (8,13). 5-year patency rate for open repair of femoral arterial aneurysms is 85%.Autogenous grafts must particularly be used for popliteal and infrapopliteal injuries because the risk of thrombosis is high in synthetic grafts with a diameter less than 6 mm.

Tablo 1.

Group	Patient No	Surgical Technique
I	1	Aneurysmectomy+autogenous saphenous vein graft interposition
I	2	The diameter of the Saphenous vein graft was not wide enough for interposition, so patency
		was constructed with 6mm ringed expanded polytetrafluoroethylene tube graft interposition
II	3	Aneurysmectomy+autogenous saphenous vein graft interposition
II	4	Aneurysmectomy+autogenous saphenous vein graft interposition
II	5	Aneurysmectomy+end to end anastomosis(primary repair)
II	6	Aneurysmectomy+autogenous saphenous vein graft interposition
III	7	Aneurysmectomy+autogenous saphenous vein graft interposition
III	8	Successful removal of aneurysm with distal-proximal ligation

Table 1. Surgical application techniques used in the eight patients.

CVS-135 - GIANT PARAANASTOMOTIC ILIAC ARTERY PSEUDOANEURYSM

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False aneurysms of iliac artery after prosthetic vascular reconstruction are considered to be rare complications with uncertain incidence. The present study evaluates a case with giant iliac artery anastomotic pseudoaneurysm.
CASE: An 82-year-old male patient with the complaints of flank pain and intermittent claudication was admitted to our clinic. He had had a bilateral aortoiliac bypass procedure 25 years before. On CT angiography, he had right aortoiliac and left aortoiliac bypass conduits. On the right side there was a giant pseudoaneurysm on the distal anastomotic site with the diameters of 13x12 cm.Uunder spinal and epidural anesthesia right flank incision was done. Cell saver was used for a probable rupture or severe bleeding. Retroperitonel approach was preferred. The anastomosis was totally separated from the iliac artery. The iliac artery was ligated and graft was extended with an 8-mm Dacron tube graft. Distal anastomosis was done to the common femoral artery. 1000 ml of red blood cell was retransfused with the aid of cell saver. He was discharged on the fifth postoperative day.
DISCUSSION: Anastomotic aneurysms, early after the operation has an incidence as low as 3%. Paraanastomotic aneurysms can be complicated by rupture, thrombosis, embolism, and pressure on or erosion into adjacent structures. It must be kept in mind that blood loss may be high enough to endanger the life of the patient. Even as in our case the aneursymal sac blood content loss may be life threatening. Therefore, red blood saving measures prior to intervention are of critical importance.

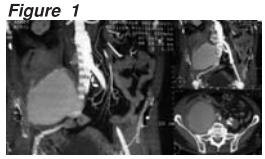
Figure 1


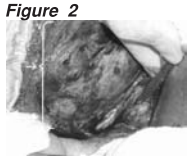
Figure 2


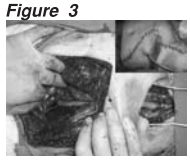
Figure 3


Figure 1
Contrast enhanced CT angiography of the patient

Figure 2
The pseudoaneursym indicated with the arrow and the proximal control of the previously implanted graft with nylon tape

Figure 3
Extended graft with a Dacron tube graft and distal anastomosis to the femoral artery

CVS-136 - SURGICAL MANAGEMENT OF HEMODIALYSIS PATIENTS WITH COMPLICATED A-V FISTULAE

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[2]Department of Nephrology, Erzurum Numune Hospital, Erzurum, Turkey

INTRODUCTION: We aimed that evaluation of surgical treatment of early and late complications of A-V fistulae operations.
MATERIAL METHODS: We operated 63 patients 38 females, 25 males; range 24-71 years in our clinic. Of these,36 patients had thrombosis of fistulae, 10 patients had aneurysm, 5 patients had poor wound healing,4 patients had graft infection, 3 patients had hematoma, 2 patients had oedema in arm, 1 patient had graft seroma and 1 patient had steal, all of them were treated with surgical interventions.
RESULTS: 36 patients underwent A-V fistula thrombectomy. Of these, 22 patients had AV- fistula with synthetic graft and 16 patients had primary A-V fistulae. Four of patients with Brescia Cimino's A-V fistula could'nt be opened with thrombectomy and these were closed and 3 of these patients underwent primary A-V fistula and one patient underwent A-V fistula with synthetic graft. 10 patients had A-V fistulae aneurysm and these underwent appropriate operations. Postoperative fourth day, hemorrhage was seen in one patient who have brachiocephalic A-V graft fistula. Postoperative twenty-sixth day, brachio-basilic synthetitc A-V graft fistula anastomotic line bleeding and development of pseudoaneurysm were seen in another patient and we thought development of synthetic graft rejection and we closed this A-V fistula and removed this synthetic graft. There was'nt any hospital mortality. Local anesthesia was used for all patients except one patient who was taken general anesthesia.
CONCLUSION: Strategies should be improved for decreasing of development of complications and Interventions against complications should have to be minumum injury to the patient.

CVS-137 - OUR AORTA-BIFEMORAL BYPASS EXPERIENCES

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INTRODUCTION: Aorta iliac occlusive disease is generally seen in middle and advanced aged population and it frequently coexists with infrainguinal arterial occlusive disease because of generalized nature of arteriosclorosis.
MATERIAL AND METHODS: A total 9 patients female, 8 males; mean, range 49-84 years who underwent aorta-bifemoral bypass in our clinic were retrospectively evaluated. Of the 9 patients,8 patients had aortailiac occlusive arterial disease and one had aorta iliac occlusive disease and infrarenal abdominal aort aneuriysm with dissection. Classically, median laparotomy was used in all operation. Inferior mesenteric arter was implanted to graft as end to side fashion in two patients.
FINDINGS: Mean cross-clemp time was 13+- 3 minutes during aorta-bifemoral bypass. In one patient who had aneurysm formation, proximal anastomsis of Y graft was performed to abdominal aorta as end to end technique, others proximal anastomosis of Y grafts were perfomed as end to side technique. Distal anastomosis of Y grafts were performed to bifurcation of common femoral arteries in all patients except one patient. This patient underwent aortabifemoral bypass and one side femoropopliteal bypas. There was'nt any hospital mortality. Discharged time was range 6-17 days. Postoperative 4th hour and 10th days, embolectomy were performed in two patients because of thromboembolysm. After the operation, outflow and distal pulses were provided.
CONCLUSION: Aorta bifemoral bypass continue to be properly regarded as the management of aorta iliac occlusive disease. We conclude that improved surgical technics, improved structural and quality of prosthetic materials will cause decreased operative mortality and morbidity.

CVS-138 - LATE COMPLICATION OF ARTERIOVENOUS FISTULAE FOR HEMODIALYSIS: GIANT CEPHALIC VEIN ANEURYSM

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[2]Ataturk University Medical Faculty, Department of Cardiovascular Surgery, Erzurum, Turkey

We herein report the case of a 48-year-old man with chronic hemodialysis in whom a giant venous aneurysm in the left cephalic vein and was excised under generally anesthesia. He had been on regular hemodialysis for 6 years because of polycyctic renal disease by a proximal brachio-cephalic arteriovenous fistula. During the last 18 months we observed the development of an aneurysm with a progressively growing diameter. He was admitted our clinic with a giant painly pulsatile mass and thrill in arteriovenous fistula site, and dyspnea. Physical examination revealed a pulsatile, easily no-compressible, 5x25 cm soft mass continuating subclavian site in left arm in brachio-cephalic fistula area. He had retrogressive effort dyspnea for last 6 months. The patients had no ischemic symptoms. Echocardiography showed moderated tricuspide insufficiency and elevated pulmonary arterial pressure. Because of cardiac failure and rupture risk, cassation of the fistula was recommended with early surgical treatment for giant arteriovenous true aneurysm (Fig 1). Surgical management included resection of the aneurysm and re-establishment of arterial continuity under generally anaesthesia. The patient's postoperative course was uneventful. There were no complications such as infection, ischaemic upper extremity, and neurological sequelae. In postoperative term, the permanent dialysis catheter was inserted to the patient for hemodialysis. Control echocardiography releaved mild tricuspide insufficiency and diminished pulmonary artery pressure. There was no effort dyspnea after 3 months to the patient. We suggest that true venous aneurysms relation to arteriovenous fistula should be considered for surgery, because of cardiac failure, rupture and thrombus formations.


