Distinguished Colleagues, Dear Friends,

It is a great honor as well as a pleasure for me to welcome you at the 2nd Annual Congress on Update in Cardiology and Cardiovascular Surgery which is organized by Heart And Health Foundation of Turkey, between 20-24 September 2006, in Bodrum/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 Kosovo, Russia, Iran, Egypt, Bangladesh and China. I would like to express my gratitude to each member of the Science Council for their extraordinary effort in grading the abstracts to bring forward these balanced and fair results. Again I cordially thank to the Congress Abstract Evaluation and Awards Committee for their effort in choosing best 30 abstracts that will be presented in the first day of the congress in front of this distinguished jury. The best three abstracts will be chosen during the presentations and the awards will be delivered at during the Gala Dinner by the Committee. The award for the first abstract is set as 1000.-Euro, for the second abstract 750.-Euro and for the third abstract 500.-Euro. Also the last seven abstracts will receive honorary mentions.

We appreciate all the contribution that has been made in order to get the cardiovascular surgery abstracts to be published as the September supplement of " Heart Surgery Forum" as it became already a tradition at our congresses.

Accordingly, I must thank to the Congress Faculty with its both national & international members in creating such as an outstanding scientific program attracting not only our national delegates but international ones as well. The **"hands on- wet lab" courses on cardiac morphology both for echocardiography specialists and cardiovascular surgeons** that had created great interest in our last congress will also continue this year. Additionally, for **cardiovascular surgeons we will have a peripheral vascular Doppler course** and an **advanced echocardiography course for echocardiography specialists** for the first time. We will also have **a special nursing course both for scrub nurses** of cardiovascular surgery and ICU nurses which will be organized in collaboration with WG of Cardiovascular Nursing of ESC. In addition to **last year's perfusion course which will take place with an international faculty this year, an intrauterine echocardiography course** will also take place in the program. Our final course is the **Arrithmyia Course.** The joint sessions that are organized in collaboration with Council for Cardiology Practice of the ESC are aiming to orientate the congress not only for “cardiologists and cardiovascular surgeons working at the academic institutions” but also for “those who are practicing this profession at the private clinic bases” and “internal medicine specialists” who have intensive concern and practice for the cardiovascular disease.

**It is a great pleasure for me, to announce that the editorial board of the journal of "Innovation" which is the official journal of "'International Society of Minimally Invasive Cardiovascular Surgery " is happily honoring our congress by inviting full manuscript of top ten abstracts in the field of cardiovascular surgery, which will be an additional scientific contribution of our congress this year.**

I look forward to welcoming you in Bodrum at this one of the leading forum in the field of Cardiovascular Medicine in a most friendly Mediterranean atmosphere.

With my warmest regards

Prof. Öztekin OTO, MD, FESC, FACC
President of the Congress

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# EXPERIMENTAL CARDIOLOGY AND CARDIAC SURGERY

## O1 - THE EFFECTS OF POLYDOKANOL ON PLEURODIESIS IN RATS: AN EXPERIMENTAL STUDY

Sezgin Atilla[1], Akay Tankut Hakki[1], Gultekin Bahadir[1], Ozkan Suleyman[1], Saritas Bulent[1], Tunel Ali[1], Ozdemir Handan[2], Aslamaci Sait[1]

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**OBJECTIVE:** Chemical pleurodesis is the artificial obliteration of the pleural space by different agents for preventing reccurent pneumothorax or pleural effusion. The aim of this experimental study was to investigate the efficacy of Polydokanol on pleurodesis and to compare the effects of this local sclerosing agent with talc in different periods on pleurodesis.
**METHODS:** The study was consisting of 4 groups including 10 Albino Wistar rats in each group. In group I, pleurodesis was evaluated 14 days after administering intrapleural polydokanol(3%-10mg/kg). In group II, pleurodesis was evaluated 28 days after administering the same drug in the same fashion. In group III, intrapleural talc(75 mg/kg) was used for pleurodesis and it was evaluated 14 days later. In group IV the evaluation was performed 28 days after administering talc. The evaluation was performed by observing the lungs, pleural cavity, the presence of atelectasis, pleural effusion, adhesions and hemotorax. Histopathologic examination was also performed after removing lungs and pleura.
**RESULTS:** Satisfactory pleurodesis was absent in groups I and II, but acceptible in group III and IV. There was not a statistically significant difference between thegroups in terms of pleurodesis periods(14 and 28 days)(p>0.05). Histopathologic examination revelaed that the response of groups III and IV was better than groups I and II.
**CONCLUSION:** Although we aimed to investigate the efficacy of Polydokanol on pleurodesis, by the mechanism of destruction on pleural epithelial surface and resulting in pleural fibrosis, we found that Polydokanol is not very effective when compared with talc. **REF0545**

## O2 - THE EFFECT OF GADOLINIUM CHLORIDE ON RENAL INJURY IN THE MODEL OF EXPERIMENTAL AORTIC ISCHEMIA-REPERFUSION

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**OBJECTIVE:** The purpose of the present study was to examine the effect of gadolinium chloride (GdCl3) on aortic occlusion-reperfusion induced remote organ injury in kidney by assaying the tissue levels of antioxidant enzymes and activity of myeloperoxidase in the rat kidney tissues.
**METHODS:** Thirty-two rats were randomly allocated to four groups (n=8) as follows; sham laparotomy, Kupffer cell blockage plus sham laparotomy, aortic ischemia reperfusion (IR) and Kupffer cell blockage plus aortic IR. Kupffer cell blockage was done by 10 mg/kg intravenous GdCl3 24 h before the surgical procedures. Aortic IR was done by placing an autraumatic microvascular clamp across the infrarenal abdominal aorta for 30 minutes and then removing the clamp for subsequent reperfusion for 60 minutes. Tissue levels of superoxide dismutase, catalase, malondialdehyde and activity of myeloperoxidase were assayed in the rat kidneys.
**RESULTS:** The tissue levels of superoxide dismutase, catalase, malondialdehyde and the activity of myeloperoxidase in the aortic IR group were significantly higher than in the other groups ($p < 0.05$). However, the tissue levels of superoxide dismutase, catalase, malondialdehyde and the activity of myeloperoxidase in the Kupffer cell blockage plus aortic IR group were significantly lower than in the aortic IR group ($p < 0.05$).
**CONCLUSIONS:** This experimental study showed that Kupffer cell blockage with GdCl3 attenuates IR injury in kidney induced by infrarenal aortic occlusion-reperfusion. We think that additional studies are needed to clarify the possible beneficial effect of pretreatment with GdCl3 in reducing renal complications caused by aortic IR during aortic surgery. **REF0074**

## O3 - EFFECT OF ADENOVIRAL VECTOR CONTAINING ANGIOTENSIN II (ANGII) TYPE 1 RECEPTOR (AT1R) ANTISENSE CDNA (AHAT1) ON MIGRATION OF SMOOTH MUSCLE CELLS OF AUTOLOGOUS VEIN GRAFTS

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**OBJECTIVES:** To evaluate the role of human angiotensin II (AngII) type 1 receptor (AT1R) antisense cDNA (ahAT1) on migration of cultured smooth muscle cells (VSMCs) of rabbit autologous vein grafts.
**METHODS:** In vitro cultured VSMCs of rabbit autologous vein grafts model was established. A surgical anastomosis was created in twenty-two rabbits between the left common carotid artery and the ipsilateral jugular vein.Two recombinant adenoviral vectors, Ad/CMV.ahAT1 containing full length antisense cDNA targeting to human AT1R mRNA, and Ad/CMV.LacZ containing LacZ called report gene, were constructed by orientation clone technology and homologous recombination, and then were used to transfect VSMCs of autologous vein grafting in vitro. AT1R expression detected by RT-PCR and immunohistochemistry, and migration of VSMCs mensured by Boyden's Chamer methods, were compared between transfected and nontransfected VSMCs.
**RESULTS:** Forty-eight hours after being transfected Ad/CMV.ahAT1 into VSMCs, the level of AT1R mRNA decreased markedly (P=0.012 vs control-group), and AT1R protein expression was significantly decreased(P<0.01 vs control-group and Ad/CMV.LacZ-group respectively).
**CONCLUSIONS:** These results indicate that antisense cDNA targeting to human AT1R transfer in vitro mediated by adenoviral vector has powerful inhibitory effect on migration of VSMCs of rabbit autologous vein grafts by attenuating AT1R expression. **REF0012**

## O4 - IN ISCHEMIA-REPERFUSION MODEL OF RATS THE EFFECT OF ISHEMIC PRECONDITIONING TO THE MYOCARDIAL APOPTOSIS

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**INTRODUCTION:** Some approaches were developed to prevent or to reduce the ischemic cell damage.One of them was ischemic preconditioning(IP). In this study we aimed to test the ischemic preconditioning would affect myocardial apoptotic cell death in rats. MATERIALS-METHODS: In this study, Wistar type 30 male rats were used and divided equally into three groups: Group I as sham group (nothing was applied); Group II is the preconditioning performed group (120 minutes reperfusion right after 30 minutes ischemia subsequently 5 minutes ischemia-5 minutes repefusion); Group III is ischemia control group (30 minutes ischemia and 120 minutes reperfusion). At the end of the experiments the hearts were extracted and Bcl-2 index was determined with immunohistochemical dying.
**RESULTS:** Through the Bcl-2 immunohistochemical dying method we found that in Group II, in which an ischemic preconditioning performed, within the infarct area the mean number of apoptotic cells was %40±4.27; whereas this rate in Group II, in which a preconditioning was not performed, in other words, only ischemia and reperfusion were performed, was %65±4.11 and in sham group was %2±0.66. We observed a significant reduction in the mean values of apoptotic cells between groups for which preconditioning performed and not performed ($p<0.001$). Again there was a significant difference between sham group and other two groups ($p<0.001$).
**CONCLUSION:** In conclusion, in rats exposed to 30 minutes ischemia and 120 minutes reperfusion, when the significance between groups for which preconditioning performed and not performed is considered, the ischemic preconditioning reduced the occurrence of myocardial apoptosis. **REF0339**

## O5 - GADOLINIUM CHLORIDE ATTENUATES AORTIC OCCLUSION-REPERFUSION-INDUCED MYOCARDIAL INJURY IN RATS

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**PURPOSE:** Aortic ischemia and reperfusion (İR) periods, which are often associated with infrarenal abdominal aortic cross-clamping and declamping, cause injury in distant organs including the heart. We recently reported that Kupffer cell blockage (KCB) with gadolinium chloride (GdCl3) attenuates lung injury induced by aortic IR. Therefore, we hypothesized that KCB with GdCl3 may attenuate myocardial injury induced by aortic IR.
**METHODS:** Wistar-Albino rats (eight per group) were randomized into three groups. The control group underwent midline laparotomy and dissection of the infrarenal abdominal aorta without occlusion; the aortic IR group underwent laparotomy and clamping of the infrarenal abdominal aorta for 30 min followed by 60 min of reperfusion; and the GdCl3 + aortic IR group was pretreated with intravenous GdCl3 10 mg/kg 24 h before the aortic IR. The tissue levels of superoxide dismutase, catalase, malondialdehyde and the activity of myeloperoxidase were measured in rat heart specimens.
**RESULTS:** Aortic IR significantly increased oxygen free radical production, lipid peroxidation and neutrophil activation in the heart tissues of the rats as measured by the tissue levels of superoxide dismutase, catalase, malondialdehyde and activity of myeloperoxidase. Pretreatment with GdCl3 significantly reduced the tissue levels of superoxide dismutase, catalase, malondialdehyde and activity of myeloperoxidase.
**CONCLUSIONS:** Our results indicate that KCB with GdCl3 attenuates the myocardial injury induced by aortic IR. Novel findings of the present study may be a basis for further studies investigating the role of GdCl3 pretreatment in reducing myocardial morbidity and mortality caused by aortic IR during aortic surgery. **REF0072**

## O6 - THE EFFECT OF HYPOTHERMIA ON VASCULAR TONUS

Ozkisacik Erdem Ali, Discigil Berent, Boga Mehmet, Gurcun Ugur, Badak Muharrem Ismail, Sirek Nail, Durmaz Selim, Gunes Tugrul Unsal

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**OBJECTIVE:** Hypothermia continues to be a vital adjuvant for techniques used in open heart surgery. The aim of this study is to evaluate the effect of hypothermia on vascular tonus.
**MATERIAL-METHOD:** Wistar rats of 200-250 grams in weight were decapitated following ether anesthesia, median sternotomy were performed immediately and thoracic aorta was dissected free and immersed in cool oxygenated physiological salt solution (Krebs solution) of the following composition: 118.3 mM NaCl, 4.7 mM KCl, 1.2 mM MgSO4,1.22 mM KH2PO4, 2.5 mM CaCl2, 25.0 mM NaHCO3, and 11.1 mM glucose. Segments (2-3mm in length) of blood vessels were prepared from thoracic aorta with special care taken not to touch the intimal surface of the vascular segments. Vascular segments were than suspended in organ chambers (20ml) filled with Krebs solution maintained at 37˚C and bubbled with 95%O2/5%CO2, pH 7.4. Each ring was suspended by two stainless steel clips passed through its lumen. One clip was anchored to the bottom of the organ chamber, and the other was connected to a strain gauge for measurement of isometric force (Statham UC 2, Gould, Cleveland, OH, USA). The rings were placed at the optimal point of their length-tension relation by progressively stretching them until contraction to 1µM Norepinephrine was maximal. After optimal tension was achieved, the aorta rings were allowed to equilibrate in Krebs solution for 30-45 minutes. To examine the effect of deep hypothermia or ischemia on vascular tonus, blood vessels were constricted with 1µM norepinephrine. When the constriction has reached to its peak level and stayed steady, organ chamber media was started to cool down to 18˚C by using heat exchanger.
**RESULTS:** Hypothermia induced comparable, temperature-dependent relaxation in all experimental aorta segments. The exposure of the blood vessel to deep hypothermia (18°C) caused a 64% (on average) loss of vascular tonus in rat aorta segments precontracted with 1µM Norepinephrine ($p<0.01$). Blood vessels returned to precontracted levels when re-warmed up to 37°C.
**CONCLUSION:** The data of this study demonstrated that hypothermia has vasodilatory effect on blood vessels. **REF0288**