Figure 1

CVS-139 - ENDOVASCULAR STENT-GRAFTING FOR A GIANT AORTIC ARCH PSEUDOANEURYSM IN THE OCTOGENARIAN

Goksel Onur Selcuk, Alpagut Ufuk, Surmen Benguhan, Ugurlucan Murat, Tireli Emin, Dayioglu Enver
Department of Cardiovascular Surgery, Istanbul University, Istanbul Medical Faculty, Istanbul, Turkey

OBJECTIVES: Diseases of the thoracic aorta present a significant challenge to the surgeon because of the complexity of the disease and the characteristics of the patient population. Endovascular stent-graft placement offers an alternative approach with potentially less morbidity and quicker recovery.
METHODS: A 85-year-old male patient was admitted to our clinic with chest pain over the past two months. His history revealed dialysis-dependent renal failure and severe restrictive-type chronic obstructive lung disease. His contrast enhanced thoracoabdominal CAT scan and aortography revealed 44x100 mm pseudoaneurysm juxtapositional to the origin of left subclavian artery.
RESULTS: After succesful endovascular implantation through right femoral route so that the uncovered part of the stent-graft is position at the origin of the left subclavian artery to ensure complete sealing of the aortic wall, he was discharged to surgical intensive care unit. His hemodialysis continued and his early control CAT scan showed no endoleaks with normal anatomy of the arch vessels. Unfortunately on day 6, he had a worsening state of awareness, left hemiparesia and diysarthria. Neurological consult suggested a cranial CT which yielded signs of intracranial hemorrhage on right subtentorial region
CONCLUSIONS: In addition to significant decreae in mortality and morbidity of stent-graft implantation for aortic dissections, inpatient and outpatient costs for such patients will also be significantly less when compared to surgery as the experience grows. We suggest that the shorter stay of the patients with earlier mobilization make EVAR more preferable for octogenarian patients, especially those with comorbidities.


Figure 1
Plain chest radiograph showing a prominent mass on the aortic arch.

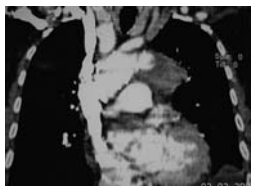
Figure 2
Contrast-enhanced CAT scan showing the pseudoaneurysm just distal to the origin of the left subclavian artery.

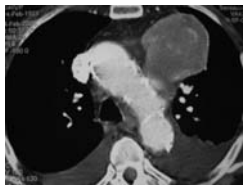
Figure 3
Contrast-enhanced CAT scan on post-procedural day 4. Note that the stent-graft is well positioned to prevent any leakage into the pseudoaneurysm and no endoleak is not detected.

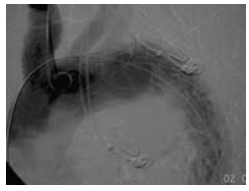
Figure 4
Digital substraction angiography of the aortic arch. Note that the uncovered portion of the stent-graft is positioned at the origin of the left subclavian artery and no endoleak is detected.

CVS-140 - CAROTID BODY ASSOCIATED WITH RECURRENT NEAR-SYNCOPAL ATTACKS

Colak Mehmet Cengiz[1], Kocaturk Hasan[2], Kiziltan Feryaz[1], Kocak Hikmet[3]
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[2]Department of Cardiology, Medical Center, Erzurum, Turkey
[3]Department of Cardiovascular Surgery,Medical Faculty Hospital Ataturk University, Erzurum, Turkey

A case of carotid body tumor associated with presyncoapal attacks arising from the carotid body is reported. Surgery revealed carotid body tumor attached to a big reactive lymph node. After total excision of the tumor, no recurrence and near-syncopal attack occurred during a follow-up.

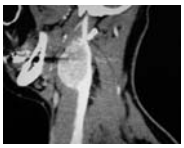


figure 1

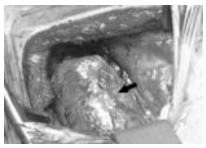


figure 2


figure 3


figure 4

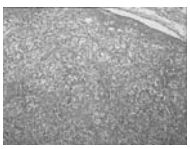


figure 5

CVS-141 - SURGICAL TREATMENT OF ARTERIO-VENOUS MALFORMATION IN THE LEG: CASE REPORT

Odabasi Dolunay, Basel Halil, Akbayrak Hakan
Van Yuksek Ihtisas Hospital, Department of Cardiovascular Surgery, Van, Turkey

20 years old girl hospitalized with the Arterio-Venous Malformation (AVM) compliants in the left leg which was propagated in the last two years. After the examination and initial investigations anjiography performed and AVM is confirmed. With the surgical intervention afferent and efferent vascular portions are excised totally and leg's arterial vascular patency is preserved. After the operation period there was no ischemic compliants and symptoms in our patient and with the performed MR anjiography it is confirmed that the AVM is vanished. The surgery is an effective therapeutical modality in AVM which is localized in the lower extermities

Figure 1

Figure 2

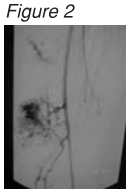


Figure 3

Figure 4

Figure 5

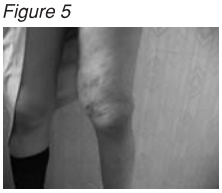


Fig 1. Preoperative appearence of the aneursym.
Fig 2. Preoperative anjiografic appearence of the lesion.
Fig 3. Intraoperative appearence of the aneursym.
Fig 4. Postoperative MR anjiografic appearence of the operated lesion.
Fig 5. Postoperative appearence of the operated lesion.

CVS-142 - SURGICAL TREATMENT OF ARTERIO-VENOUS MALFORMATION IN THE DIGIT: CASE REPORT

Odabasi Dolunay, Akbayrak Hakan, Basel Halil
Van Yuksek Ihtisas Hospital, Department of Cardiovascular Surgery, Van, Turkey

18 years old girl hospitalized with the Arterio-Venous Malformation (AVM) compliants in the left hand fourth digit's dorsal face which was propagated in the last two years. After the examination and initial investigations MR anjiography performed and AVM is confirmed. With the surgical intervention afferent and efferent vascular portions are excised totally and digit's arterial vascular patency is preserved. After the operation period there was no ischemic compliants and symptoms in our patient and with the performed MR anjiography it is confirmed that the AVM is vanished. The surgery is an effective therapeutical modality in AVM which is localized in the upper extermities


Fig 1

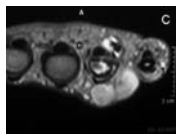


Fig 2


Fig 3

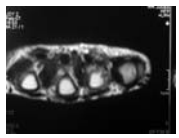


Fig 4

Fig 1. Preoperative appearence of the aneursym.
Fig 2. Preoperative Mr anjiografic appearence of the aneursym.
Fig 3. Intraoperative appearence of the aneursym.
Fig 4. Postoperative MR anjiografic appearence of the operated lesion.

CVS-143 - BY-PASS FROM PROXIMAL POPLITEAL ARTERY TO DISTAL POPLITEAL ARTERY IN BUERGER'S DISEASE; CASE REPORT

Odabasi Dolunay, Basel Halil, Akbayrak Hakan
Van Yuksek Ihtisas Hospital, Department of Cardiovascular Surgery, Van, Turkey

Its a case report of a 34 years old man who has Buerger's disease diagnosed angiographically totally occluded poplital artery. A proximal to distal popliteal bypass with sapheneus vein graft performed.

Fig 1. Preoperative anjiografic appearence of the lesion.

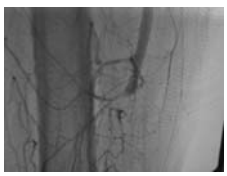
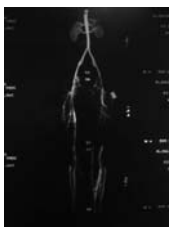


Fig 2. Postoperative MR anjiografic appearence of the operated lesion.



CVS-144 - EXTRACRANIAL INTERNAL CAROTID ARTERY ANEURYSM; CASE REPRT

Odabasi Dolunay, Basel Halil, Akbayrak Hakan
Van Yuksek Ihtisas Hospital, Department of Cardiovascular Surgery, Van, Turkey

The atherosclerotic extracranial carotid artery lesions are encountered so often but the aneurysms are less common. The aneurysms are usually located in the main carotid artery especially at the bifurcation, less commonly they are seen in internal carotid artery. In our case it's reported that an aneurysm located in extracranial segment of the internal carotid artery is explorated under general anesthesia. After resection the arterial patency is established with end to end anastomosis.

Fig 1. Preoperative anjiografic appearence of the aneursym.

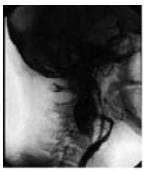
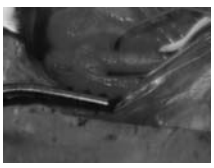


Fig 2. Intraoperative appearence of the aneursym.

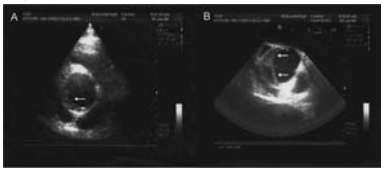


CVS-145 - AORTIC INTRAMURAL HAEMATOMA: A VARIANT FORM OF AORTIC DISSECTION

Sevimli Serdar, Islamoglu Yahya, Aksakal Enbiya, Bakirci Efdal Murat, Tas Hakan, Senocak Huseyin
Department of Cardiology, Ataturk University, Erzurum, Turkey

Aortic intramural haematoma (IMH) is characterised by absence of intimal tear and direct flow communication between the true and false lumen.
CASE: A 45 year old men was admitted because of chest pain with radiation to the back. On examination, blood pressure was 90/60 mmHg and pulse rate was 100/minute. The ECG was normal, as were myocardial enzymes and ventricular wall motion assessed by transthoracic echocardiography. An aortic dissection was then suspected; Transthoracic echocardiography showed a thickening of aortic wall at sinotubular junction (Figure 1A). The transesophageal echocardiography revealed an aortic intramural hematoma, characterised by thickening of the aortic root (Figure 1B). The haematoma extended for about 5 cm. A computed tomographic scan confirmed the dissection. The patient was referred for surgery.
CONCLUSION: Aortic intramural haematoma has become accepted as a variant form of classic aortic dissection. In contrast to classic dissection, IMH is characterized by hematoma within the wall of the aorta, which gives the aortic wall an appearance of focal thickening without a demonstrable intimal flap. IMH is classified as either involving (type A) or not involving (type B) the ascending aorta. The diagnosis of IMH mainly depends upon physician recognition of the disease. Bleeding into the aortic media may be self limiting, but may lead to classic dissection, as well as to rapid aortic dilatation or circumferential and longitudinal extension of the haematoma.

Figure 1



CVS-146 - ANALYSIS OF ETIOLOGY OF EMERGENCY EMBOLECTOMY OPERATIONS

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INTRODUCTION: In etiology, causes of occlussion are cardiac emboly, atheroemboly and acute arterial thrombosis.Location of emboly is frequently on bifurcation of vessel.
MATERIAL -METHOD: A total of 40 cases 21 female, 19 male, mean age 60 years, range 24-79 who underwent emergency embolectomy operation. Of these 40 patients, 29 cases have one side femoral thromboembolysm, 8 cases have bilateral femoral thromboembolysm and 3 cases have brachial artery thromboembolysm. Our patients were evaluated with transthoracic echocardiography and electrocardiography for find out etiology of thromboembolysm. All patient underwent embolectomy operation. Local anesthesia was used in all patients.100 IU/ kg/ day heparin was given to patients during perioperative period. There was no hospital mortality.
FINDINGS: Cardiac pathology was found in 28 cases, extra cardiac pathologyatherosclerosis (7 patients), Behcet disease(1 patient) and abdominal aort aneurysm(1 patient)) was found in 9 patients and there was not any reason in 3 cases in our study. Of these 28 cases, 13 cases have atrial fibrillation, 15 cases have atrial fibrillation and valve pathology. Embolectomy could'nt be reach success in 3 cases of all cases. 2 of these 3 patients underwent peripheral arterial bypass operation. Fasiotomy was performed in 4 cases. Below knee operation was performed in 2 cases(mean time 72 hours from embolysm). Dropping foot developed in 2 patients. Heparin and warfarin were given to patients during postoperative period.
RESULTS: WE conclude that number of patients with arterial embolysm increase day by day. Cardiac embolysm occurred in % 78 of patients with arterial emboly.

CVS-147 - ENDOVASCULAR APPROACH FOR KOMMERELL DIVERTICULE. HYBRID TEQNIQUE

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Aberrant right subclavian artery (RSA) is a rare anatomic variation. Aberrant right subclavian arteries occur in as much as 2% of the population. Aneurysms in this vessel are rare but exhibit a marked propensity toward rupture; therefore, early elective treatment is indicated. We described combined endovascular and surgical management (hybrid technique)of a complex aneurysmal aberrant right subclavian artery 67 -years old male patient who has a prior coronary by-pass surgery was admitted to the hospital with complaint of hemopthysis and cough. Chest X-ray was revealed upper mediastinal mass. Thoracic MRI was shown aeurysmatic dilation of an abberant right subclavian artery. Tracheal and esophagial compression were also detected. Carotid artery doppler USG was shown %90 obstruction on the right carotid artery.
At the first step right carotid artery endarterectomy was performed and two weeks after this operation ascending aorta-bisubclavian bypass (8 mm PTFE (GORE-TEX © vascular stretch graft with ring)) was performed via median sternotomy. And finally 42/100mm and 44/100mm EVAR grafts (Valiant thoracic stent graft, Medtronic©, Inc. Minneapolis MN) were implanted to the arcus and descending aorta. Ostiums of both subclavian arteries were occluded by the stent graft. After follow up period patient's complaints were regressed and we will take the control DSA in 3 months time for checking the postoperative status of aneurysms.
Combined endovascular and surgical (hybrid) approach is safe alternative for diverticulum of kommerell.

CVS-148 - A CASE OF MULTIPLE ASCENDING AORTA AND AORTIC ARCH THROMBI CAUSING SIMULTANEOUS CEREBRAL AND PERIPHERAL EMBOLISM

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INTRODUCTION: There are few reported cases of thrombus in the aortic arch. We report a case with aortic thrombus causing both cerebral and peripheral embolism.
CASE: A 62-year-old man was admitted with left arm ischemia and unconsciousness for 6 hours. On physical examination his left arm pulses were deficient and he was unconscious. He didnot have pathologic reflexes. He responded to the painful stimuli. CT angiography showed showed multiple ascending aortic and archus pedunculated thrombus (Fig1).
He was operated using right axillary artery cannulation. Under moderate degree hypothermia (28ºC) and selective antegrade cerebral perfusion oblique aortotomy extended to the lesser curvature of aorta was done. There were multiple pedunculated aortic thrombi adhered to the ascending aorta and arch. The aortic wall was not seen diseased as it was seen in the CT so the thrombi were evacuated (Fig. 2) and aorta was closed primarily. Antegrade cerebral perfusion time took 12 minutes under 800ml/min flow. Brachial embolectomy was done after aortic surgery. Histologic evaluation of the evacuated material revealed thrombus. Unfortunately the patient was lost on the second postoperative day due to sudden hypotension unresponsive to treatment.
DISCUSSION: Thrombi of the aortic arch are infrequent causes of systemic emboli. Atherosclerosis, dissection, trauma, malignancy, and coagulopathies, have been associated with aortic mural thrombi Intraluminal thrombus may be located in the ascending aorta, even without extensive atherosclerotic plaques. The presented case is the first case with both peripheral and cerebral embolism due to both ascending and archus aorta thrombi.

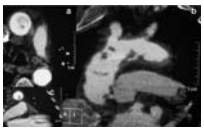
fig 1


fig 2

fig1: Axial (a), sagittal (b), and coronal (c) slab CT images created with MinIP shows multiple intraaortic thrombi.

fig2: View of evacuated aortic thrombi

CVS-149 - EXTRACTION OF AN ENTRAPPED GUIDE WITH MINIMAL INVASIVE TECHNIQUE

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INTRODUCTION: We in this study wanted to present extraction of an escaped guide in the inferior vena cava of a cardiac arrest patient in whom the guide had been entrapped in the lumen of inferior vena cava during subclavian catheterization.
CASE: An 81 year old man had the hospital brought to emergency service from another hospital due to acute myocardial infarction. Emergent temporary pace-maker had been inserted to right subclavian vein. All his vital signs had come back to normal, but it had been seen that the guide of subclavian catheter had been escaped to the vein lumen. Extraction of the guide with surgical exploration of right femoral vein was failed.
PROCESS: First of all right femoral vein was tried to be catheterized with seldinger technique for intervention however this attempt was failed. The both ends of guide were not captured with endovascular snare (EN Snare®-catheter, 6Fx100 cm) from left femoral intervention. Then the previously made incision was opened and the guide was introduced to the femoral vein. It was seen that right femoral vein was thrombosed via re-exploration of sutured right femoral incision. It was punctured to the fresh thrombosed vein politely with seldinger method. The end of guide was captured easily in the right iliac vein with a snare-catheter and was taken out of the vein (Figure1). We performed a successful guide extraction with endovascular snare without major surgical intervention like thoracotomy or retroperitoneal approach.


Figure 1
Endovascular snare technique

CVS-150 - INTRA AORTIC BALLOON CATHETER SHEAT INDUCE ISCHEMIC COMPLICATIONS

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AIM: In cardiac operations, intra aortic balloon pump (IABP) is the most useful for mechanical circulatory support device. The aim of our study is the vascular complication frequency from sheath and sheatless IABP catheter.
METHOD: From June 2005 January to April 2007 we used 32 IABP kateter in our clinic. All the catheter insersions were made from right or left femoral arter. The patients divided into two groups. Group 1; Catheter insersion with sheath and group II; Catheter insersion without sheath. In group one there are 14 patients and in group two there are 18 patients. Ischemic complications was seen in five patients. Four patients are in group two and one patient is in group one. We performed femoral embolectomy to these patients. Heparin anticoagulant therapy used for all patients which was followed with ACT during IABP.
CONCLUSION: Catheter sheaths have a thick diameter so it makes obstruction in the arterial lumen and makes more endotelial damage. In our retrospective study we see that catheter with sheath makes more vascular damage so we offer that it will be more safety when catheters used with sheatless.