## O7 - SERUM ADIPONECTIN LEVELS PREDICT EARLY ATHEROSCLEROSIS IN CAROTID ARTERIES IN PATIENTS UNDERGOING CORONARY ARTERY BYPASS GRAFTING

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**OBJECTIVE:** Adiponectin, a plasma protein produced specifically by adipose tissue, has anti-atherogenic effects. Hypoadiponectinemia has been observed in patients with coronary artery disease (CAD). However, the relation between serum concentrations of adiponectin and early atherosclerosis in carotid arteries in patients with CAD has not been determined yet. To determine this relation, we measured carotid artery intima-media thickness (IMT) and serum concentrations of adiponectin in the patients who underwent coronary artery bypass grafting (CABG).
**METHODS:** Eighty-four consecutive patients (69 male, mean age 60.81±10.59) with CAD who underwent CABG were included into the study. Serum concentrations of adiponectin were measured by ELISA (ACRP30®, Linco Research, Missouri, USA). Carotid artery IMT of far wall was measured at the distal common carotid artery (CCA) and the carotid bulb on both sides with a high-resolution ultrasound unit (Apio80®, Toshiba, Tokyo, Japan).
**RESULTS:** The mean serum adiponectin concentration was 7.73±5.34 µg/ml. The mean IMT of CCA and bulb were 0.97 ± 0.13 and 1.01±0.14 mm, respectively. Serum adiponectin concentrations significantly and negatively correlated with the mean IMT of CCA ($r=-0.581$, $p < 0.01$) and bulb ($r = -0.415$, $p < 0.01$).
**CONCLUSIONS:** This study indicates the presence of an inverse relationship between serum concentrations of adiponectin and subclinical carotid atherosclerosis in patients with CAD. Adiponectin is one of the clinically important molecules associated with atherosclerosis and the measurement of adiponectin levels would be of predictive value to identify patients at high risk to develop severe carotid artery stenosis. **REF0069**

# ACUTE CORONARY SYNDROMES: DRUGS, INTERVENTION, SURGERY

## O13 - PREOPERATIVE FLUVASTATIN TREATMENT REDUCES C-REACTIVE PROTEIN LEVEL WITHOUT ANY IMPROVEMENT ON POSTOPERATIVE OUTCOMES IN PATIENTS WITH UNSTABLE ANGINA

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**BACKGROUND:** Low-grade inflammation as detected by elevated C-reactive protein levels may predicts the risk of postoperative complications in patients with unstable angina undergoing coronary artery bypass surgery. The effect of inflammation on mortality and morbidity may be attenuated by preoperative a statin-fluvastatin- therapy.
**MATERIAL-METHODS:** Sixty consecutive patients with symptomatic coronary artery disease underwent coronary artery bypass grafting. Patients were randomly grouped according to the statin therapy receiving and CRP-elevation (>5 mg/L) and to a control group in which had no statin therapy because of no preoperative CRP-elevation (from 0 to 5 mg/L). CRP was determined preoperatively and activated partial thromboplastin time, platelets, white blood cells count and lipid profiles measured before surgery (2 weeks), 24 and 72 h thereafter. The clinical course was prospectively recorded.
**RESULTS:** The in-hospital results were similar between the two patients groups. Although the postoperative CRP-level significantly reduced by statin therapy, the early postoperative outcomes did not differ among the two groups.
**CONCLUSIONS:** In this prospective, randomized study, a preoperative level of CRP > 5 mg/l did not predict in-hospital postoperative complications in patients with unstable angina and a preoperative statin treatment did not improve the early outcome following elective on-pump CABG. **REF0384**

## O15 - THE IMPORTANCE OF THE CORONARY BYPASS SURGERY FOR ACUTE MYOCARDIAL INFARCTION

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**INTRODUCTION:** Myocardial infarction is still the most common cause of death. Surgical therapy performed within the first six hours after acute miyocardial infarction diminishes the infarction area and preserves the myocardial functions. In this study we would like to present our results of 128 patients who underwent coronary bypass surgery within the six hours after acute myocardial infarction.
**MATERIAL-METHODS:** Between January 2002-June 2005, 3772 coronary bypass grafting operations were performed. One hundred and twenty eight of 3772 patients (3.3%) had acute myocardial infarction within the first 6 hour of infarction. The mean age of the patients was 61.3±4.5 years and ranging 41 to 78 years. All of the patient underwent coronary angiography. 88 patients (68%) were sent to operation directly. 20 patients (16%) had failed PTCA and sent to operation with acute evolving MI. Acute MI due to elective primary PTCA complication was cause of emergency operation for 20 patients (16%). Eleven (8%) patients had preoperative IABP support for hemodynamic instability. Eight patients (6%) had IABP at angio lab. Six patients (4%) developed cardiac arrest and were transferred to operation room with cardiopulmonary resuscitaiton. Patients with the complications of acute MI such as Post MI VSD, ischemic mitral insufficiency…) were excluded from this study. All patients received median sternotomy. IMA was used in 95 patients (74%). IMA and radial artery was combined in 10 patients (7.8%). Thirty two patients (25%) received only vein graft. On pump coronary bypass surgery was performed at 104 patients (81%). Twenty four patients (19%) underwent off-pump surgery. Operative mortality was found as 4.6%. Three patients who died at operation were patients who had CPR before the operation. Mean intensive care unite stay was 3.7±1.9 days and mean hospital stay 12.6±6.7 days.
**CONCLUSION:** Despite surgery is not the first choice treatment for acute myocardial infarction, surgical approach is life saving procedure for some certain cases. It can be performed with acceptable mortality and morbidity rates. **REF0291**

## O16 - SURGICAL TREATEMENT OF MECHANICAL POST INFARCTION COMPLICATIONS; LEFT VENTRICEL ANEURYSM AND VENTRICULAR SEPTAL DEFECT. SURGICAL TIMING AND LONG TERM SURVIVAL

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**INTRODUCTION:** Complications of AMI with mechanical defects are associated with poor prognosis.Surgical intervention is indicated for a majority of patients.The goal of surgical intervention is to improve the systolic cardiac function and to achieve a hemodynamic stability.
**METHODS:** We analysed retrospectively the hospital records of 41 patients ages range from 48 to 81 who underwent a surgical treatement between 1990 and 2005 because of Post infarction ventricular septal defect (PVSD) and 269 patients ages range from 33 to 86 years who underwent an operative repair of Left ventricel aneurysm (LVA).
**RESULTS:** In PVSD group hospital mortality was 32%.The mortality of urgent repair within 3 days in 5 cases of intractable cardiogenic schock was 100%.All patients who underwent the surgical repair later than day 36 survived.In LVA group hospital mortality was 3.7%.Comparison of pre and postoperative echocardiographic findings showed a significant improvement of left ventricular function.The NYHA stage decreased from III-IV to I-II.
**CONCLUSION:** Surgical intervention is indicated for a majority of patients with mechanical complications.Cardiogenic schock remains the most important factor that affects the early results.The surgical repair of PVSD should be performed 4-5 weeks after AMI.In LVA the choice of surgical technique seems to depend upon the extend of scar segment,especially the presence of anteroseptal scared area.To improve surgical outcome and hemodynamics the choice of surgical technique and surgical timing as well as preoperative management should be tailored for each patient individualy. **REF0606**

# ATHEROSCLEROSIS: PATHOPHYSIOLOGIC PERSPECTIVES

## O21-ATHEROSCLEROTIC RISK FACTORS; ARE ALSO RISK FACTORS FOR AORTIC VALVE CALCIFICATION?

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**BACKGROUND:** The aim of this study was to determine whether risk factors for atherosclerosis were associated with increased aortic valve calcification and whether there are differences in risk factors in respect to etiology of aortic stenosis.
**METHODS:** The study included 701 patients who underwent AVR between 1985-2005 in our center. Patients were separeted in three groups based on the etiology of aortic valve disease (rheumatic, congenital bicuspid and degenerative). Diabetes mellitus, hypertension, cigarette smoking, hyperuricemia, hypercalcemia, hyperlipidemia, chronic renal failure, high serum C-reactive protein levels (CRP) levels, presence of coronary artery disease, and patient age and sex were analyzed as risk factors for aortic valve calcification for whole cohort and for each group separately.
**RESULTS:** Multivariate analysis revealed high serum CRP levels was related to calcification in patients with rheumatic and degenerative etiology (p=0.001 and 0.003 respectively). Hyperlipidemia was linked to calcification only in patients with degenerative etiology (p=0.01) and prevalance of coronary artery disease was significantly higher in patients with calcific aortic valves of degenerative etiology (p=0.01). Sex, hypertension, smoking, hyperuricemia and hypercalcemia were not related to calcification.
**CONCLUSION:** Although most of the risk factors for coronary artery disease are not associated with increased risk of aortic valve calcification prevalance of coronary artery disease is higher in patients with calcific aortic valves of degenerative etiology and hyperlipidemia, a treatable factor, is related to increased risk of calcification. Association of high CRP levels with calcification in rheumatic and degenerative groups probably reflects the role of inflammatory processes upon calcification.
**REF0260**

## O23-HYPERLIPIDEMIA AND AORTIC SCLEROSIS

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**BACKGROUND:** This study aims to investigate role of hyperlipidemia in a large cohort of patients with aortic stenosis with different etiological factors.
**MATERIAL-METHODS:** The study included 988 patients who underwent AVR between 1985-2005 in our center. Patients were separated in three groups based on the etiology of aortic valve disease (rheumatic, congenital bicuspid and degenerative). Effects of hyperlipidemia and severe hyperlipidemia on aortic valve calcification and block aortic valve calcification were analysed for each etiologic groups.
**RESULTS:** Both univariate and multivariate analysis revealed high serum cholesterol levels (200 mg/dl) was not related to calcification in all patients with aortic stenosis but was related to block calcification (p=0.003). Hyperlipidemia was linked to calcification and block calcification in patients with degenerative etiology (p=0.02 and p=0.01 respectively) and was found to be related to the presence of block calcification in patients with congenital bicuspid aorta (p=0.02). Other variables in the equation (ex, hypertension, smoking, hyperuricemia and hypercalcemia) were not related to calcification. Hyperlipidemia was not a risk factor for calcification in patients with rheumatic etiology (p=0.3).
**CONCLUSION:** Hyperlipidemia is related to increased risk of calcification in patients with aortic sclerosis of degenerative and congenital etiology. Association of high cholesterol levels with severe calcification in congenital bicuspid aorta suggests an additive role of hyperlipidemia on hemodynamic factors for this patient group as well as for patients with degenerative etiology. The effect of anti-hyperlipidemic therapy on progression of aortic sclerosis needs to be investigated on clinical trials.
**REF0262**

## O25 -COMPARISON OF THE LEVELS OF HOMOCYSTEINE IN PLASMA AND INTERNAL MAMMARY ARTERY TISSUE IN CORONARY ARTERIAL DISEASE PATIENTS

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**OBJECTIVE:** Homocysteine constitutes an independent risk factor for coronary artery disease. Homocysteine serves its prothrombotic effects through down-regulation of thrombomodulin in endothelial cells and up-regulation of tissue factor in endothelial cells and macrophages. Physiologically, the endothelium of the internal mamary artery (IMA) secretes NO and PGI2 in greater quantities, compared to the other grafts. We aimed to compare the levels of homocysteine in plasma and IMA tissue in patients undergoing coronary artery bypass surgery (CABG).
**METHOD:** Eighteen patients were included in study. The mean age of the patients was 58.70±10.12. The level of homocysteine was measured in the homogenate prepared from the IMA tissue and in plasma.
**RESULTS:** Tissue homocysteine levels (3.59±1.26) were found to be well below the mean plasma (11.17±6.90) values. However, there was a statistically significant correlation between the levels homocysteine in plasma and tissue (P<0.05).
**CONCLUSION:** Low levels of homocysteine in IMA tissue found in this study may be a factor explaining the well known superior patency rates over other arterial grafts and the resistance of the IMA grafts to atherosclerosis.
**REF0321**

# PROBLEMS AND SOLUTIONS IN CARDIAC SURGERY

## O28 - COMPLETE ARTERIAL REVASCULARIZATION IN ELECTIVE AND NONELECTIVE CORONARY BYPASS GRAFT SURGERY

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**OBJECTİVE:** The aim of this study is to evaluate the clinical results of the use of arterial grafts for complete arterial revascularization in elective and nonelective coronary bypass graft surgery.
**METHODS:** From January 2002 to Decembere 2005, 95 patients were operated for complete arterial grafting for coronary artery disease. Mean age of the patients was 55.4+/- 8.0 years; 74.7% were male(n: 71), 25.3% (n: 24); 54.7% (n: 52) had triple-vessel disease, 33.6% (n: 32) had two-vessel disease, 5.3% (n: 5) had single-vessel disease, and 6.4% (n: 6) had left main coronary artery disease. Double internal mammary artery grafts were used in 8 patients, single internal mammary artery grafts in 4 patients. In 67 patients, the left internal mammary artery was used with the radial artery as a free or T-graft. In two patients Radial artery grafts were used with right internal mammary artery, and in eleven patients bilaterally internal mammary artery was used with radial artery as a free or T-graft. In three patients laterally circumflex femoral artery was used with internal mammary artery and/or radial artery.
**RESULTS:** There was no intraoperative mortality. Postoperatve mortality rate was 2.1%(2 patients). Seven patients had reangiogram for angina of which one patient had a blocked radial artery graft and two patients underwent angioplasty to their native coronary arteries.
**CONCLUSION:** Total arterial revascularization with the internal mammary and radial artery is associated with a low rate of perioperative complications and mortality and can be safely used in both elective and nonelective bypass graft surgery **REF0481**

## O30 - CHANGES IN SERUM TRACE-ELEMENT LEVELS DURING CARDIOPULMONARY BYPASS AND ITS EFFECTS ON MYOCARDIAL DAMAGE

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**AIM:** Inflammatory response to cardiopulmonary bypass (CPB) continues to be a significant problem today.
**MATERIAL-METHOD:** A total of 40 patients who had undergone arterial bypass under elective conditions were included in the study. Of all patients, 32 were male (80%) and 8 were female (20%). Mean age was 62.50±1.95 (range 45, min: 36 - max: 81). Thirty-six patients (90%) had triple vessel disease and 4 patients had (10%) double vessel disease. Fourteen patients (35%) had previously undergone angioplasty or stent operations. Two patients (5%) had Canada Class I, 25 patients had (62.5%) Class II, 12 patients had (30%) Class III and 1 patient had (2.5%) Class IV functional capacity.
**RESULTS:** The number of bypass grafts applied on the patients was 3.27±0.12 in average. The mean cardiopulmonary bypass duration was 113±3.93 min. The mean aortic cross-clamp (ACC) duration was 75.4±3.99 min. Operative mortality was 2.5%. Serum-copper (Cu) values, which had been measured as 0.83±0.01 µg/ml in average preoperatively, increased throughout the operation and reached its peak value (1,36±0.02 µg/ml) at the end of CPB. Despite the drastic fall in serum-copper level in the first 24 hours, it reached its normal blood value on the fifth day following the operation. Serum-zinc (Zn) value, which had been 1,06±0.02 µg/ml preoperatively, showed a dramatic fall in the first thirty minutes of the CPB and reached 0.65±0.01 µg/ml ($p<0.001$). Serum-zinc level gradually decreased throughout the CPB and reached its lowest level at the end of the operation. It reached its normal blood value on the fifth day following the operation. Serum CPK-Mb-mass value gradually increased throughout the CPB and reached its peak value at the end of the operation. It fell to its normal blood value on the third day following the operation.
**DISCUSSION:** Trace-element changes occurring during the cardiopulmonary bypass have been found to be closely related with myocardial ischemia. **REF0058**

## O31 - IMPORTANCE OF THE URINARY MEASUREMENT OF GLUTATHIONE S-TRANSFERASE IN PATIENTS WITH BORDERLINE RENAL FUNCTION UNDERGOING ON-PUMP AND OFF-PUMP CORONARY ARTERY BYPASS SURGERY

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**OBJECTIVE:** Acute renal failure occurring after cardiac surgery has rather high levels of mortality and morbidity. We aimed to determine the incidence of renal tubular damage in patients with borderline renal function who underwent on-pump and off-pump cardiac surgery, using urinary alpha glutathione s-transferase measurement as a marker of renal tubular damage, and to assess if there is a difference in renal tubular damage between on-pump and off-pump surgery techniques.
**METHODS:** Fifty patients awaiting elective on-pump and off pump coronary revascularization with normal preoperative cardiac functions and with plasma creatinine level ranging between 1.5 to 2.0 mg/dL, were studied in this prospective non - randomized study and allocated into two groups as those undergoing CABG with cardiopulmonary bypass (on-pump group, n = 25) and without cardiopulmonary bypass (off-pump group, n = 25). Renal glomerular and tubular injury were assessed by urinary alpha glutathione s-transferase (α-GST), plasma creatinine, and blood urea nitrogen levels, creatinine clearance and fractional excretion of sodium. **REF0394**

**O31 -Continued**

**RESULTS:** Urinary α-GST levels significantly rose in postoperative 24 hours after the surgery (p<0,001) and lowered in postoperative 72'nd hour (p<0.001). Urinary α-GST levels revealed a statistically significant difference between groups in postoperative 24'th hour (p=0.044). Number of the patients with normal and elevated urinary α-GST levels, and occurred renal complications did not reveal statistically significant differences between groups. Postoperative renal complications (renal dysfunction or ARF) occurred more frequently in patients with high postoperative urinary α-GST levels in both groups (p=0.005 for on-pump group and p<0.001 for off-pump group). Preoperative and postoperative 24'th hour levels showed positive predictive value for the renal dysfunction occurrence (91% for α-GST ≥ 4.8 μg/L and 88% α-GST ≥ 7.1 μg/L respectively), but not for the dialysis requirement (ARF). Renal dysfunction occurrence, dialysis requirement and mortality rates were similar in the both groups.

**CONCLUSIONS:** Although it was shown that cardiopulmonary bypass has some detrimental effects on the renal tubular function revealed by elevated urinary α-GST levels, tubular damage produced by the cardiopulmonary bypass is not only factor associated with postoperative acute renal failure or dysfunction occurrence. Because of the factors independent from the pump usage remain to affect adversely the renal function, excluding the pump usage alone is not sufficient to certainly prevent postoperative acute renal failure occurrence in patients who have preoperative borderline renal function. But at least, cardiopulmonary bypass known as a damaging factor over renal function can be excluded from the surgery procedure to prevent the extension of the renal damage, and off-pump surgery in patients with borderline renal function is advisable as a first step of kidney preservation.

**REF0394**

**O32 -COMPLETE ARTERIAL REVASCULARIZATION WITH EFFICIENT USAGE OF INSITU ARTERIAL CONDUITS IN CORONARY BYPASS OPERATIONS**

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**INTRODUCTION:** Superiority of the arterial conduits in coronary bypass surgery is not debatable. Internal thoracic arteries are the most frequently used conduits with the most favorable histological structures, endothelial functions and long patency rates. The fact is that; today, ischemic heart disease necessiates the more efficient usage of internal thoracic arteries and new alternative arterial grafts are required. In this study, we observed the postoperative follow-up and different application methods of coronary anastomosis in patients whom we performed full arterial (right/left ITA and right gastroepiploic artery if needed) revascularisation with in situ arterial conduits.

**METHOD:** 133 multiple coronary artery disease patients whom we performed full arterial revascularisation between March 1999-January 2003 have been considered for this study.The patients had an average age of 57.1±9.3 years of which 41 of them were women and 92 of them were men. In 131 patients, LITA was anastomosed either to a single coronary artery or sequentially to two or three coronary arteries. In 119 patients, RITA was anastomosed to a single coronary artery or sequentially to two coronary arteries. Right gastroepiploic artery (RGEA) was used as a third arterial graft in 47 patients.

**RESULTS:** One patient died peroperatively, and another patient died in the 14th postoperative day due to non-cardiac reasons. The mortality rate was 1.5%. Ischemic electrocardiographic changes were detected in three patients (2.2%). Among those three, two patients were evaluated as myocardial infarction regarding to enzymatic study results. Control angiography was performed to 29 patients, whom 5 of them were symptomatic, between the postoperative 15th day and the second year. Stenoses in some grafts were detected in two of the five symptomatic patients and in one of the asymptomatic patients. It has been found statistically that the postoperative left ventricle ejection fraction (LVEF) improved significantly compared to preoparative values. According to the Spearmen's correlation test, mortality and complications were related to the learning period (r=0.275, p<0.001), and were slightly related to the usage of gastroepiploic artery (r=0.218, p<0.05), while other factors (age, gender, emergent operation, number and type of anastomoses, sequential usage of grafts, cardiopulmonary bypass and aortic clamp times, LVEF and additional procedures) did not cause any significant difference.

**DISCUSSION:** The superiority of the arterial grafts, especially the ones which were used as in situ conduits was shown in several studies. We, therefore, think that the efficient usage of right and left ITA and right GEA's in multiple coronary artery disease will ensue especially in young patients,aiding full arterial revascularization without any extra problems.

**REF0283**

**O33 - THE USE OF THROMBOELASTOGRAPHY-GUIDED TRANSFUSION ALGORITHM IN CARDIAC SURGERY**

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**INTRODUCTION:** Due to the absence of a standart transfusion algorithm, perioperative transfusion therapy after cardiac surgery is still done empirically. In this study, we aimed to test the efficancy of a thromboelastogram-based transfusion algorithm on our transfusion policy in patients undergoing cardiac surgery.

**MATERIAL-METHOD:** Between January 2004- May 2006, 242 patients undergoing elective cardiac surgery were enrolled into the study. Patients were assigned to three groups; Group 1 (n=160): patients recieving routine transfusion therapy without using thromboelastogram, Group 2 (n=54): patients recieving transfusion therapy according to the coagulation defect seen on thromboelastogram, Group 3 (n=28): patients recieving transfusion therapy according to the thromboelastogram-based transfusion algorithm. Thromboelastogram variables, coagulation tests, mediastinal tube drainage, and blood and blood product transfusions were compared.

**RESULTS:** Patients in all groups were similar in demographic charecteristics and risk factors. The amount of mediastinal dranaige, changes in the levels of the perioperative hemotocrit and perioperative transfusion rates of erythrocyte suspensions did not differ between the groups (p>0.05) (Table 1). In Group 3 (thromboelastogram-based algorithm), the rate of blood product transfusion, namely platelets and fresh frozen plasma, was significantly lower than in others (p<0.05).

**CONCLUSIONS:** Our results showed that use of thromboelastogram-based transfusion algorithm may be effective in reducing the requirements of blood product transfusions and morbidity related to the transfusion therapy, consequently.

**REF0286**

**Table 1**

| | Group 1 (n=160) | Group 2 (n=54) | Group 3 (n=28) |
|---|---|---|---|
| Mediastinal dranaige (cc) | 587.5±411.2 | 804.6±475.0 | 858.4±372.8 |
| Erythrocyte Suspension (U) | 2.4±2.6 | 2.4±2.8 | 2.3±1.2 |
| Fresh Frozen Plasma (U) | 1.4±2.5 | 1.9±1.6 | 0.7±1.9 |
| Thrombocyte Suspension (U) | 0.2±1 | 0.7±1.6 | 0.1±0.7 |
| Htc1 (%) | 38.0±5.8 | 37.6±10.7 | 41.3±4.8 |
| Htc2 (%) | 31.7±4.9 | 26.4±11.8 | 31.0±7.6 |
| Htc3 (%) | 30.1±4.1 | 28.0±8.8 | 29.6±6.3 |

*Perioperative variables (Htc1: preoperative basal hematocrit, Htc2: postoperative day 1 hematocrit and Htc3: hematocrit value at discharge)*

## O34 - RECONSTRUCTION OF THE LEFT ANTERIOR DESCENDING CORONARY ARTERY WITH LEFT INTERNAL THORACIC ARTERY IMPROVES LONG-TERM SURVIVAL

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**OBJECTIVES:** Nowadays, cardiac surgeons should deal more frequently with patients having diffuse coronary artery disease. The aim of this study is to analyze the clinical outcomes obtained in patients who underwent an extended left anterior descending coronary artery reconstruction procedure with the left internal thoracic artery combined with conventional coronary artery bypass grafting to other territories.
**METHODS:** Between April 1997 and February 2006, 3736 coronary artery bypass grafting operations were performed by our team. Of these cases, 524 patients (14 %) with the diffusely diseased LAD underwent a long segmental reconstruction procedure.
**RESULTS:** The mean age was 56.5 ± 8.2 years. The length of the arteriotomy incision ranged from 2 to 10 cm. with a mean of 4.5 ± 1.2 cm. The postoperative mortality and myocardial infarction rates were 1.9 % and 6.9 %, respectively. Actuarial survival in the entire cohort at 3, 5 and 7 years were 93.8 ± 1 %, 89.6 ± 1.5 %
and 85.5 ± 2.6 %, respectively. Actuarial freedom from angina recurrence at 3, 5 and 7 years were 94.5 ± 1 %, 88.5 ± 2 % and 82.9 ± 3 %. Among survivors, interim angiographic evaluation could be performed in 128 patients at a mean follow-up of 52.4 ± 13.5 months and the patency rate of LITA-LAD anastomosis was 91.4 %.
**CONCLUSIONS:** The long-term results of long segmental LAD reconstruction are very promising in patients with diffuse LAD disease and our study revealed comparable results with those of patients with non-diffuse coronary artery disease. **REF0625**

## O35 - PROPHYLACTIC DIALYSIS IN ELDERLY PATIENTS UNDERGOING CORONARY BYPASS SURGERY

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**BACKGROUND:** Renal dysfunction is associated with markedly increased risk for both mortality and morbidity in patients undergoing coronary artery bypass surgery (CABG), especially in elderly patients. We aimed to determine the impact of prophylactic preoperative hemodialysis on operative outcome in patients with mild renal dysfunction.
**METHODS:** Between March 2002 and May 2005 a total of 64 patients, over 70 years of age and with preoperative creatinine levels greater than 2 mg/dL, underwent primary elective on pump coronary artery bypass surgery. The mean age was 76.3±6.4 (range 70-83). The patients were prospectively allocated into two groups. Group A was the dialysis group (31 patients) and preoperative prophylactic hemodialysis was performed in all patients. Group B (33 patients) was taken as a control group without preoperative hemodialysis.
**RESULTS:** Ten patients died (15.6%) in the hospital. In the postoperative period mean levels of creatinine were found to be decreased in dialysis group. (2.3±0.8 mg/dL versus 3.4±0.2 mg/, p=0.037). The incidence of overall morbidity (such as acute renal failure, need of postoperative dialysis, low cardiac output and multiple organ failure) were also found to be decreased in dialysis group.
**CONCLUSIONS:** Preoperative renal dysfunction and advanced age increase the risk of mortality and morbidity after on-pump coronary artery bypass surgery. We believe that perioperative prophylactic hemodialysis is an easy and effective method and it decreases both operative mortality and morbidity in elderly patients with renal dysfunction. **REF0402**