CVS-151 - THROMBOLYTIC THERAPY IN THE TREATMENT OF THE RIGHT ATRIAL THROMBOSIS AND PULMONARY EMBOLISM

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A 22-year-old woman was operated caused by secundum type ASD four years ago. She was admitted to an institution with chest pain and palpitation symptoms during 2 months, and begun dyspne during 2 weeks. Transthoracic and transesophagial echocardiogram examinations, and cardiac magnetic resonance image were established in the right atrial thrombosis. This pattern was always associated with the echocardiographic signs of pulmonary hypertension. Also, pulmonary CT angiography showed multiple pulmonary embolisms in bilateral pulmonary artery. The thrombolytic employed in this case was recombinant tissue plasminogen activator (rt-PA) according to the following protocol: 10 mg in a bolus and 40 mg over 2 h, followed by 50 mg over 5 h, up in a total dose of 100 mg, associated with a bolus of 5000 units of heparin. Control echocardiograms were performed 12 h after the initiation of treatment and at 1-month follow-up. rt-PA determined the dissolution and disappearance of the right atrial thromboemboli. During and after the rt-PA therapy there was no evidence of further pulmonary embolism. Control pulmonary CT angiography showed normal pulmonary arteries. The fibrinolytic treatment for right atrial thromboemboli during multiple pulmonary embolisms is a promising alternative to right atrial thrombectomy: our result indicates that rt-PA acts rapidly and is effective and safe. If these results will be confirmed in a larger group of patients; rt-PA could become the first-choice therapy of right atrial thromboembolus.

CVS-152 - DIAMOND ANASTOMOSIS TECHNIQUE FOR FISTULA CREATION IN HEMODIALYSIS PATIENTS

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Appropriate long term intravenous access is very important in hemodialysis patients. Autogenous access is usualy prefered in these patients. There are various techniques for providing autogenous access in hemodialysis patients. The aim of this study is to assess the results of our diamond anatomosis technique in patients with chronic renal insufficiency. The patency rate of 16 randomly chosen cases for whom the diamond anastomosis technique was applied to were 88 % in the early period.
Maintaining the patency of the arteriovenous fistula during the early postpoperative period is crucial for the fistula to function. The patency during the early postoperative period was maintained in a vast majority of the patients in our series. Diamond anastomosis technique is a simple procedure, can be applied to all cases and it also contributes to the patency in early postoperative period.

Figure 1

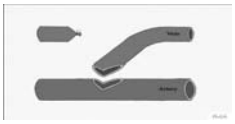

Figure 2

Figure 1: Schematic diagram of end to side arteriovenous fistula creation with diamond technique. The vein is distally ligated with proximal vertical venotomy. Arteriotomy is done in the diamond shape as described in the literature.

Figure 2: Intraoperative appearance of the diamond technique radiocephalic anastomosis just before the skin closure.

CVS-153 - SUBFASCIAL ENDOSCOPIC PERFORATOR VEIN SURGERY (SEPS) USING STANDART ENDOSCOPIC BALLOON DISSECTOR

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Subfasial endoscopic perforator vein surgery (SEPS) has recently been a popular in the treatment of severe venous insufficiency of the lower extremity.
Three male patient underwent SEPS procedue from February 2007 to March 2007. Two limbs were classified as C6 (active ulcer) and 1 as C4 (lipodermatosclerosis). The SEPS via two ports and using standart balloon dissector for endoscopic surgery (50 ml) instead of 240 ml space maker balloon. Carbon dioxide insufflation and titanium endoclip was used.
Chronic venous insufficiency scores significantly decreased after surgery. There was no problem during the follow up period (mean 3 months). This surgical procedure was safe, efficient and also cost effective

Standart endocopic surgery balloon dissector

CVS-154 - DOES STERNAL RETRACTION CAUSE INJURY AT THE ORIGIN OF SUBCLAVIAN ARTERY DURING OPERATIONS WITH MEDIAN STERNOTOMY?

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Case 1. A 67-year-old man presented with complaints of increasing angina pectoris and coldness of her left arm for 1 month. Six months ago, he had undergone triple coronary artery bypass grafting (CABG) including left internal mammary artery (LIMA) to left anterior descending artery (LAD) and two saphenous vein grafts to the diagonal branch of LAD and obtuse marginal branch of the circumflex artery. Coronary angiography revealed that contrast media injected into the saphenous vein graft coursing down the diagonal branch flowed up to LAD and drained into the LIMA opacifying the left subclavian artery. Arch angiography documented a total occlusion of the left subclavian artery. After a guidewire was passed through total occlusion, 4X23mm stent was implanted to subclavian artery. After operation, the symptoms disappeared and blood pressure in her left arm recovered.
Case 2. Median sternotomy will be performed on healthy and 6-years old sheep by endotracheal intubation and general anestesia. Retraction for 1/3 distal part of the sternum was done by sternal retraction placement. After this procedure, high sternal retractor placement with excessive opening and sternal retraction for internal mammary artery harvest was performed. Arterial pressure was measured continously throughout the procedures. Brachial artery blood pressures significantly were reduced at each measurement. And finally, specimens were taken from at the origin of subclavian artery for microscobic study.
CONCLUSION: Today the use of LIMA as a conduit to revascularize the LAD has become a standardized procedure. As the use of LIMA grafts has increased progressively, LIMA graft malfunction has emerged as an important clinical problem. Coronary subclavian steal syndrome results from proximal subclavian artery occlusive disease, causing reversal of flow in an internal mammary artery used as a conduit for coronary artery bypass leading to myocardial ischemia. The incidence of a critical stenosis or occlusion of the subclavian artery was reported in 0.2% to 5.3% of patients after CABG. Median sternotomy with sternal retraction has been thought to produce brachial plexus injury, especially after high sternal retraction placement with excessive opening. Generally, atherosclerosis has been known to cause these stenoses. However, in the light of this knowledge and our study, the mechanism of stenosis might be occurred by over or upper sternal retraction which produces an injury at the origin of subclavian artery.

subclavian artery and LIMA after stent implantation

total oclusion of subclavian artery

SURGICAL TREATMENT OF TRAUMATIC CARDIOVASCULAR INJURY

CVS-155 - MITRAL VALVE REPAIR FOR SEVERE MITRAL VALVE DEFICIENCY CAUSED BY TRAUMATIC MITRAL CORD RUPTURE

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Blunt toracoabdominal traumas are frequently caused by high velocity motor vehicle accidents or falling from height and the clinical spectrum may vary from myocardial contusion to valve rupture. Intracardiac valvular injury is rarely observed with this type of trauma. Few cases have been reported in the literature. Youngest of the reported cases was 6 years old. Here we report a 2.5 years old child, who suffered from isolated mitral valve insufficiency due to posterior mitral papillary muscle rupture which developed after a domestic accident.

Fig. 1

Fig. 2

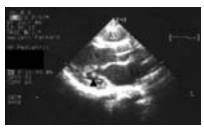

Fig. 3

Fig. 4

Fig. 1: Preoperative left intra-atrial appearance of papillary muscle, arrowhead.
Fig. 2: Preoperative appearance of ruptured papillary muscle, arrowhead.
Fig. 3: Preoperative appearance of mitral insufficiency on color Doppler, arrowhead
Fig. 4: Doppler appearance of postoperative minimal mitral insufficiency, arrowhead.

CVS-156 - POSTOPERATIVE DIAGNOSIS OF AORTO-RIGHT VENTRICULAR OUTFLOW TRACT FISTULA CAUSED BY STAB WOUND: A CASE REPORT

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Traumatic aorto-right ventricular fistulas are rare lesions after penetrating thoracic injuries. Although aorto-right ventricular fistulas are well tolerated initially, most of them result in heart failure over a variable period. Early diagnosis and prompt surgical intervention are required to avoid the natural outcome of cardiac decompensation.In this abstract, we report a case of Ao-RV fistula after a stab wound that was diagnosed on the second day after the first successful surgery.
A 27-year-old man was admitted to our hospital because of a stab wound to the left parasternal region. The patient was semiconscious with a blood pressure of 70/40 mm Hg and heart rate of 150/min. No thrill or murmur was appreciated over the precordium. There was sinus tachycardia onthe electrocardiogram. Pericardial effusion that leads to cardiac tamponade was noticed on transthoracic echocardiography (TTE). The patient was taken to emergency operation and a hemopericardium was released and a perforation of RV was successfully repaired without using cardiopulmonary bypass.Two days after surgery, a thrill along the RV outflow tract was palpated and a grade 4/6 continuous murmur was heard on routine cardiac auscultation.A fistula between the Ao and RV outflow tract at the level of right coronary sinus was demonstrated by TTE and transesophageal echocardiography (TEE) (Fig 1).No additional valve injury or regurgitation was detected.The aortography confirmed the presence of fistula and shunt from Ao to RV (Figure 2). No coronary artery injury was detected on coronary angiography.Although an early reoperation to repair the fistula was planned, the patient refused a second surgery.
Once Ao-RV fistula is detected, early surgical repair is recommended to prevent cardiac decompensation and endocarditis.No case has been reported about spontaneous closure of Ao-RV fistula. There is a propensity for the shunts in Ao-RV fistulas to remain open and increase in magnitude over time.For this reason early diagnosis and early surgery is significant.The diagnosis of the fistula by TTE and TEE in our case could have been set on the second day of admittance, which is a relatively early diagnosis.The development of a continuous murmur in the setting of penetrating chest traumaas in our case requiresthorough investigation.Therefore, TTE and TEEare very useful for evaluating residual lesions in these patients.5 However, TEE with color flow.In conclusion,Patients sustaining penetrating cardiac traumas should be examined by preoperative, intraoperative, or perioperativeTTE or TEE for probable intracardiac shunts. If not, the patients should be closely followed up after first urgent surgery for probable intracardiac defects.