## O36 - EFFECT OF ACUTE RENAL DYSFUNCTION ON EARLY MORTALITY AFTER CARDIAC SURGERY

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**BACKGROUND:** The definition of acute renal failure after cardiac surgery and its effect on mortality are still challenging. The aim of our study was to evaluate the effect of postoperative acute renal dysfunction on early mortality in patients undergoing cardiac surgery by using RIFLE classification (Risk Injury Failure Loss End stage kidney disease).
**METHODS:** 248 patients undergoing elective cardiac surgery between November 2004 and May 2006 were analysed. Mean age of the patients was 61.21±10.80. Preoperative creatinine level was equal or more than 1.4 mg/dl in 26 of patients (mean 1.85±0.59), while the remaining 222 patients had a creatinine level less than 1.4mg/dl. Patients who were on either hemodialysis or peritoneal dialysis preoperatively were excluded. Patients were assigned to four groups; Group 1: RIFLE-0 (n=194): an increase in plasma creatinine level less than 1.5 times, Group 2: RIFLE-R (n=22): an increase in plasma creatinine level between 1.5 and 2 times, Group 3: RIFLE-I (n=10): an increase in plasma creatinine level between 2 and 3 times of the basal value, Group 4: RIFLE-F (n=22): an increase in plasma creatinine more than 3 times or any creatinin value more than 4mg/dl postoperatively.
**RESULTS:** According to RIFLE classification, 21.8% of patients had renal impairment after cardiac surgery. There was a statistically significant correlation between the severity of the renal impairment and early mortality (1.54% in RIFLE-0 and 27.7% in RIFLE-F (Table 1) (p=0.000).
**CONCLUSIONS:** RIFLE classification might be a valuable method to estimate the early mortality due to postoperative acute renal dysfunction. **REF0293**

Table 1

| | RIFLE-0 | RIFLE-R | RIFLE-I | RIFLE-F |
|---|---|---|---|---|
| Patients (n) | 194 | 24 | 8 | 22 |
| Mortality | 3 (1.5%) | 3 (12.5% ) | 4 (%50) | 6 (%27.3) |

*Perioperative RIFLE classes and mortality*

# ATHEROSCLEROSIS: FROM BENCH TO BEDSIDE

## O42 - THE RELATION BETWEEN METABOLIC SYNDROME AND CAROTID INTIMA/MEDIA THICKNESS IN PATIENTS UNDERGOING CORONARY ARTERY BYPASS SURGERY

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**OBJECTIVE:** Metabolic syndrome (MS) is a well known risk factor for atherosclerotic cardiovascular disease. Carotid atherosclerosis may coexist in the patients with coronary artery disease. The aim of this study was to investigate the effect of MS on carotid intima/media thickness (IMT) in the patients undergoing coronary artery bypass grafting (CABG).
**METHODS:** Eight-four patients (69 male, mean age 60.81 ± 10.59) who underwent CABG were included into the study. MS was defined as presence of three or more out of five criteria defined at National Cholesterol Education Program Adult Treatment Panel III; low HDL (<40 mg/dl for men and <50 mg/dl for women), hypertension (≥130/85 mmHg), increased waist circumference (>102 cm for men, >88 cm for women), hypertriglyceridemia (≥150 mg/dl) and increased fasting glucose (>110 mg/dl) or presence of diabetes mellitus. Carotid artery IMT of far wall was measured at the distal common carotid artery on both sides with a high-resolution ultrasound unit (Apio80®, Toshiba, Tokyo, Japan).
**RESULTS:** Forty patients (47.6 %) had diagnosis of metabolic syndrome. The mean carotid IMT was 0.94 ± 0.14 and 1.00 ± 0.12 mm in the patients with MS and without MS, respectively and the difference was statistically significant ($p < 0.05$).
**CONCLUSION:** The results indicate that MS might increase carotid IMT in the patients undergoing CABG. Since carotid IMT has been used as a marker of early carotid atherosclerosis in several studies, presence of MS might be a risk factor for concomitant carotid atherosclerotic disease in the patients undergoing CABG. **REF0110**

## O43 - METABOLIC SYNDROME AND CORONARY ARTERY BYPASS GRAFTING

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**OBJECTIVE:** To determine the effects of metabolic syndrome on the morbidity and mortality of coronary artery bypass grafting in the early postoperative period.
**METHODS:** 150 patients who underwent coronary artery bypass grafting between 2004 and 2005 were included to the study prospectively. 73 of the patients were with metabolic syndrome and 77 patients were without metabolic syndrome. Clinical identification of the metabolic syndrome was performed using National Cholesterol Education Program Adult Treatment Panel III criteria. Two groups were compared according to the demographic variables, postoperative morbidity and mortality in the early postoperative period.
**RESULTS:** Body weight, waist circumference, arterial blood pressure, fasting glucose, triglyceride levels, high density lipoprotein levels, low density lipoprotein levels, total cholesterol levels, right and circumflex coronary artery diseases, frequency of male gender and family history were higher in metabolic syndrome group. Total postoperative drainage, need for fresh frozen plasma, ventilator time, need for insulin infusion, postoperative myocardial infarction, pneumonia and other infections, length of intensive care unit staying time, hospital staying time and early mortality were higher in the metabolic syndrome group comparing to the other group.
**CONCLUSION:** Patients with metabolic syndrome have increased risk for early postoperative morbidity and mortality in coronary artery bypass grafting operations.
**REF0685**

# FROM INTERVENTION TO SURGERY IN CORONARY ARTERY DISEASE

## O47 - MIDTERM ANGIOGRAPHIC RESULTS OF OFF-PUMP CORONARY ENDARTERECTOMIES

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**OBJECTIVE:** Endarterectomy during off-pump technique (OPCAB) is not a foreseen but inevitable application in cases of plaque disruption or insufficient lumen diameter found right after arteriotomy.
**MATERIAL-METHODS:** Twenty patients, who had endarterectomy during OPCAB procedure in our clinic, were involved in this study. Control angiographies were performed and preoparative, perioperative and postoperative data are evaluated statistically. The mean time interval from operation to control angiographies was 29,2±22,59 months Endarterectomy was performed at the left anterior descending artery in eleven, at the circumflex artery in three, at the right coronary artery in five patients, and both circumflex artery and right coronary artery in one patient. In seven patients, a long segment anastomosis was performed. Mean diameter and endarterectomy lenght of the vessels were 1,37±0,39 mm and 29±25,42 mm, respectively. During the early postoperative period; one patient had postoperative myocardial infarction, three patients had atrial fibrillation. Their postoperative follow-up was performed on the 10th day, 2nd month and every 6 months ever after.
**RESULTS:** Postoperative control angiographic studies of the 39 anastomosed grefts showed that 10 [ (10/39) %25] of them were occluded while 29 [ (29/39) %75] were patent. Also 6 [ (6/21) %28,5] of the 21 grefts received endarterectomy were occluded, while 15 [ (15/21) %71,5] of them were patent. On the other hand 4 [ (4/18) %22] of the 18 grefts whitout endarterectomy were occluded, while 14 [%78(14/18)] of them were patent.
**CONCLUSION:** Our study indicates that the patency rate of the by-pass grafts in endarterectomized vessels performed in OPCAB procedure is satisfactory. **REF0363**

## O48 - OFF-PUMP CORONARY ENDARTERECTOMY ON THE HIGH RISK PATIENTS

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**BACKGROUND:** Currently, coronary endarterectomy has a role as an adjunct to CABG, mainly in patients with diffuse coronary artery disease, to achieve more complete revascularization. We aimed to review our experience in off-pump endarterectomy in a group of patients with diffuse coronary artery disease and carrying high risk for cardio-pulmonary by pass,
**METHODS:** Thirty-two patients had a total of 38 off-pump coronary endarterectomy. Age ranged from 59 to 78 years (mean 69). There were 21 men and 11 women. Mean LVEF 38.6% (range24% – 55%). Pre- and intra-operative variables, and post-operative complications and mortality of these groups were analyzed.
**RESULTS:** Mean number of CABG grafts per patient was 2.6. The left internal mammary artery (LIMA) was used in 29 patients (81%). Arteries endarterectomy was done were RCA and its branches (18), LAD (15), diagonal branch (2) and circumflex system (3). The overall operative mortality rate was 3.1%. Per-operative MI occurred in 6.2%. Late follow-up was completed in 30 patients (93%). The mean follow-up period was 14+3.3 months. Late survival was 93%. Freedom from late cardiac events that required hospital admission was 89%. Freedom from PTCA to the endarterectomized vessel was 96%
**CONCLUSION:** Our findings supported that off-pump coronary endarterectomy can be performed with good results in patients with diffuse coronary artery disease and risk factors for CPB. **REF0007**

## O49 - READMISSON TO INTENSIVE CARE UNIT AFTER CARDIAC SURGERY

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**OBJECTIVE:** Hospital cost, morbidity and mortality rates can be reduced by decreasing the insidence of readmission to the intensive care unit.
**METHODS:** Between February 2005 and March 2006, 1124 patients urdergoing cardiac surgery at our institution have been reviewed retrospectively. Of all cases 28 patients who readmitted to the intensive care unit represented to be study group for subsequent analysis. The causes of readmission were identified by review the medical records of each patient.
**RESULTS:** The rate of ICU readmission was %2,5 (28 patients).
Among 28 cases, 2 of them died because of low cardiac output. The mortality rate in this group was %7,14 in 30th hospitalization days, while this rate was %1,1 in patients with uneventful postoperative course ($p < 0.001$). Multivariate analysis revealed the presence of renal failure and chronic obstructive pulmonary disease on inedependent risk factor for ICU readmission.
**CONCLUSIONS:** After cardiac surgery, ICU readmission is associated with increased mortality rates and hospital cost. In patients with preoperative course should be managed more carefully and the necessary measures should be taken to prevent ICU readmission. **REF0573**

## O50 - PROLONGED STAY IN INTENSIVE CARE UNIT AFTER CORONARY ARTERY BP-PASS SURGERY: MORBIDITY AND MORTALITY ANALYSIS

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**OBJECTIVE:** Several medical and/or surgıcal events have occured in patients that stayed in intensive care unit for a prolenged period after coronary artery by-pass surgıcal. In this retrospectıve study we revealed morbidty and mortalıty analysıs of that process.
**METODS:** Between February 2001 and December 2005 4316 patients undervent coronary artery by-pass surgıcal. 137 of them stayed in intensive care unit longerden than 72 hours. 53 of them were female(%39,3) and 84 male(%60,7) Avarage age was 62,63 +- 11,03. additional disease were as follows: Hypertaensıon 66 cases(%48,5) Diabetes mellitus 34 cases (%25) Peripharel artery disease 15 cases (%11,0) avarage TPT was 112,58 +- 53,72 min. And ACC time was 79,64+- 38,69 min. Mortalıty rate Pulmunary complıcatıons and cardiac arrrythmia were the most fracuent morbıdıty factors. Mortalıty read was %33(47 cases)
**RESULTS:** Older age, LMC lesion,peripheral artery disease diabetes mellitus and preoperative renal failure were statistically higher in patients died. Also Postoperative inotrophic support İABP support,prolenged entübation period, reentübation, and renal complications,and coronary artery greft number were factors effecting mortality.
**CONCLUSION:** In our retrospective study, multıvariate analysis with Backward Stepwise Logistik Regression revealed that diseased and grefted coronary artery number was the most effective factors in mortality.
**REF0586**

## O51-LATE OUTCOMES IN PATIENTS WITH UNCORRECTED MODERATE MITRAL REGURGITATION AT THE TIME OF ISOLATED CORONARY ARTERY BYPASS GRAFTING

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**BACKGROUND:** Mitral valve intervention combined with coronary artery bypass surgery (CABG) is inevitable in the case of severe mitral regurgitation in patients with coronary artery disease but the best treatment protocol for patients with a moderate degree of mitral regurgitation is under debate. We evaluated the progress of mitral regurgitation after isolated CABG in cases of ischemic mitral regurgitation.
METHODS: The study was conducted between June 1998 and Oct.2004. 14 patients (85% men, with a mean age of 56 years, a mean ejection fraction of 39.3%, and a mean NYHA class of 2.53) with preoperative diagnoses of moderate degree ischemic mitral regurgitation (Grade 2 mitral regurgitation on a scale of 0 to 4) and coronary artery disease underwent isolated CABG. Patients were followed-up at a mean of 48 months and an echocardiographic evaluation was done to determine the progress of the mitral disease.
**RESULTS:** In the postoperative period, the mean ejection fraction was 44.6% and the mean functional capacity of the patients was 1.31. Mitral regurgitation regressed to a mild degree in 57.1% of the patients. Grade of MR is unchanged after CABG in 5 (35.7%) patients with grade 2 ischemic MR. Post CABG–MR progression was present in 1 (7.2%) patients. No patient required subsequent mitral valve operation or other procedures in long-term follow-up.
**CONCLUSIONS:** We conclude that, in patients with moderate MR, isolated CABG (without mitral valve replacement or repair) suffices, producing dramatic improvement in ejection fraction, and in degree of MR, with good long-term survival.
**REF0129**

## O52 - COMPARISON OF RINGER'S SOLUTION WITH NORMAL SALINE FOR PERICARDIAL IRRIGATION DURING OPEN HEART SURGERY

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During heart surgery, approximately 1-2L of saline is used for irrigation and topical cooling and some of it is aspirated into the cardio-pulmonary bypass circuit. This study compared irrigation with Ringer's solution, which is closer in composition to plasma, to normal saline.
**METHODS:** 58 patients undergoing open heart surgery were divided into two groups. Group I (24 patients) were irrigated with Ringer's solution and group II (34 patients) were irrigated with %0.9 NaCl.
**RESULTS:** Groups I and II were similar to each other regarding mean age and cardiopulmonary bypass duration. The volume of slush ice (691±175 ml vs. 687±246 ml) and irrigation solution (660±232ml vs. 685±420ml) were also similar in groups I and II.
Analysis of blood hemotocrit, pH, sodium, potassium, osmolarity, and glucose at, induction of anesthesia, and at the beginning, during and end of perfusion did not differ between the two groups. The only significant difference was in blood ionized calcium content which was significantly lower in the saline group during and at the end of perfusion. Although the urine output during perfusion was similar for both groups, in the Ringer's group the use of frussemide and mannitol was signigicantly higher. Likewise, significantly more patients were treated with hypertonic %3 NaCl solution in the Ringer's group.
**CONCLUSION:** Preparation of irrigation and topical cooling solutions with Ringer's resulted in more physiologic calcium levels during and after cardiopulmonary bypass but more diuretics and hypertonic NaCl solution was required. These differences did not have a clinically important effect.
**REF0649**

## O54 - THE EFFECT OF L-CARNITINE ON MYOCARDIAL FUNCTION ON PATIENTS UNDERGOING CORONARY ARTERY BYPASS SURGERY

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**BACKGROUND:** Carnitine is an essential cofactor for fatty acid(FA) metabolism and the predominant source of ATP in the normal aerobic heart. During myocardial ischemia, FA metabolism is impaired and tissue carnitine levels are depleted. Since the heart cannot synthesize carnitine, carnitine could play an important role for myocardıal functıon during reperfusion.
**METHODS:** Twenty patients were selected who underwent elective coronary artery bypass surgery. GroupI (controlled group) included 10 patients and GrupII(study group) included 10 patients in groupI, with standart cold blood cardioplegia was used and in groupII, L-carnitine enriched cold blood was use.
**RESULTS:** There were no significant differences between myoglobin, CK, CK-MB and troponin-T which show myocardial damage between the groups. Cardiac output(CO) was found to be significantly high in the study group at the postoperative 1st hour (control group;4,93±0.08 and carnitine group 5.31±0,42;p<0,005), but after the six hour this significance was dissappeared in between the groups. No statistical difference was found between the two groups considering the CI values. Patients left ventricular stroke works(LVSW) were 45,62±0,56gxm in Grup1 after CPB and 69,7±28,2gxm in Grup2(p<0,05). Postoperative 1st hour LVSW values were 55,06±0,98gxm in Grup1 and 69,8±27,8gxm in Grup2(p<0,05). Right ventricular stroke works(RVSW) were 11,09±0,86gxm postoperative 1st hour in Grup1 and 13,4±4,5gxm in Grup2(p< 0,05).
**CONCLUSION:** L-carnitine enriched cardioplegia has no effect on normal left ventricular function. However L-carnitine has limited beneficial effect on the patients with poor left ventricular function who has preoperatively low EF, with longer cross clamp time, the patients who need complex surgery and for reoperations.
**REF0013**

# CORONARY ARTERY SURGERY: COMPLICATED SITUATIONS

## O55 - CABG IN AWAKE PATIENTS

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**OBJECTIVE:** In this study, our objective was to show advantages of coronary artery bypass operations under high thoracic epidural anesthesia (HTEA) and to show that coronary revascularization can be achieved with this technique as efficiently as in patients operated under general anesthesia.
**METHODS:** In our study we operated on 3 female 34 male patients under HTEA. Continuous epidural anesthesia infusion was provided with a solution composed of bupivacaine hydrochloride, lidocaine, fentanyl and sodium-bicarbonate. We performed 2 vessel CABG in 10 patients and 3 vessel CABG in one patient. Operations were performed through total median sternotomy in 15 patients, reversed-j inferior mini sternotomy in 19 patients and T-mini sternotomy in 3 patients.
**RESULTS:** In one patient, respiratory distress developed after the opening of right pleura and he was converted to general anesthesia intraoperatively. In one patient, after the completion of anostomoses ischemia was observed on ECG and patient was converted to general anesthesia and cardiopulmonary bypass. We did not observe any peroperative myocardial infarction, low cardiac output syndrome, any wound infection or sternal complications.
**CONCLUSION:** CABG operations in awake patients under HTEA has good early and midterm results. The procedure is quite cost-effective with short hospital stay and providing the return to work in a short time and might be a serious alternative against interventional cardiologic methods (stent applications) in the future.

**REF0172**

## O56 -REVASCULARIZATION IN THE PATIENTS WITH SEVERE LEFT VENTRICULAR IMPAIRMENT WHO HAVE ISCHEMIC HEART DISEASE

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**OBJECTIVES:** In patients with coronary artery disease and poor left ventricular (LV) function, bypass grafting remains a surgical challange. We assesed the effect of coronary bypass grafting on LV function, exercise capacity and symptom profile in patients with Left ventricular impairment and evaluated the role of the different factors in a retrospective study.
**MATERIAL-METHODS:** Forty-five patients (33 men,12 women, mean age 63,49±7.38 years) with left ventricular ejection fraction of less than 0,32 were admitted to our institution between November 2000 to Juni 2003 for coronary bypass operation. Preoperative and postoperative wall motion, functional class (New York Heart Assaciation) and risk factors were analyzed.
**RESULTS:** We had one perioperative mortality 2,2 %) and two early postoperative mortality (4,+ %) because of poor cardiac function. There was a significant increase mean Left ventricul ejection fraction from 26,64+5,17 to 37,56+6,45 ($p<0,001$) postoperatively. In this group the mean New York Heart Association grade improved from 2,07+0,76 to 1,5+0,79 ($p<0,001$). Preoperative functional class, congestive heart failure, arrhythmia, age, per/postoperative complications were the main predictors of poor outcome following surgical revascularization for ischemic cardiomyopathy.
**CONCLUSION:** In patients with severe Left ventricular impairment with myocardial hibernation, coronary artery bypass grafting improves both global and regional Left ventricular function and symptom profile. We therefore recommend coronary artery bypass grafting as an alternative to orthotopic heart transplantation whenever myocardial viability can be documented.

**REF0277**

## O57 - OFF-PUMP CORONARY BYPASS FOR BAD VENTRICLE

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**BACKGROUND:** In this study the results of off-pump bypass in patients with advanced LVD and without by-passable circumflex disease were retrospectively analyzed.
**PATIENTS AND METHODS:** Fifty-five patients with advanced LVD underwent off-pump coronary by-pass. Age ranged from 39 to 82 years (mean 62.3+8.4.). 42 patients (76.3%) were in class 3 or 4 (NYHA). Mean LVEF 23.8+5.1%. Pre-and intra-operative variables, and post-operative complications and mortality of the patients were analyzed. Mid-term follow-up was completed by contacting with telephone either to referring cardiologist or to the patients.
**RESULTS:** Mean number of CABG grafts per patient was 2.22+0.63. Eight coronary endarterectomy was achieved. Per-operative MI occurred in one patient (1.8 %). Mean postoperative blood loss was a of 425+ 50 cc. Early mortality was 3.6%. Two patients (3.6 %) supported with IABP. Ten patients (18.1 %) needed inotropic support. Significant improvement in ejection fraction, was observed in the postoperative course. Mean intensive care unit stay was 2.1+1.1 days and mean hospital stay was 7.2+1.3 days. The mean follow-up period was 21.8+6.2 months. Mid-term survival was 92.4 %. Freedom from cardiac events requiring hospital admission was 89.7 %. Most of the patients enjoyed symptomatic relief, however 16 patients (32.6 % of survivors) remained in class 3 or 4 (NYHA).
**CONCLUSION:** These results support the effectiveness of off-pump coronary bypass with good early and mid-term results in patients with ischemic cardiomyopathy and without by-passable circumflex lesion.

**REF0006**

## O58 - CORONARY BY-PASSS FOR BAD VENTRICLE; ADOPTION OF THE "HYBRID-PUMP" BYPASS

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**BACKGROUND:** The outcomes of on-pump and hybrid-pump bypass surgery in patients with depressed left ventricular function (EF<30%) were analyzed.
**METHODS:** 109 patients with preoperative left ventricular ejection fraction of <30% were randomized in a double blind fashion to undergo hybrid-pump (combination of off-pump and on-pump) procedure (54 patients), or on-pump coronary bypass (55 patients). Mean LVEF 24.4+4.8%. Pre-peri and postoperative variables were analyzed
**RESULTS:** The patients in hybrid-pump group received less graft than others, but difference was not significant and patients in on-pump group were required more endarterectomy. Duration of the surgery was not different statistically between hybrid-pump and on-pump groups. A longer intraoperative duration of ischemia and extra corporeal circulation was found in on-pump group. Significant improvement in the postoperative course such as less mechanical ventilation, less catecholamines and IABP usage, less ICU and hospital stay, less stroke, less need for hemodyalisis and most importantly less hospital mortality was observed in hybrid-pump group.
**CONCLUSION:** Shortening the CPB and myocardial ischemic time and avoiding related problems, adoption of hybrid-pump strategy, in patients with severely impaired LVEF and bypassable circumflex coronary disease results in better outcome than conventional on-pump bypass.
**REF0002**

## O59 - THE EFFECT OF NEBIVOLOL PRETREATMENT ON ISCHEMIA-REPERFUSION INJURY INDUCED BY CORONARY ARTERY BYPASS SURGERY

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**OBJECTIVE:** Nebivolol is a -blocker drug having antioxidant properties and preserves mitocondrial functions in oxidative stress. We evaluated that the effect of nebivolol pretreatment on myocardial ischemia-reperfusion injury in cases of coronary artery bypass surgery (CABG) by means of biochemical markers of myocardial injury.
**METHODS:** A total number of 32 patients undergoing isolated CABG surgery were randomized to receive nebivolol (group-I) or no betablocker drug (group-II) groups. In group-I, nebivolol (5mg/day) was started 7 days before surgery and continued up to the day of surgery. In group-II no beta blocker drug therapy was given prior to surgery. No statistical significant difference between groups regarding age, gender, diabetes mellitus, hipertension, myocardial infarction, unstable angina pectoris, EF% was present preoperatively. CK-MB and troponin-I levels were evaluated in blood samples gained preoperatively and posteperatively 1, 6, 12 and 24 hours preceeding the release of cross-clamp.
**RESULTS:** There was no difference between the groups regarding CK-MB and Troponin-I levels in serum samples obtained at the preoperative period and after 24 hours after the release of cross-clamp. In group-II, CK-MB and Troponin-I levels were significantly higher than the levels of group-I at 1., 6., and 12. hours later after the release of cross clamp ($P<0.05$).
**CONCLUSION:** Our results indicate that nebivolol pretreatment before isolated CABG significantly reduces myocardial ischemia-reperfusion injury. Further studies are needed for understanding through which mechanisms nebivolol serves antioxidant and mitocondrial protective properties.
**REF0312**

## O60 - CORONARY BYPASS SURGERY FOR PATIENTS YOUNGER THAN 40 YEARS OF AGE. PREOPERATIVE RISK FACTORS, GRAFT CHOICE AND EARLY RESULTS

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Nowadys, Coronary surgery has been perfoermed more often for the patients in young age group. We would like to present our surgical results and preoperative risk factors of 103 patients who underwent CABG operation between January 2001 and May 2006. Eighty seven of the patients were male and 16 of the female. The mean age was foun as 36 years (ranging: 29 - 40 years). Preoperative risk factors were as follows: cigarette smoking at 68 patients, hypertension at 44 patients, Diabetes Mellitus at 18 patients, obesity at 11 patients, family history at 14 patients and hyperlipidemia at 23 patients. No risk factor was observed at 34 patients. Elective surgery was performed for 97 patients. Six patients was operated with the diagnosis of acute miyocardial infarction in emergency conditions. Eight patients had off pump CABG, and 95 of 103 patients had on pump CABG. IMA (Internal Mammarian Artery) was anostomosed to LAD artery in 102 patients. Only one patient received Radail artery to LAD anostomse because of IMA damage. Radia artery was choosen as a graft material at 74 patients. Left Radial artery was preferred. Bilateral mammary artery was not used. For the multivessel bypasses saphenus vein graft was pointed as third choice at 68 patients. Mean cross clamp time 25 minutes (±8.3 minmutes). Mean cardiopulmonary bypass time was 48 minutes (±13.4 minutes). Three patients who underwent emergency coronary bypass surgey needed IABP support during weaning form CPB. Mean intensive care unit stay was 23.4 hours (±8.5 hours) and mean hospital stay was 6.4days (±2.1 days). No hospital mortality occured at the early postoperative period. Three patients was required resternotomy for bleeding. Intensive cardiologic screening tests revealed more younger patients with coronary artery disease who need surgical intervention. Arterial graft must be the first choice for patients in this age group.
**REF0289**

## O61 - OUR RESULTS OF OFFPUMP CORONARY ARTERY BYPASS SURGERY

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**PURPOSE:** in recent years in the course of mechanic and technologic improvements the off-pump coronary artery surgery (OPCAB) has become an operation being increasingly utilized against conventional CABG. In the present study we aimed to assess the outcomes of our 270 OPCAB patients who were operated in our clinic within the last five years under the light of preoperative, perioperative and postoperative data.
**METHOD:** 270 patients who received OPCAB were included in the study prospectively between January 1999 and May 2006. In patients an Octopus II and III tissue stabilizer and in a group of patients (n=96) a Starfish cardiac position provider system were used. While patients are given Trendelenburg position (particularly Cx and PDA anastomoses) pericard was enlarged over Vena Cava Inf. LIMA, RIMA, radial artery and safen vein were used as grafts. First, LAD anastomosis was performed. Primarily distal bypasses were performed except for selected cases.
**FINDINGS:** during control angiographies the clearance rates of 67 patients who completed one year were found as LITA 97.5 %, RIMA 100 %, Radial artery 96.2 % and Safen vein 90 %.
**RESULTS:** with the increases in experience, accelerated technological developments, appropriate hemodynamic monitorization and initiation of early pharmacological support with the help of it, coordination of an anesthetist and stable and reliable position providing systems, OPCAB has become a method that can be used successfully in complete revascularization.
**REF0419**