CVS-157 - SURGICAL MANAGEMENT OF A PATIENT WITH SUBCLAVIAN AND AXILLARY ARTERY INJURY DUE TO BLUNT TRAUMA

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PURPOSE: Subclavian and axillary artery injuries account for less than 5% of all vascular injuries. Blunt trauma occurs less than penetrating trauma in subclavian and axillary artery injuries but it is usually more morbid.
METHODS: A 52 year-old male was admitted to our clinic due to right upper extremity ischemia following blunt traction trauma as a result of traffic accident. Axillary, brachial and distal arterial pulses were nonpalpable. There was both motor and sensory deficit in the extremity. Angiography and doppler USG revealed a trombotic segment and dissection in distal portion of the subclavian artery.
The right subclavian and axillary arteries were exposed through supraclavicular and infraclavicular insicions. The subclavian vein was intact but subclavian artery was thrombosed and dissected in the distal portion. Brachial plexus was completely avulsed at the root level. We performed subclavian – axillary artery bypass with a 6 mm syntetic polytetrafluoroethylene (PTFE). In the postoperative fist day, we performed brachial embolectomy due to ischemia.
RESULTS: Permanent neurological deficits developed due to brachial plexus damage in postoperative period. Neither mortaliy nor extremity amputation developed. Patient was refered to the orthopaedics and plastic surgery departmants 15 days later.
CONCLUSIONS: We think that, In extremity artery injuries following trauma, patients should be transfered to vascular surgery clinics as soon as possible. Multidisciplinary management and early surgical treatment may save both extremity and life in these patients.

CVS-158 - AORTO-RIGHT VENTRICULAR FISTULA DUE TO PENETRATING CARIDAC INJURY

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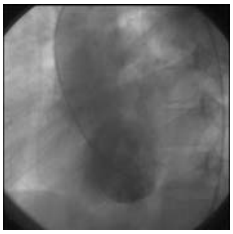
Aorto-right ventricular fistulas due to traumatic cardiac injury are rare compliacations. It can be result by congestive heart failure when it did not diagnosed and treated earlier. Our case was emergently went to the operation and we controlled left atrial bleeding due to penetrating cardiac injury by primary suturation. He discharged but we diagnose an aorto-right ventricular fistula at his postoperative controls. 84 days after aorto-right ventricular fistula repaired by using CPB with open heart surgery succesfully.

Figure1: Angiographic aorto-pulmoner transient



CVS-159 - CORONARY ARTERY FISTULA DUE TO PENETRATING SHARP OBJECT -CASE REPORT

Kocogullari Cevdet Ugur[1], Emmiler Mustafa[1], Saglam Hayrettin[2], Ayva Ercument[1], Sasirtan Taner[1], Eren Naim[1], Cekirdekci Ahmet[1]
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[2]Department of Cardiology, Afyon Kocatepe University, Afyon, Turkey

17 years old man admitted to emergency department with right hemitorax due to penetrating sharp object injury. Clinical examination charectarized by blood pressure: 70/40 mmHg, heart rate: 120/min, and unconscious. There was active hemorrhagia at right hemitorax injury zone. The patient was taken to the operating room by the Department of Thoracic Surgery with the prediagnosis of right sided lung injury. In the operation there was massive hematoma in right hemitorax but active hemorrhagic focus could not be found. In the operation 0,5x0,5 cm. diameter penetrating injury was observed at the right side of pericardium. With the observation of the active hemorrhagia from that side, our department was wanted to consult the patient. We opened pericard, observed massive hematoma, active hemorrhagia from right coronary artery. There was a wide defect at the right coronary artery. Aorto saphenose greft is made to the distal portion of right coronary artery injury zone by beating heart (with Octobus 4 cardiac stabilizator). Defect zone is closed with primary suturing. The patient without any problem was externed five days later the operation. After 1 month the patient admitted our polyclinic with angina pectoris. In his echocardiography coronary artery fistula to the right ventricle was determined. The coronary angiography revealed the definitive diagnosis of fistula to right ventricle from the defect zone. Coronary artery fistula closed with coil under floroscopy.

CVS-160 - PENETRATING CARDIAC INJURY

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Six patients who were admitted to the emergency service of Izmir Egitim Hospital(n=4), Izmir Tepecik Egitim Hospital(n=1) and Ege University Hospital(n=1) between 2002 and 2007 and who were operated on with the diagnosis of penetrating heart injury were evaluated retrospectively in this study.
Five of the six patients was men (83,3%) and only one patient was woman (16,7%). The mean age of patients was 23,8. Five patients had stab wounds and the other had gunshot wounds.
All of the patients were hypotensive deeply and they were operated immediately. Median sternotomy was performed in emergency room for one patient. All patients had pericardial tamponade. There is no need for cardiopulmonary bypass. The right ventricle was injured in 3 patients, left ventricle in 2 and right atrium in the other one. Distal part of the Circumflex OM1 artery was injured in one of the left ventricle injured patients. None of the patients had major vascular injury. Mediastinitis developed in 2 patients. One patient died (16,7%) during operation.
It is concluded that low mortality rate in this report was associated young age, pericardial tamponade and only one chamber injury in all patients.

cardiac injury

ANESTHESIA IN CARDIAC SURGERY

CVS-161 - IS GENERAL ANAESTHESIA A RISK FOR MYOCARDIUM? EFFECT OF ANESTHESIA ON MYOCARDIAL FUNCTION AS ASSESSED BY CARDIAC TROPONIN-I IN TWO DIFFERENT GROUPS (ISOFLURAN + N2O INHALATION AND PROPOFOL+ FENTANYL IV ANESTHESIA)

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BACKGROUND AND OBJECTIVES: Peroperative myocardial infarction (MI) is the most common cause of morbidity and mortality. What is the role of general anaesthesia in this process? Is general anaesthesia a risk for myocardial infarction? The present study was designed to determine whether the measurement of serum levels of cardiac troponin I (cTnI), a highly sensitive and specific marker for cardiac injury, would help establish the diagnosis of myocardial infarction in two different types of anaesthesia.
METHOD: Elective abdominal hysterectomy was planned with the permission of the ethic committee in 40 patients who were 20-45 years range, in ASA-I group, and have Goldman cardiac risk index-0. The patients were divided into two groups. Isoflurane+N2O was administrated to first group, and Propofol+Fentanyl to second group. cTnI levels were determined before anaesthesia, after induction before surgery and 9 hours after the second period respectively.
RESULTS: There was no significant difference between the groups by the means of demographic properties, hemodynamic parameters and cTnI levels, and the cTnI levels were determined under the basal levels in all samples.
CONCLUSION: General anaesthesia is not a risk for myocardial infarction to state eliminating risk factors and protection hemodynamia cardiac.

CVS-162 - VERY EARLY EXTUBATION IN PEDIATRIC CARDIAC SURGERY

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[2]Behcet Uz Children Hospital, Cardiology Department, Izmir, Turkey
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Background: The concept of early extubation after pediatric cardiac surgery is not new. In recent years, there have been several articles that examined the practice of early extubation. The term of "early extubation" may have included extubation up to 6-8 hours in these studies. The aim of this report was to evaluate the results of the very early extubation (within 3 hours postoperatively) in 153 consecutive pediatric patients who undergone cardiac surgery.
METHODS: To evaluate the role of very early extubation on outcome, retrospective data were collected from hospital records.
RESULTS: 153 consequtive pediatric patients underwent cardiac surgery from January 2004 to December 2006 with a median age 39.8±39.9 months (10 to 210 months). 151 very early extubation was accomplished in 98.7% of the patients. Extubation time ranged 15 to 180 minutes with a median duration 101.27±61.9 minutes. No patient required reintubation. There was no hospital death. Two children required mechanical ventilation more than 6 hours (because of postoperative bleeding in one patient and hemodynamic instability in the other).
CONCLUSIONS: Very early extubation of patients is possible in most pediatric patients who undergone cardiac surgery related to not only simple pathologies, but also complex cardiac anomalies. These acceptable results suggest that very early extubation may be safe for pediatric patients.