## O63 - FACTORS AFFECTING MORBIDITY AND MORTALITY AMONG CORONARY ARTERY BYPASS GRAFTING PATIENTS ABOVE 70 YEARS OF AGE

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**BACKGROUND:** Average age of patients having CABG operation is continually increasing. Elder patients have higher mortality and different risk profiles.
**METHOD:** Between January 1993 and December 2002, 581 patients above age of 70 had CABG operation. We retrospectively analyzed their perioperative data and obtained their late follow up.
**RESULTS:** Patients were predominantly male(75.2%). Hospital mortality was 12.1 % for group. Univariate analysis identified that age, smoking, diabetes, hypertension, renal failure, coexisting carotid disease, unstable angina, prior MI, LMCA disease, low EF, urgent operation, incomplete revascularization, not using ITA graft, and CPB duration as perioperative risk factors that affect the mortality.
On multivariate logistic regression analysis however, age, smoking, postoperative low cardiac output state, need for IABP, urgent operation, postoperative neurological and renal complications were identified as independent risk factors that affect the early mortality. Multivariate Cox regression analysis identified renal failure, USAP, postoperative IABP need and emergence of any late complication during follow up as independent risk factors for late mortality. Five year survival rate of this patient group was 79.1% and complication free 5 year survival rate was 45.5%.
**CONCLUSION:** Coronary artery bypass grafting operation has relatively high mortality and late complication rates among patients over 70 years when compared with younger patient groups. However CABG can be performed safely among these patients and recent advances on surgical management will provide better results. **REF0527**

## O64 - SEQUENTIAL CORONAY ANASTOMOSIS WITH THE ARTIFICIAL Y-GRAFT USING SIDE BRANCH OF SAPHENEOUS VEIN GRAFT

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**Background:** Sequential coronary anastomosis is a technique of choice in patients with multivessel coronary disease.However, the graft patency is directly related to anastomosis technique. We here report our novel sequential anastomosis technique using side branches of saphenous vein.
**Methods:** From February 2006 to May 2006, we reviewed the postoperative course and the graft patency of 22 selected patients who underwent sequential coronary anastomosis using our novel technique. All patients were evaluated clinically and by postoperative coronary angiography for patency rate.
**Results:** There were no early or late deaths during the mean follow-up period of 55.6 ± 27.7 days (range, 14-110 days). Postoperative coronary angiographies of all patients showed the 100% patency rate for sequential anastomosis using side branch of saphenous vein graft.
**Conclusions:** This technique appears to be useful in selected patients such as multivessel coronary disease who need sequential anastomosis. Further experience is needed to verify its safety and efficacy.
**REF0627**

## O65 - IS CREATININE LEVEL A PREDICTOR IN EARLY MORTALITY FOR PATIENTS WITH RENAL DYSFUNCTION AND UNDERGOING CORONARY ARTERY BYPASS SURGERY?

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**BACKGROUND:** We investigated the dialysis requirement in postoperative period and its association with the levels of creatinine in patients with renal dysfunction and undergoing on pump coronary artery bypass surgery.
**PATIENTS AND METHODS:** A number of 121 patients undergoing coronary artery bypass surgery with renal dysfunction( but who did not require dialysis before) were enrolled in the study. The patients were allocated into two groups. In Group A creatinine levels were between 1.4 and 2.5 mg/dL (n=84), in group B creatinine levels were greater than 2.5 mg/dL (n=37). In postoperative period, fluid balance, creatinine levels and dialysis requirements were compared between the groups.
**RESULTS:** Creatinine clerence was higher in group A (55.2±21.7 ml/min versus 25.7±11.1 ml/min, $p<0.05$). In group A there was 14 (16.7%), in group B there was 17 patients(45.9%) who require intra/postoperative dialysis treatment. The number of deaths in groups A and B were 6 (7.1%) and 2 (5.4%) respectively. In 6 patient who died there was a requirement of dialysis treatment(4 in group A- 28.6%, 2 in group B-11.8%). There was not a statistically significant difference between mortality and creatinine levels($p=0.067$). In overall, there was a statistically significant difference between dialysis treatment requirement and mortality($p=0.004$).
**CONCLUSIONS:** We found a correlation between requirement of dialysis and mortality however there was no correlation between creatinine level and mortality. We believe that taking precautions to minimize dialysis requirement in preoperative, intraoperative and postoperative periods but maintaining dialysis treatment immediately when indicated will reduce mortality rate. **REF0380**

## O65A - WHICH ONE COULD BE THE METHOD OF CHOICE FOR MULTIVESSEL CORONARY DISEASE: CABG OR PCI?

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We think that the patient cohorts of randomized clinical trials comparing the results of percutaneous coronary interventions, including drug eluted stents, versus coronary bypass surgery for multivessel coronary artery disease have not been adequately questioned. We present this review to gain the attention of the society to this poorly discussed point.
CABG and PCI are modern revascularization methods for coronary artery disease. CABG has a history reaching almost 50 years, where PCI techniques are increasingly in practice since 15 years. Data from past studies have standardized these methods. Limits and capabilities of both methods are well defined. Due to developing devices and knowledge, number of their indications are increasing everyday. Although CABG and PCI have been defined for specific patient groups, cases with multivessel disease represent the "grey zone" between invasive cardiologists and cardiac surgeons. The results of many recent "randomized clinical trials" document that new stent techniques, including DES, are going to replace CABG for multivessel coronary artery disease. Despite their presentation, most of those trials, which are almost always written by cardiologists, are far away from being "randomized", and their conclusions seem to be subjective. We have questioned these trials and their results. We think that stent techniques are excellent treatment methods in selected cases but CABG is still the gold standard for multivessel coronary disease. We have also compared and discussed long term results and costs of both techniques. **REF0383**

# CARDIAC PHARMACOLOGY

## O66 - THE EFFECT OF ASPIRIN ON ADHERENCE OF SLIME PRODUCING COAGULASE NEGATIVE STAPHYLOCOCCI TO VASCULAR GRAFTS

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**INTRODUCTION:** In this study, we examined the adherence of slime producing standard S.epidermidis strain ATCC 12228 to Dacron and PTFE grafts in in vitro media containing either salicylate or not.
**MATERIAL-METHODS:** Dacron and PTFE graft pieces of standard size were placed in trypticase soy broths containing either 5 millimolar (mM) acetylsalicylic acid solution or not. These soy broths also contained 1x107 CFU/ml S. epidermidis ATCC 12228. The incubation period lasted for 18 hours at 37°C. The bacteria on the graft were freed by worteksing. The obtained bacteria suspension was serial diluted. Afterwards, the obtained suspension was plated on 5 % sheep blood agar, and counted after overnight incubation.
**RESULTS:** In this study, we demonstrated that aspirin of an ideal concentration (5 mM) decreased the adherence of slime producing S.epidermidis strain to Dacron and PTFE grafts. The mean number of colonies was significantly lower for both Dacron and PTFE groups in salicylated medium.
**CONCLUSIONS:** We believe that aspirin provided in the post-operative period can, by maintaining the ideal serum level, decrease graft infections emerging due to coagulase negative staphylococcus.

**REF0055**

## O68 - REDUCED CYTOKINES RELEASE AND MYOCARDIAL DAMAGE IN CORONARY ARTERY BYPASS PATIENTS DUE TO PROSTAGLANDIN-I2 CARDIOPLEGIA SUPPLEMENTATION

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Our prospective randomized study on CABG patients investigates the effect of Prostaglandin-I2 on myocardial stress as expressed by myocardial cytokines release and ischemia.
CABG patients were randomly assigned to receive Prostaglandin-I2 in cardioplegic solution in Group A and standart blood cardioplegia in Group B as control. Blood samples were collected from the retrograde coronary sinus catheter to determine interleukin-6, interleukin-8, tumor necrosis factor and leucocyte counts for the evaluation of inflammatory responses and troponin and CK-MB levels as myocardial ischemia markers, before the initiation of cardiopulmonary bypass, after cross clamping of the Aorta and after the opening of the cross clamp.
25 patients have been enrolled (group A, treated with Prostaglandin-I2, n = 15; group B, control, n = 10). There was no difference between the groups in terms of age, gender, body mass index, severity of coronaryl disease, ejection fraction or the presence of concomitant diseases. Operation times, total cardiopulmonary bypass and Aortic cross-clamping durations were also similar in both groups. Among the inflammatory markers, IL-6 and TNF levels have shown no statistically significant difference. On the other hand, IL-8 levels were significantly lower in group A ( p = 0.001). Myocardial ischemia markers have shown no statistically significant difference.
CABG patients may benefit from Prostaglandin-I2 cardioplegia supplementation in terms of reduced inflammatory reaction giving way to a reduction in myocardial ischemia-reperfusion injury, and better hemodynamic performance. Moreover, a clinical advantage is evident in terms of a faster recovery in cardiac performance in patients treated with Prostaglandin-I2.

**REF0598**

## O71 -AN ALTERNATIVE TREATMENT OPTION AT THE TERMINAL CRITICAL LIMB İSCHAEMIA WITH İNTRAVENOUS İLOPROST İNFUSION

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**OBJECTIVES:** Iloprost is the first stable analoque of prostacyclin, initially demonstrated its efficiency in the treatment of arterial vazospastic disorders, Buerger's disease and arteriosclerosis. The aim of the study is to investigated the role of iloprost treatment on ulcer healing, pain relief, limitation of necrosis, rates of amputation in critical limb ischaemia patients who were not suitable for the arterial revascularization.
**METHODS:** We present a prospective analysis of 34 consecutive patients with critical limb ischaemia unsuitable for revascularization who were treated with iloprost between January 2004 and December 2005. The population consisted of 30 men and 4 women, mean age 51.11±14.17 years. Ethiological reasons are: I-diabetic ulcer (n=14), II- Buerger's Disease (n=14), III- peripheric oclusive disease, IV- Raynaud's disease. All patients were treated with iloprost 28 days at a maximum dose of 2ngr/kg/min. Patients were followed-up clinically (ischemic pain, trophic change, walking distance and ulcer healing).
**RESULTS:** Response at 6 months is lasting: One major and 4 minor amputations, all responded patients were totaty escape from the ischemic pain, they have no need for the analgesics anymore. All ulcers were healed in the reponded group. There were no mortality.
**CONCLUSION:** Iloprost therapy is effective in patients with severe critical limb ischaemia who were inoperable. Iloprost controbutes to healing of trophic lesions by regulating microcirculation, relieves the resting pain and decreases the incidence of amputation and general mortality.

**REF0332**

# NEW APPROACHES IN THE TREATMENT OF PERIPHERAL ARTERIAL DISEASE

## O75 - IS CAROTID ENDARTERECTOMY NECESSARY IN CONCOMITANT CAROTID AND CORONARY ARTERY DISEASE

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**INTRODUCTION:** Considering its importance as a cause of stroke, associated carotid artery lesions in patients undergoing coronary artery bypass surgery constitute a challenge for the surgeon. In this study, we aimed to compare the clinical outcomes of two different management modalities in such patients.
**MATERIAL-METHODS:** Between June 2002 and May 2006, 79 patients with concomitant carotid and coronary artery disease were enrolled in the present study. While group 1 patients (n=29) underwent a coronary arterial revascularization procedure using beating heart technique without an intervention to their carotid lesions; group 2 patients (n=50) underwent simultaneous operations. Clinical outcomes of these two different approaches were assessed.
**RESULTS:** Demographic data and preoperative hemodynamic parameters were comparable in both groups. Mean percentage of the maximum stenosis was similar in both groups (79±13 and 83±8.8, respectively). Mean number of grafts were higher in group 2 patients (1,6±0,6 vs. 2,3±1,0; p=0.001). Cardiac related complications and in hospital mortality were similar between the groups; however, neurological complications were more common (0% vs. 22%; p=0.006) and the mean duration of hospital stay was longer (5,3 ± 2,7 vs. 10 ± 8,3 days; p=0.001) in group 2 patients.
**COMMENT:** In patients with pre-existing asymptomatic carotid artery disease, off-pump coronary artery revascularization alone was associated with low neurological morbidity compared to simultaneous operations. Nevertheless, further randomized clinical trials with larger groups are warranted in order to validate this controversial issue. **REF0376**

## O76 - INTERNAL CAROTID ARTERY TOTAL OCCLUSION AND CARDIAC SURGERY

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**BACKGROUND:** Severe carotid artery disease is an important factor for increased morbidity and mortality during cardiovascular operations. However the effect of total carotid occlussion on morbidity and mortality during cardiovascular opeartions is still not clear.
**METHODS:** 62 patients who has one sided total occlussion underwent cardiac surgery between 1997 and 2006. 59 of these patients underwent coronary artery bypass (CABG) grafting. Other operations were; aortic valve surgery in one patient, mitral valve surgery in two patients, double valve replacement and CABG in one patient, tube graft interposition between ascendan aorta and truncus brachiocephalicus and CABG in one patient. Thirteen patiens underwent carotid endarterectomy for contralateral ICA stenosis.
**FINDINGS:** Six patients had cerebrovascular accident during early postoperative period (9.67%). Two of the patient with right ICA occlussion had left sided hemiplegia and another had facial paralysia after CABG. One patient with left ICA occlusion and underwent right ICA endarteractomy eight months before had right sided central facial paralysia after CABG. Two patients with left ICA occlusion had cooperation and orientation problems after operation. Three patients died in the early postoperative period due to cardiac, renal and pulmonary complications (4.83%). One patient with right ICA occlusion and underwent CABG six weeks ago, readmitted to the hospital with left hemiparesia. He died due to multiorgan failure. The rate of both the morbidity and mortality in the late postoperative period were silimar (1.69%).
**RESULTS:** Total occlusion of ICA might be a potential source of morbidity and mortality during cardiovascular operations. **REF0684**

## O77 - SIMULTANEOUS CAROTID ENDARTERECTOMY AND CARDIAC SURGERY

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**BACKGROUND:** The occurrence of severe carotid artery disease in patients requiring CABG represent a high-risk population whose management remains controversial. This study reports carotid artery repair under cross clamp with hypothermia in 26 patients.
**METHODS-RESULTS:** Between February 2001 and April 2006 26 patients (19 men and 7 women, mean age 68.7) were admitted at the Department of Cardiovascular Surgery of Gaziosmanpasa Safak Hospital for coronary artery bypass graft and carotid endarterectomy (CEA). Carotid endarterectomy was done under cross-clamp after termination of the distal coronary anastomoses. The mean cardiopulmonary bypass time was 95.2 minutes and aortic cross-clamp time 75.3 minutes, and the mean number of grafts per patient was 3.2. The hospital mortality was 2 and 1 patient had perioperative neurological complication of permenant deficit.
**CONCLUSION:** Simultaneous carotid endarterectomy and cardiac surgery can be performed with an acceptable risk for neurological complications and mortality. On-pump intervention with hypothermia may be more protective for neurologic outcome. **REF0571**