CVS-163 - PERIANESTHESIA CARE OF CARDIAC SURGERY PATIENT: A REVIEW

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Postoperative nursing management of cardiac surgery patients is considered part of perianethesia nursing core curriculum by American Society of Peianesthesia Nurses. Although cardiac surgery patients bypass the postanesthesia care unit many hospitals, content on postanesthesia care is included on the nursing exams. Many PACU nurses are unfamiliar with the immediate postoperative routine and nursing care regimen of cardiac surgery patients.
Consequently perianesthesia nurses who do not routinely care for this patient population need to review how to prepare for the immediate postoperative period; the principles of hemodynamic monitoring; and the potential causes, recognition, prevention, and management of common immediate postanesthesia complications.
In this review, bleeding, cardiac tamponade, low cardiac output syndrome and dysrhythmias are discussed. Postoperative nursing management are also presented. Perianesthesia care of cardiac surgery patient should ensure the improvement of clinical outcomes.

CVS-164 - STERNAL REVISION WITH HIGH THORACIC EPIDURAL ANESTHESIA; CASE REPORT

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In this case report we intended to emphasize sternal revision operation with High Thoracic Epidural Anesthesia in patients with accompanied pulmonary disease; and the length of stay in intensive care unit without entubation.

Fig 1. Sternal revision operation managed patient with HTEA.

CVS-165 - MEASUREMENT OF URINARY OXYGEN PRESSURE TO MONITOR RENAL FUNCTION DURING OPEN HEART SURGERY

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INTRODUCTION: Patients who undergo open heart surgery are at risk of developing post-op acute tubular necrosis and renal dysfunction due to renal hypoperfusion during cardiopulmonary bypass. The goal of this study was to evaluate the value of urinary oxygen pressure (PUO2) measurements in monitoring renal function during open heart surgery.
METHODS-MATERIALS: In this study, 120 patients who were candidates for open heart surgery (coronary grafts or valvular surgery) were selected randomly. Urine samples were taken from the patients before, during and after the operation to measure PUO2. Patients' serum BUN and creatinine were also measured before and after the operation. After collecting the data, statistical analysis (Tuky's, Dunnet, Chi-square and t-test) was done using SPSS 11.5. P values less than 0.05 were considered statistically significant.
RESULTS: Patients were divided into three groups according to their PUO2 changes. Patients in different groups did not have statistically significant differences in age, sex, height, weight, type of operation and minimum rectal temperature. In first group (n=65) there was 11±4 mmHg increase in PUO2. In second group (n=13) there was no change in PUO2. In third group (n=42) there was 25±5 mmHg decrease in PUO2. Patients in group 3 had statistically significant post-op decrease in urinary output as well as increase in serum BUN and creatinine comparing to groups 1 and 2.
CONCLUSION: According to obtained results, measuring PUO2 is a non-invasive and inexpensive method of monitoring renal function during operation which can predict the risk of post-op renal dysfunction.

CVS-166 - EFFECTS OF HYDROXYETHYL STARCH 6% 130/0.4 (VOLUVEN), HES10% 200/0.5 AND RINGER USAGE FOR PRIMING SOLUTION ON iNFLAMMATUARY RESPONCE AND MORBIDITY IN EXTRACORPOREAL CIRCULATION

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OBJECTIVES: Extracorporeal circulation is one of the most important invention of modern medicine which induce open heart surgery possible. In extracorporeal circulation blood and ingredients of blood contact with given solution and artificial surfaces. After extracorporeal circulation coagulapathies and important pathological changes in cardiac, pulmonary, renal and cerebral functions. Also systemic diferentiations as fever, increased capillary permeability, increased interstitial fluid collection and leucocytosis reported. In this study Ringer, HES %10 200/0.5 and HES %6 130/0.4 solutions with different osmolarity used in priming solution to search their effect on renal function, post operative bleeding, blood replacement and PT, aPTT, INR, Complement and CRP levels.
METHODS: We studied on 45 patients undergoing coronary artery bypass surgery at Dokuz Eylul University Faculty of Medicine Department of Cardiovascular Surgery between dates 07.09.2005-17.04.2006. Patients divided into three groups. Priming solution in control group prepared with Ringer solution and in experimental groups with 1000cc HES 10% 200/0.5 AND HES 6% 130/0.4 solutions. Also priming solutions consisted of mannitol 20% 3ml/kg BW, sodium bicarbonate 30 mEq, potassium chloride 10mEq and magnesium sulphate 10mEq. Blood samples for CRP, C3, C4 were obtained: (1)after intravenous heparin (3mg/kg) administration before CPB; (2) after CPB; (3) two hours after CPB and (4) four hours after CPB from radial arteriel line. Also we measure 24 hours drainage and amount of blood usage, preoperative and postoperative 24'th hour CBC, PT, aPTT, INR, BUN, Creatinin levels. Blood samples for plasma colloid oncotic pressure were obtained: (1) after induction of anesthesia before skin incision; (2) 15 minute after the onset of CPB following cardioplegic cardiac arrest; (3) before weaning from CPB; (4) two hours after CPB and (5) four hours after CPB. Also we measured postoperative extubation time.,
FINDINGS: In our study statistically important difference between Ringer, 6% HES 130/0.4 and 10% HES 200/0.5 groups according to age, sex, height, body surface area, body weight, diabetes mellitus, hypertension, myocardial infarction, ACC, CPB, drainage amount (cc), extubation time (hour), intensive care period (day), number of anastomoses and CRP did not find. C3 level of blood which was taken at the end of CPB in 10% HES group was found lower from ringer group ($p<0.05$). Also four hours after end of CPB C3 level was lower in 10% HES 200/0.5 group then %6 HES 130/0.4 group ($p<0.05$)
RESULT: Ringer, 6% HES 130/0.4 and 10% HES 200/0.5 solutions are reliable solutions for mortality and morbidity as prime solution. In 10% HES 200/0.5 solution of these three solutions; C3 levels at the end of CPB and four hours after CPB found significantly lower than ringer and 6% HES 130/0.4 solutions. And this shows that compleman activation in this group possibly higher than others.

Intraoperative and postoperative variables

	ACC	CPB	Drainage(cc)	Extubation time/h	Intensive Care time/d	Anastomose	Blood/ unit
I(Ringer)	56.00	98.80	773	12.13	2.67	3.47	2.20
II(HES 10%)	61.13	109.67	1373	13.73	2.47	3.80	3.73
III(HES 6%)	56.33	100.40	850	8.26	1.4	3.53	2.4
Total mean value	57.82	102.76	1018.8	11.38	2.18	3.6	2.78

ACC:Aortic Cross Clamp time (minute) CPB:Cardio pulmoner by pass time (minute)

C3 levels

	I(Ringer)	II(HES 10%)	III(HES 6%)	Total mean value
C3-a	94.60	92.76	107.03	98.13
C3-b	70.12	54.98	63.67	62.86
C3-c	73.86	66.33	80.20	73.46
C3-d	86.96	80.03	93.72	86.90

CVS-167 - PERIOPERATIVE USE OF ULTRAFILTRATION IN PATIENTS WITH CHRONICAL RENAL FAILURE DURING OPEN HEART SURGERY

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AIM: Chronic renal failure patients who undergo open heart surgery have high morbidity and mortality rates in the postoperative period because of volume loading and electrolyte imbalance in this study. We performed perioperative hemodiafiltration in our patients with chronic renal failure during open heart surgery and aimed to present our clinical results.
METHOD: This is a retrospective study including 15 open heart surgery patients who were on the regular dialysis schedule before the operation. Mean age was 59. F/M = 3/12. Distribution of the operations were 13 CABG, 1 MVR and 1 AVR. Ultrafilter was tied on arterial line of pump and was used along with CPB. Mean withdrawed ultrafiltrate fluid was 3800 ml.
RESULTS: Mean cross clamp time was 83 min. Postoperative mean drainage was 725 ml/day. Cardiac tamponade occured in 1 patient, 2 had superficial wound infection and 1 patient had postop pnomonia. Mean extubation time was 12h. Intensive care staying time was 4 days. Hospital staying time was 12.0 days. Mean number of blood transfusion was 4U. Hemodialysis was achieved in 1 of the patients (% 6.66) postoperative 1st day, in 4 of them (% 26.66) postoperative 2nd day, in 7 of the patients (% 46.66) postoperative 3rd day, in 2 patients (% 13.33) postoperative 4th day. Mortality was seen on 2 patients (% 13.33) who were performed CABG in the early post operative period and 1 (% 6.66) patient who was performed CABG dead on postoperative 10th day.
CONCLUSION: Surgery mortality rates, postoperative wound healing and systemic infection rates are acceptable belonging to administration of ultrafiltration during open heart surgery. Extubation time, intensive care staying time and hospitalization times are almost standart rates.
DISCUSSION: The patients of chronic renal failure have high rates of surgical morbidity and mortality due to coagulation disorders, sensitivity to infections, elongation of extubation time caused by late excreation of anesthetic drugs, volume loading and electroyte imbalance.We believe that performing hemofiltration during CPB supports to keep surgical morbidity and mortality in acceptable rates. However, the implementation of beating heart in coronary bypass surgery is most preferable operation in patients undergoing chronic dialysis (1).
Referance:1. Ariyoshi T, Eishi K, Yamachika S, et al. Perioperative and mid-term results of coronary bypass surgery in patients undergoing chronic dialysis. Ann Thorac Cardiovasc Surg 2006; 12:257-64.