## O78 - SHUNT DECISION WITH REGIONAL CERVICAL BLOCK IN CONTRALATERAL CAROTID ARTERY STENOSIS

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**OBJECTIVE:** The surgical outcome in patients with contralateral total occlusion may vary greatly. The surgical success is usually reduced in this patient group. Some clinics routinely apply shunts to this type of patients. This study aims to facilitate the decision for shunt requirement during carotid endarterectomy (CEA) with regional cervical block (RCB), and to demonstrate that shunt-related complications are evaded.
**METHODS:** A total of 74 patients (50 male(8 Bilateral) and 24 female(4 bilateral)) underwent 86 CEA between October 2001 and may 2006 in our clinics. The contralateral carotid arteries were normal in 30 patients, less than 45% stenotic in 10 patients, 45-70% stenotic in 10 patients, up than 75% stenotic in12 patients and totally occluded in 12 patients. The decision for surgery in these patients was rendered by MRI-angiography, or digital subtraction angiography (DSA). 21 patients were asymptomatic while 47 patients were symptomatic. All patients with contralateral total occlusion were symptomatic. All CEA were performed using LRB with systemic heparinization, ECG, and invasive blood pressure monitoring. The arterotomy was routinely closed primarily with 6/0 polypropylene. Hemovac drains were placed in all patients, postoperatively. During the surgery, the anaesthesiologist asked certain questions and started conversations in order to check the motor and consciousness states of the patients during arterial clamping.
**RESULTS:** Shunt wasn't used in any patients, including the contralateral total occluded patient group. No perioperative neurological deficit developed in any patient. No postoperative mortality was observed. Temporary haematoma developed in one patient, and temporary facial paresia was observed in three patients. Confusion developed in one patient 12 hours postoperatively, but using medical therapy, no irreversible sequels developed in this patient. 14 patients received CABG, postoperatively. The mean arterial clamping time was 10 to 25 minutes (average: 12 minutes).
**CONCLUSION:** The decision for carotid shunt during CEA is easier in conscious patients under RCB. RCB can be safely applied in all patients with isolated carotid artery stenosis. Thus, the complications of general anaesthesia may be avoided. **REF0082**

## O79 -DIAGNOSIS AND TREATMENT OF CAROTID BODY PARAGANGLIOMA

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**OBJECTIVE:** Carotid body tumors are usually benign in origin and their resection is a challenging process due to their localizations, invasions to cranial nerves and major arteries. The aim of our study is to evaluate the surgical strategy and operative results of our patients.
**METHODS:** Between 1985and 2006, eight patients with carotid body paraganglioma were operated in our center. Preoperative, peroperative and postoperative data were evaluated retrospectively. Seven patients were female and the age average was between 38 and 65 years. According to Shamblin classification, five tumors were type 2 and the other three were type 3.
**RESULTS:** In five cases subadventitial tumor excision was performed. The carotid artery was repaired with polytetrafluoroethylene (PTFE) graft in Shamblin type 3 of three cases. After a median follow-up of 36.4 months (range 1 months to 108 months), there was no sign of tumor recurrence any of the cases.
**CONCLUSION:** Surgical excision is the best treatment option for patients with carotid body ganglioma. Especially in severe cases care has to be taken not to damage adjacent neural structures. **REF0264**

## O80 - INFRAPOPLITEAL ARTERIAL RECONSTRUCTION: MID TERM RESULTS

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**PURPOSE:** To analyze patency and amputation rates following infrapopliteal arterial reconstruction.
**METHODS-MATERIAL:** 44 (40M-3F) patients that an infrapopliteal arterial reconstruction between Feburary 2003-May 2006 were analyzed retropectively. In 40 patients a below knee bypass procedure could be performed using the saphenous vein, in 4 patients a bypass was not possible and embolectomy and patch plasty was performed. 14 of the patients (32%) had a previous arterial reconstruction procedure. A proximal aorto-femoral or ileo-femoral bypas was performed in 14 patients (%32) in addition to the distal bypas procedure. In 23 patients (%53) proximal anastomosis of the graft was to either a popliteal grafte, popliteal artery or distal süperficial femoral artery. All patients were examined postoperatively with Doppler ultrasound.
**RESULTS:** Only one patient with acute leg ischemia following CABG died postoperatively. Below knee leg amputation was performed in 2 of the 4 patients in whom a distal bypass could not be performed and 5 patients had foot level amputations for gangrenous tissues following bypass. 4 patients developed early graft occlusion in 3 patients graft patency was reinstated. 8 patients developed graft occlusion during follow-up. Primary patency rate at 1 year was calculated at 68%. A popliteal or superficial femoral arterial proximal anastomisis and presence of diabetes were independent risk factors for graft occlusion
**CONCLUSION:** A below knee arterial reconstruction procedure may prevent amputation in most patients with advanced peripheral arterial disease complicated with multiple previous procedures. Mid term patency rates reflect the advanced disease state of these patients. **REF0657**

## O81 - THE ROLE OF ANTI-ENDOTHELIAL CELL ANTIBODIES IN DEVELOPMENT AND FOLLOW-UP OF CORONARY AND PERIPHERIC ARTERIAL OCCLUSIVE DISEASES

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**BACKGROUND:** Occlusive lesions in the arterial endothelium are often caused by intimal hyperplasia and fibrinoid necrosis formation. The aim of this prospective study was to investigate the association between anti-endothelial cell antibodies (AECA) and development of coronary and peripheral arterial diseases.
**METHODS:** In this study, 94 patients with peripheral and coronary artery disease and 94 healthy volunteers serving as controls were examined. Frozen sections of human umbilical cord (HUVEC) and monkey smooth muscle cell were used to detect existence of AECA.
**RESULTS:** AECA was positive in 52 of 94 patients (55%) in the patient group, and in 15 of 94 volunteers (16%) in the control group (P =.00001).
**CONCLUSION:** Tissue damage in the endothelial structure is the major factor in arterial diseases.In the current study we found a statistically significant relationship between AECA and coronary/peripheral arterial diseases. AECA have been identified as a risk factor in coronary/peripheral arterial diseases. According to our study, AECA may be used as reliable parameters for predictive and prognostic aims. Further studies with additional large numbers of serum samples are under way. **REF0578**

## O82 - MONITORIZATION OF THE SEVERITY OF SYMPTOMPS BY CONSERVATIEVE MEDICAL THERAPY IN REYNAUD PHENOMENON

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**OBJECTİVES:** Paliative therapy is usually preferred in the treatment of reynaud phenomenon(RP).İn this study,it was aimed to evaluate the efficiency of the two different treatment modalities and alterations in the subjectivesymptomps of the patients with RP by visual analagous scale(VAS)
**METHODS:** Hundered twentysix(126 ) patients were enrolled in this study between january 2002 and october 2005.patients were warned to avoid smoking,cold exposure and to use gloves in cold seasons.Patients were divided in to two groups.Nifedipine 30 mg,acetyl salicilic acid 100 mgand pentoxyphylin 400 mg(three times a day)were given to group 1.Nifedipine 30 mg and acetyl salicilic acid 100 mg were given to group 2.VAS was performed for each patients in the first,15th,30th,60th,90th and the end of 6th month of the treatment.The mean VAS values of the patients are shovn on the table 1 First day 15th day 30th day 60th day 90th day 6th month
Group 1 7.0 6.0 5.5 4.0 3.0 1.0
Group 2 7.0 7.0 6.0 4.0 3.0 2.0
**RESULTS:** Mean VAS values during the whole follow-up period are equal in both groups.More than 95% improvement of symptomps have been detected in 80% of patients in group 1 and 70% of the patients in group 2.
**CONCLUSİONS:** VAS appears to be useful method to monitarize the response to the symptomatic therapy for RP.Finally,monitarization of the symptomatic therapy response may increase the Professional satisfaction. **REF0084**

# DIABETES AND DIABETIC HEART DISEASE

## O86 - CHANGES IN STERNAL VASCULARITY OF DIABETİC PATİENTS AFTER INTERNAL MAMMARY ARTERY HARVEST: FOLLOW-UP WITH SINGLE PHOTON EMISSION COMPITURIZED TOMOGRAPHY

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**OBJECTIVES:** İnternal mammary artery (IMA) is the major arterial supply of sternum. We evaluated the changes in vascularity of sternum after LIMA harvest in diabetic and non-diabetic patients.
**MATERAI AND METHODS:** This study includes 18 patients undergoing elective CABG. Nine patients were diabetic (Group I) and 9 were non-daibetic İMA (Group II). Scintigraphic images with Tc 99 m-MDP were taken from all patients at three time points; preoperativelly, at postoperative4-7 days and about 18 months after the operation. Quantitative changes in sternal vascularity is evaluated.
**RESULTS:** Acute ischemic period for sternal vascularity was detected early after the LIMA harvest for all patients. However, at longer follow-up ischemic sternal vascularity resolved but, overall never reached to the baseline values (0.890±0.086, 0.740±0.121, p=0.008). There were no significant difference between diabetic and non-diabetic patients (p=0.931). Right hemisternal vascularity resolved comletely at 18 months for both groups (0.861±0.111, 0.848±0.02, p=0.72).
**CONCLUSION:** Sternal vascularity decreases in ipsilateral sternal half after İMA harvest. However, altered vascular autoregulation does not affect sternal vascularity in diabetic patients. **REF0570**

# PULMONARY PHYSIOLOGY AND PULMONARY HYPERTENSION

## O88 -MIDTERM RESULTS OF UNIDIRECTIONAL VALVE PATCH TECHNIQUE IN CLOSURE OF LEFT TO RIGHT SHUNTS WITH SEVERE PULMONARY HYPERTENTION

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**BACKGROUND:** Mortality and morbidity after closure of large septal defects with severe pulmonary hypertension (PH) and bidirectional shunt is very high. The unidirectional valve patch (UDVP) technique by permitting right side decompression in early postoperative period, improves operative outcome in these patients.
**METHOD:** During 1997- 2003,27 patients ( mean age 8.5 years ) with near or suprasystemic PH (mean PA/Ao pressure 0.92 ) and systemic desaturation (mean Ao sat 0.86) secondary to large VSD, ASD, or AP window, were operated by this technique. Some of these patients were labeled as inoperable since many years before.
**RESULTS:** There was one early mortality (9months old baby with AP window) with no late death. Right to left, but no left to right, shunting via UDVP was documented by echocardiography in 4. There was significant decrease in PA pressure after surgery ( mean PA/AO pressure 0.42 ). Postoperative course was smooth in most of the patients with mean ventilator time 19.5, intubation time 22.4, ICU stay 58.6 hour (2.4 days ),and hospital stay 8.5 days. Only one patient needed epinephrine for maintaining acceptable blood pressure and cardiac output.
**CONCLUSION:** Unidirectional valve patch is functional and effective in decompressing right side and controlling pulmonary hypertensive crisis after closure of large left to right shunts with very high PA pressure. However for determining actual survival rate and evaluating functional capacity in these patients, longer follow up is needed. **REF0087**

## O90 -PROTECTIVE EFFECTS OF ILOPROST ON CARDIOPULMONARY BYPASS INDUCED LUNG INJURY

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**OBJECTIVE:** Iloprost a prostacyclin analogue with a prolonged plasma half-life has beneficial effects in chronic pulmonary hypertension, but their effects in acute lung injury is not well known. We investigated whether iloprost infusion through pulmonary artery during aortic clamp period prevents pulmonary dysfunction after cardiopulmonary bypass by measuring inflammatory cytokine levels (IL-1, IL-6, IL-8, TNF-), white blood cell counts from left atrium and lung biopsies.
**METHOD:** 20 patients undergoing CABG operation were divided into two groups. The study group received iloprost (2 gr/kg/min) through pulmonary artery during aortic cross-clamp period, whereas the control group underwent a standart CABG operation. Blood samples were collected from left atrium through right superior pulmonary vein before commencing CPB, at the 5th, 20th minutes of aortic cross-clamp and after weaning from bypass. Blood for white blood cell counts and lung biopsy specimens were collected after weaning from bypass.
**RESULTS:** IL-1 levels after weaning from CPB were significantly lower in the study group (0.87±0.16 vs 1.17±0.24, p<0,05). IL-6 levels were also significantly lower in the study group (84.0±22.2 vs 120.2±58.2, p<0,05). IL-8 levels were found to be significantly lower both at the 20th minute of aortic clamp and after CPB (30.2±9.1 vs 41.3±13.8 and 41.3±13.8 vs 131.2±38.6, p<0,05). TNF- levels were also significantly lower in the study group after CPB (78.8±15.9 vs 111.4±34.3, p<0.05). WBC counts were found to be significantly lower in the study group (12940±1755 vs 14770±1829, p<0,05). Lung biopsy specimens showed marked inflammatory response in control group.
**CONCLUSION:** Iloprost infusion via a cathater introduced through pulmonary artery, during aortic cross-clamp period decreases the inflammatory response and acute lung injury after CPB. **REF0329**

## O91 - COMPARISON OF İNTERPLEURAL VERSUS EPIDURAL ANALGESIA WITH ROPIVACAINE FOR POSTTHORACOTOMY PAIN AND RESPIRATORY FUNCTIONS