THORACIC AND CARDIOVASCULAR SURGERY: VARIOUS ASPECTS

CVS-168 - EARLY AND LATE NEUROLOGICAL COMPLICATIONS FOLLOWING HEART TRANSPLANTATION

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Immunsupressive therapy should be maintained within normal ranges delicately. Thus, agents including cyclosporin, azathiopurine and prednol are used in many centers. However, therapeutic options involving conversion of immunsupressive agents from one to another is currently being performed in order to avoid adverse effects associated with these agents and to provide an effective immunsupressive treatment. The most common adverse effects associated with cyclosporin are renal and neurological consequences.
Among 52 heart transplantations cases performed between 1989 and 2007 in our hospital, we aimed to report three cases in which neurological complications developed following heart transplantation.
Case 1: 29 years old male underwent heart transplantation in 2001 presented with numbness, tingling and loss of motion in left hand. The patient had presented with left hemiparesia in 2004 and 2006 and in order to clarify these repetitive hemiparesia attacks, cranial magnetic resonans imaging study and upper extremity and cranial vascular MR angiography imaging studies were performed and no anomalies were observed about vascularity. Cranial MR findings showed lesions in right frontal region suggesting encephalomalasia and an area of perifocal gliosis and no other pathological findings to explain the symptoms were observed.
Case 2: 35 years old male underwent heart transplantation in March 2007 developed neurological signs including convulsions, agitations and blurred conscious on the first day after operation. Conscious status was deteriorated progressively and the patient was followed up with mental confusion subsequently.
Case 3: 27 years old male underwent heart transplantation in February 2007 developed repetitive attacks of status and tonic-clonic generalised convulsions while hemodynamically stable. The convulsions were treated with epanutin. Afterwards, delirium occured and the agitations followed by deep mental confusion.
Case 2 and 3's Glascow coma scale score was under 5 during the follow up.MMF treatment started and cyclosporine level was reduced. Finally, all three cases treated with prolonged rehabilitation, anti-depressant therapy and by regulation of cyclosporin levels and discharged with full recovery of neurological symptoms.

CVS-169 - THE EFFECT OF OBESITY ON BODY IMAGE SENSATION

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The aim of this study is to evaluate the effect of patients who presented to the polyclinic of obesite in Mugla General Hospital, obesity on body image sensation. Of these 61 patients, 41 were women and 20 were man. The weigh and height of the patients were measured, body of body image were calculated and the effect of obesity on body image sensation from the scala obesity, the data of sociodemographic factors are collected.
As a result; % 44,3 of obese patient were aged between 30 – 44 and % 67,2 were women. % 65,6 had three or more siblings, % 65,6 were actively worker, % 63,9 were obes for 2- 10 years; % 67,2 were a member of a nuclear family; % 44,3 were living in an urban; % 67,2 were married; %34,4 were graduated from high school. Ased on their body mass indexes, %95,1 were obes and % 4,9 were morbid obes. The approximate of body image points of these obes patients were 137 +/ - 16,81 and the sensation of their body image were good. To reduce the incidance, to determine the etyologic factors and to expedience, more expanded studies are seems to be needed.

CVS-170 - A SERIOS COMPLICATION DUE TO PULLING OF THE TEMPORARY EPICARDIAL PACEMAKER:

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The fixation and pulling of the temporary epicardial pacemaker in the open heart surgery is done routinely in many center. Some complications can occur during these procedures. The most serious of these complications are hemorrhagia, and cardiac tamponade due to this hemorrhagia.
CASE REPORT: The period of intensive care unit and service follow up without any problem after coronary artery bypass surgery, the patient's pacemaker wire was pulled of without any resistance one day before charge. One hour later of this procedure orthostatic hypotension and dispnea had occured and suddenly the patient's clinical status became bad. Chest radiography showed left hemotorax and pericardial tamponade in echocardiography was determined. The patient immediately taken to operating room, in the exploration active hemorrhagia observed from the pacemaker wire zone at epicardium of right ventricle, and primarily repaired. Postoperatively the hemodynamics improved, and the patient externed healthy at the fourth day of reexploration.
RESULT: There is no consensus between all cardiac surgery clinics performing routinely epicardial temporary pacemaker about the fixation side, number,and the date of pulling of the wire postoperatively. If the complications after pulling of the wire does not be awared of in a short time period, it should not be forgetten that these complications can change the succesfull perioperative period to a nightmare.

CVS-171 - TEMPORARY PACING AS A CAUSE OF VENTRICULAR RUPTURE WITHOUT PERICARDIAL TAMPONADE

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A 71-year-old man was admitted because of severe chest pain and syncope. His ECG showed hyperacute ST-segment elevation in leads **II**, **III** and complete atrioventricular block with a heart rate of 38 beats/min. He was hospitalized and a transfemoral temporary pacemaker was inserted immediately via the right femoral vein under direct fluoroscopy. Coronary angiography revealed severe multivessel disease. The patient experienced severe chest pain with cardiogenic shock after insertion of the pacemaker. X-ray showed a temporary endocardial pace lead out of the heart contour (Fig.1). An intraaortic balon pump was inserted and he underwent emergency open heart surgery. A milimetric defect was observed in the right ventricle free wall and the pacemaker electrode could clearly be seen extruding from the defect (Fig 2). There was no pericardial tamponade. Surgical repair of the right ventricular free wall was done with subsequent coronary revascularization. A epicardial temporary pacemaker was later inserted without further complication. After surgery, the sinus rhythm returned. Right ventricular perforation is reported to be a rare complication of pacemaker insertion, and when present, the main problem is most often related to pacing failure and cardiac tamponade. The unique feature of our case is that, there was no pericardial tamponade despite ventricular free wall perforation.

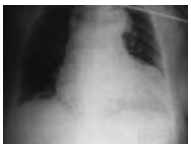 Fig.1

 Fig.1

Fig.1: Preoperative x-ray showing a temporary endocardial pace lead out of the heart contour.

Fig.2: Intraoperative images showing a right ventricle free wall rupture due to extrusion of the transfemoral temporary pacemaker electrode.

CVS-172 - THORACOSCOPIC EXCISION OF BRONCHOGENIC CYST IN THE PARAVERTEBRAL SULCUS

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Para vertebral lesions are commonly caused by neurogenic tumours, neurogenic cysts and secondaries. We describe a bronchogenic cyst presenting as a rare cause of paravertebral lesion and its successful excision by video assisted thoracoscopy

CASE REPORT: A 58-year old woman was referred for surgical consideration for excision of a Para vertebral mass. Clinical examination did not reveal any abnormal findings. CT scan demonstrated a 3 x 4.5 x 5cm elliptical left para-spinal soft tissue mass with smooth outline abutting descending thoracic aorta at the level of T10-T12. MRI scan ruled out an intra–spinal communication.

SURGICAL TECHNIQUE: Under general anaesthesia in right lateral position and single lung ventilation Left Video assisted thoracoscopy was performed with three ports. This revealed a 3 x 5 cm mass wedged between the diaphragm and pericardium below the inferior pulmonary ligament. The mass was soft with a solid element at its superior pole. Aspiration of the mass revealed pus hence the capsule was opened, 200ml of pus was drained and the abscess cavity was excised. Recovery was swift and uncomplicated. She was discharged home on the third post operative day. Histology revealed the lesion was a bronchogenic cyst.

DISCUSSION: Bronchogenic cysts are closed sacs created by abnormal budding of the respiratory system. They are commonly classified using Maior classification based on their site as paratracheal, subcarinal, hilar, paraoesophageal and miscellaneous.

Our case is particularly interesting because it discusses the thoracoscopic excision of a para vertebral bronchogenic cyst.

 CT SCan of Chest

CVS-173 - VIDEO ASSISTED THORACOSCOPIC ENUCLEATION OF OESOPHAGEAL LEIOMYOMA WITH ENDOSCOPIC ASSISTANCE

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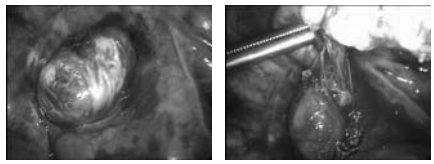
INTRODUCTION: We describe an interesting case of oesophageal leiomyoma resected by Video assisted thoracoscopy with oesophagoscopic assistance and guidance.

CASE: A thirty six year old asian female was referred for surgical evaluation with symptoms of general tiredness with a history of exposure to tuberculosis. The Chest X Ray showed of loss of paratracheal stripe on the right side and The CT Scan confirmed a mediastinal mass in the paratracheal and subcarinal region more on the right side. Clinical examination was normal.

She underwent a Right VATS inspection which revealed a firm paratracheal mass which dissection was found arising from the oesophageal wall. The characteristic appearance were that of a oesophageal leiomyoma. An on table oesophagoscopy was performed which confirmed the presence of the leiomyoma. The oesophageal muscles were split and the leiomyoma was dissected taking care not to injure the mucosa of the oesophagus. We then used the oesophagoscope to guide our dissection by illuminating the site of the mucosa from inside the oesophagus and to provide guidance of the mucosal limits. The leiomyoma was excised in total and the surgery was uneventful.

The patient had an uneventful recovery with her drains removed on day two and was discharged home on day three.

COMMENT: VATS Enucleation of Oesophageal Leiomyoma is well supported and augmented by peroperative oesophagoscopy to guide the surgeon with regards to the mucosal integrity during dissection.



Leiomyoma
The light from Oesophagoscope guiding the excision by demonstrating mucosal integrity

CVS-174 - VIDEO-ASSISTED THORACIC SURGERY IS EFFECTIVE TREATMENT OF THE FIRST EPISODE PRIMARY SPONTANEOUS PNEUMOTHORAX

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STUDY OBJECTIVE: Is video-assisted thoracic surgery (VATS) is effective treatment of the first episode primary spontaneous pneumothorax (PSP).

SETTING: Department of Cardiothoracic Surgery, Suez Canal University hospital.

PATIENTS AND METHODS: During the period from January 2000 to January 2004, Eighty patients with PSP were admitted in our cardiothoracic surgery department. Group (A) 40 patients were treated by pleural drainage or observation. Group (B) 40 patients were treated by VATS. Patients with known underlying pulmonary disease were excluded. The following variables were recorded in both groups: age, sex, smoking, complications, drainage time and hospitalization time.

RESULTS: Patients characteristics were similar in both groups.The complication rate in Group A (30%) was significantly higher than in Group B (20%) ($p=0.05$). Drainage time of patients in Group (A) was significantly longer compared to patients in Group (B) ($p<0.0001$). Hospitalization time was significantly longer in Group (A) compared to Group (B) ($p=0.03$).

CONCLUSIONS: Video-assisted thoracoscopy is a valid alternative to open thoracotomy for the treatment of spontaneous primary pneumothorax. Thoracoscopy for the first episode of PSP is safe, effective, and cosmetically excellent with less morbidity and total costs as compared to conservative therapy.

CVS-175- THORACOSCOPIC SYMPATHECTOMY AS A TREATMENT FOR PALMAR HYPERHIDROSIS

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BACKGROUND: Hyperhidrosis can cause significant professional and social handicaps. Thoracic endoscopic sympathectomy has become the surgical technique of choice for treating intractable palmar hyperhidrosis and is usually considered as a simple and safe procedure. A retrospective study was undertaken to determine the effectiveness of this procedure.
METHODS: Between January 2003 and December 2004, 30 consecutive patients were operated on for palmar hyperhidrosis. There were 12 men and 18 women, ranging in age from 18 to 40 years (mean 29 years). In all cases, the procedure was bilateral. The procedure was performed in one stage in all patients. All patients were seen 1 month and follow-up to one year after the operation.
RESULTS: Successful sympathectomies were performed in 100 % of the patients; the follow-up was from 1 to 12 months (mean 6 ± 3.4 months). There was no recurrence of palmar hyperhidrosis. No Horner's syndrome was reported. No mortality or serious complications were observed, nor the need to convert to thoracotomy. There was compensatory sweating in 6 patients (20%).Two patients (6.7%) had residual pneumothorax which didn't require drainage. One patient (3.3%) had hemothorax which was minimal and didn't need drainage.
CONCLUSIONS: Thoracoscopic sympathectomy is a safe and effective method for managing palmer hyperhidrosis.

CVS-176- A CASE OF PEDIATRIC EXTRACORPOREAL MEMBRANE OXYGENATION AFTER CARDIAC SURGERY

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Extra corporeal life support(ECLS) was used for the first time in supporting the heart after repair of tetrology of Fallot by Soeter and colleagues since 1973, it's using increased with experience and technical opportunities. When conventional supportive measures inadequate, institution of ECLS may be life saving. Limitations in available therapeutic as like ECMO(Extra Corporeal Membrane Oxygenation) used from most pediatric cardiac surgery centers.
2 years old 15 kilogram a male patient, diagnosed tetrology of Fallot and severe pulmonary stenosis second month after birth. Blalock Taussig shunt has been performed and he has been followed up from pediatric cardiology. During follow up, pediatric norology make medication because of convulsion two times, and after this he has been interned diagnoses of pnomonia. At the same time repeating of cardiac catheterization due to cyanotic spell, seen that shunt was ineffective, for this we repaired ventricular septal defect with perikard and right ventricul outflow truck wided by perikard in urgency. Postoperative 32th hours acute respiratory distres diagnosed and we began ECMO. At same time we made hemofiltration. After 204 hours(postoperatif 10th day) beginning of ECMO, we weaned. After weaning ECMO we does not have been any unstability or complications such as trombocytopenia or bleeding. Postoperatif 12th day rectal heat increased with leucocytosis and diagnosed sepsis. After this we lost our patient.
ECMO may effective support in pulmonary or cardiac insufficiency when conventional measures inadequate after pediatric cardiac surgery. Nowadays after surgery surgeons have courage to begin ECMO because of good results such as externation of patients whom made ECMO from most centers despite limitations. In according to this we want to share our experience with you.

CVS-177- HERBAL MEDICATIONS USE BY CARDIAC SURGERY PATIENT AND PREOPERATIVE NURSING ASSESMENT

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There is widespread use of herbal medicine in patients suffering from cardiovascular diseases. For cardiovascular diseases, herbal treatments have been used in patients with congestive heart failure, systolic hypertension, angina pectoris, atherosclerosis, cerebral insufficiency, venous insufficiency, and arrhythmia. Although herbal medications are considered 'natural' products that may have some benefits, most of the results of clinical studies on alternative pharmacotherapy used in cardiovascular disorders remain controversial, and risk-versus-benefit ratios are not well defined.
Some herbal medications have the potential to cause serious toxic effects, direct health risks include hypertension, prolonged bleeding and major drug-to-drug interactions. However interaction between herbal medicine and cardiovascular drugs is a potentially important patient safety issue, these potential drug interactions are of particular concern for patients undergoing anesthesia. The American Society of Anesthesiologists recommends that all patients stop these herbal medications at least two to three weeks prior to surgery to avoid the possibility of interactions and complications.
During the preoperative assesment, perioperative nurses should explicitly elicit and document a history of herbal medication use to minimize complications during anesthesia and after surgery. Nurses are responsible for critiquing and applying relevant research findings to their practice, as well as participating in the identification of researchable problems related to herbal products use preoperatively. In this review, it is defined the role of cardiovascular surgery nurses in assessment that patient's use of herbal products and their risk of complications or adverse interactions with anesthetic agents.

CVS-178- MARFAN SYNDROME PATIENT WITH BIVENTRICULAR PACE MAKER UNDERGOING ORTHOTOPIC HEART TRANSPLANTATION AND ASCENDING AORTA SEPERE GRAFT INTERPOSITION

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Marfan syndrome is a geneticly expressed connective tissue disorder; that invades heart, eye, scelatal system and central nervous system. We make the diagnosis of Cardiomyopathy to one of our patient who we follow up as aortic - mitral and tricuspid insufficiency for 1,5 years. Biventricular pace maker implantation has performed to the NYHA(New York Heart Association) class IV patient. He was a 37 year old male Marfan syndrome diagnosed patient for Ghent criterion. Ascendan Aort replacement and orthotopic heart transplantation has performed to the patient; who has got an 4,4 cm ascendan aorta in Echocardiography; because the prominent difference of native aort's and donor heart's diameter.We have to assess the patients; with diagnostic methods for mortal complications; diagnosed as Marfan Syndorme and who we decide to perform cardiac transplantion. Biventricular pacemaker can be beneficial for bridge to transplantation in this patients.

*Numericals refer to abstract number. D ahead of numericals denote discussion poster presentation respectively.

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*Numericals refer to abstract number. D ahead of numericals denote discussion poster presentation respectively.

*Numericals refer to abstract number. D ahead of numericals denote discussion poster presentation respectively.

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*Numericals refer to abstract number. D ahead of numericals denote discussion poster presentation respectively.

*Numericals refer to abstract number. D ahead of numericals denote discussion poster presentation respectively.

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*Numericals refer to abstract number. D ahead of numericals denote discussion poster presentation respectively.

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