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**PURPOSE:** Although thoracic epidural analgesia is considered as the best choice for postthoracotomy analgesia, it may not be suitable for every patient as it is associated with some risks and side effects. The aim of this study was to evaluate the impact of interpleural analgesia on postthoracotomy pain and respiratory functions as an alternative to thoracic epidural analgesia.
**PATIENTS AND METHODS:** Between May 2002 and August 2005, 60 young patients scheduled for elective thoracic surgery(correction of aorta coarctation and patent ductus arteriosus) were allocated in this prospective randomised study. The patients in interpleural analgesia(IP) group (n = 30) had a catheter inserted between the parietal and visceral pleura by a surgeon, and 0.2% ropivacaine was given through this catheter. In thoracic epidural analgesia group (TEA), ropivacaine was administered through a thoracic epidural catheter. The impact of both methods on pain control, respiratory functions, and pulmonary complications were analyzed and compared.
**RESULTS:** The incidence of atelectasis and pleural effusion was also significantly high in interpleural analgesia(IP) group (p<0.01). Respiratory functions and postoperative pain score were better in thoracic epidural analgesia group (TEA) (p<0.01). Arterial blood gas analysis in the 5th postoperative day were significantly better in TEA group.
**CONCLUSIONS:** We conclude that thoracic epidural analgesia has more beneficial effects on the respiratory functions and postoperative pain after thoracotomy and it is beter than interpleural analgesia.**REF0403**

### O92 - ALTERATIONS IN BRONCHIAL NITRIC OXIDE RELEASE AND PULMONARY FUNCTION AFTER CARDIOPULMONARY BYPASS IN PATIENTS WITH NORMAL AND DECREASED RESPIRATORY CAPACITY

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**OBJECTIVE:** The aim of this study is to evaluate the pulmonary function and define the alterations in bronchial NO release in correlation with the vascular endothelial NO release in patients with normal and decreased respiratory capacity.
**METODS:** 40 patients with coronary artery disease were involved in this study, the first 20 patients had normal pulmonary functions preoperatively the patients with decreased respiratory function was involved in the second group. All the patients are operated with conventional CABG technique. Endotracheal Aspiration (ETA) samples and plasma samples were obtained just after the entubation in the operating room, at the end of the CPB and and at the postoperative 3th hour in the ICU unit, from all of the patients. The NO levels were determined with Nitric Oxide Colorimetric Assay ( Roche Molecular Biochemicals, Mannheim-Germany) in serum and bronchial samples. The respiratory functional status, bronchial NO release and vascular NO release was evaluated peroperative and postoperatively.
**RESULTS:** The NO levels in plasma and bronchial samples were decreased gradually in both groups. The decrease in the respiratory capacity was higher in the patients with poor respiratory function preoperatively. There was a correlation between the serum and the bronchial NO levels and an inverse correlation with the NO levels and the respiratory capacity.
**CONCLUSION:** The vascular and the bronchial release of NO gradually after CPB, the respiratory capacity also decreases after the CPB showing an inverse correlation with the NO levels. **REF0426**

### O93 - EFFECT OF INTERNAL MAMMARY ARTERY HARVESTING TECHNIQUES ON PULMONARY FUNCTION

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**BACKGROUND:** Although it impairs the pulmonary functions, internal mammary artery harvesting-with pedicle or skeletonized- has been proved to have better long term outcomes. Even if there is no full consent, some reports exist insisting on the advantages of skeletonized LIMAs to lessen postoperative pulmonary dysfunction. Our aim was to compare postoperative respiratory functional status in patients by using these two techniques.
**METHOD:** Totally 80 patients were involved in the study and were divided into two groups; in group P (n=40) IMA was dissected as a wide pedicle and in group S (n=40) IMA was prepared as a skeletonized arterial graft. Pulmonary function was evaluated on 6th and 7th postoperative days and was compared between the two groups.
**RESULTS:** Forced expiratory volume in 1 second (FEV1) and forced vital capacity (FVC) were the measured data. The decrease in FVC was more prominent in group P (p=0.016).
**CONCLUSION:** This FVC difference demonstrated that skeletonized IMA technique cause lesser restriction of pulmonary functions. So skeletonization technique may be preferred as it lowers the incidence of postoperative pulmonary dysfunction. **REF0574**

### O96 - THE EFFECTS OF N-ACETYLCYSTEINE ON PULMONARY FUNCTIONS FOR THE PATIENTS WHO UNDERWENT CORONARY ARTERY SURGERY

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**BACKGROUND:** Postoperative lung dysfunction remains a life-threatening complication of the cardiopulmonary bypass(CPB). N-Acetylcysteine (NAC) is a compound that exerts anti-oxidant and scavenging actions against reactive oxygen species. It is also a cytoprotective agent. The antioxidant and anti-inflammatory properties of N-acetylcysteine has been documented in many experimental lung injury models. The pulmonary functions may deteriorate at the intraoperative and postoperative period because of the extracorporeal circulation, cardioplegia and anesthetic drugs.
**METHOD:** Twenty patients enrolled in this study. Patients were divided into two groups, goup 1 (control group; n=10), goup 2 (study group; n=10). For the study group 600 mg N-acetylcysteine was added in to the extracorporeal circulation. Respiratory function test was made and preoperative, postoperative on the 3th, 5th day only the FEV1 values were measured.
**RESULTS:** The respiratory function test(RFT), preoperative FEV1 values of the RFT was higher then the values of postoperative 3th and 5th days. At the the 5th postoperative day the FEV1 values at both groups started to improve. But improvement was more significant and faster at the study group then the control group. In study group improvement of the lung function was faster then the control goup.
**CONCLUSSIONS:** Results presented in our study indicate that addition of NAC into the pump prime results improvement of lung function after coronary artery surgery. **REF0447**

# NEW HORIZONS IN CARDIAC IMAGING

## O102 - THE IMPACT OF INTRAOPERATIVE TRANSOESOPHAGEAL ECHOCARDIOGRAPHY ON ADULT CARDIAC SURGERY

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**OBJECTIVE:** To determine the impact of intraoperative transesophageal echocardiography, an important adjunct in many types of cardiac surgical cases, on the surgical decisions made perioperatively in adult patients undergoing cardiac surgery.
**PATIENTS AND METHODS:** From 2001 to May 2006, 441 patients were examined by intraoperative new findings before and after cardiopulmonary bypass and alterations in the planned surgical procedure or management were documented prospectively.
**RESULTS:** A total of 441 patients were included in the study. The most common operations performed were mitral valve replacement and aortic valve replacement. New information was found before bypass in 4.3% of patients, directly affecting surgery in 4% of the patients. New information was found after bypass in 20.8% of the patients, resulting in a change in surgery or hemodynamic management in 18.5% of the total. The most common postbypass finding was valvular dysfunction with repeat bypass in most patients for re-repair or replacement.
**CONCLUSION:** In adult patients undergoing cardiac surgery, transesophageal echocardiography is useful in identifying anatomic and functional abnormalities either before or after cardiopulmonary bypass that affects surgical and hemodynamic management. **REF0066**

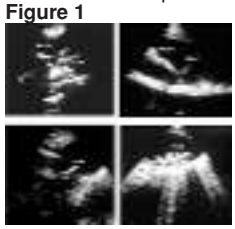
## O103 - IMPORTANCE OF TRANSESOPHAGEAL ECHOCARDIOGRAPHY FOR INTRAOPERATIVELY PLACED INTRAAORTIC BALLOON PUMP

Tasoglu Irfan, Imren Yildirim, Gokgoz Levent

*Department of Cardiovascular Surgery, Gazi University, Ankara, Turkey*

**OBJECT:** In our study we tried to discuss the importance of the transesophageal echocardiography in the emphasizing the effectiveness of intraoperatively placed intraaortic balloon pump and reducing the complication of the intraaortic balloon pump.
**METHODS:** In our clinic 22 of 34 intraoperatively placed intraaortic balloon pump evaluated peroperatively by transesophageal echocardiography and they recorded prospectively. The other 12 patients were out of our criteria. The patients were followed up closely for peroperative and postoperative intraaortic balloon pump related complications.
**FINDINGS:** From patients with intraoperatively placed intraaortic balloon pump, 22 out of 34 (%65) was within our criteria for evaluation by transesophageal echocardiography. In 17 (%50) patients there was need for further inetrventions after evaluation with transesophageal echocardiography; either with replacement or repositioning of the intraaortic balloon pump. In the other 5 patients there was no need for any intervention. In 12 patients we found no need for evaluation with transesophageal echocardiography. 7 patients were died in early postoperative period.
**RESULTS:** In the last years the use of the intraaortic balloon pump in the cardiac surgery was increase specially it has an important role during the weaning from the cardiopulmonary bypass. Here we can get benefit from peroperative transesophageal echocardiography in correct placement and positioning of the intraaortic balloon pump to increase effectiveness and reduce the complications of intraaortic balloon pump. **REF0067**

**Figure 1**



## O104 - TRANS-ESOPHAGEAL ECHOCARDIOGRAPHY IN DIAGNOSIS OF EARLY TAMPONADE AFTER CARDIAC SURGERY

Imren Yildirim, Tasoglu Irfan, Gokgoz Levent

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**INTRODUCTION:** The rate of cardiac tamponade after open cardiac surgery is between 0 and 8,8%. In this study, we have discussed the management and the diagnostic procedures of early phase cardiac tamponade.
**MATERIAL AND METHODS:** 49 patients with a suspected diagnosis of cardiac tamponade were evaluated retrospectively. Patients with a suspected cardiac tamponade were divided into two groups as early and late.
Considering the clinical, radiological and echocardiographic findings, patients with a suspected diagnosis of cardiac tamponade underwent surgery. During surgery, the presence of pericardial fluids in the mediastinum, evacuation of thrombi and evident improvement in hemodynamic parameters were accepted as proof for exact diagnosis.
**RESULTS:** 49 patients with suspected cardiac tamponade were evaluated with echocardiography. 23 (%) of these were chosen for surgery after echocardiography with a suspected cardiac tamponade diagnosis. 13 of (%) these were early phase and 10 (30%) were late. The diagnoses in 22 out of 23 patients were confirmed during surgery. 5 patients with a suspected cardiac tamponade were evaluated with TTE and no signs were detected in cardiac tamponade.
**DISCUSSION:** Previous evaluations with TTE revealed no pathology in 5 of our patients, they had pericardial thrombi requiring cardiac tamponade. TTE in early phase evaluation revealed false negative in 5(57%) of 13 patients. Consequently, we recommend that patients with a negative TTE, which is the classical frontline evaluation for early phase cardiac tamponade, should undergo further evaluation with TEE. **REF0068**

**Figure 1**

# NEW ECHOCARDIOGRAPHIC APPLICATIONS

## O113 - FIVE YEARS EXPERIENCE WITH THE USE OF İNTRAOPERATIVE TRANSESOPHAGEAL ECHOCARDIOGRAPHY IN MITRAL VALVE SURGERY

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**BACKGROUND:** Transesophageal echocardiography (TEE) offers detailed functional and morphological information by providing high-resolution images of the mitral valve apparatus. In mitral valve repair su E identifies not only the candidates for mitral valve repair but also it provides the detection of inadequate mitral repair immediately in the operating room and allows the correction in the same operative period.
**CONCLUSION:** Between October 2001 and June 2006, in 172 cases TEE examination was performed in the operating room for mitral valve surgery. Procedures included mitral valve replacement (n:84), mitral valve repair (n:76) and closed mitral valve commissurotomy (n:12). Significant residual mitral regurgitation has been described in TEE assesment in 12 patients undergoing mitral valve repair and prompted succesfull valve replacement in all.
**RESULTS:** İntraoperative TEE in mitral valve surgery is a reliable method for improving patient outcome and offers the cardiovascular anesthesiologist a role in intraoperative surgical decisions **REF0700**

# TREATMENT OF HEART FAILURE: INSIGHTS FROM MOLECULAR BIOLOGY: DRUGS, MECHANICAL SUPPORT

## O126 - ROLE OF BRAIN NATRIURETIC PEPTIDE IN CORONARY ARTERY BYPASS SURGERY IN PATIENTS WITH LEFT VENTRICULAR DYSFUNCTION

Bal Ebru, Polat Adil, Rabus Murat Bulent, Mataraci Ilker, Sareyyupoglu Basar, Ozdemir Ahmet, Yildirim Ozgur, Songur Murat, Anasiz Huseyin, Erkin Alper, Kirali Kaan, Yakut Cevat

*Kosuyolu Heart and Research Hospital-Cardiovascular Surgery Department -Istanbul, Turkey*

**OBJECTIVE:** A markedly elevated plasma concentration of brain natriuretic peptide (BNP), which is the biochemical marker of left ventriculer dysfunction, is a predictor of risk in patients undergoing coronary artery bypass grafting. The purpose of this study was to investigate the effectivenes of brain natriuretic peptide as an indicator of myocardial damage following off-pump coronary artery bypass surgery.
**METHODS:** 36 patients who underwent coronary artery bypass surgery were included in this study. 18 patients were operated off-pump while 18 patients were operated on-pump. Except two patients general anasthesia was performed. BNP were measured at 5 time points; the day before surgery, the first, third, fifth postoperative days and one month after the surgery.
**RESULTS:** In off-pump group it decreased preoperative levels at the end of the month. Brain natriuretic peptide did not return the preoperative levels in on-pump group. In ten patients postoperative atrial fibrillation occured. Two patients devoloped low cardiac output state that supported with intra aortic baloon pump. There were significiant correlations between atrial fibrillation occurence and postoperative brain natriuretic peptide levels ($p<0.01$), preoperative brain natriuretic peptide levels and cross clamp time, total perfusion time ($p=0.02$) and preoperative brain natriuretic peptide plasma concentrations and the postoperative requirment for inotropic agents ( $p<0.001$).
**CONCLUSION:** Off-pump coronary artery bypass surgery is observed to be less invasive. Patients with high preoperative plasma brain natriuretic peptide concentrations should be managed aggresively and monitored carefully for complications after cardiac surgery. **REF0159**

## O127 - A NEW TURKISH CENTRIFUGAL BLOOD PUMP FOR LONG TERM LEFT VENTRICULAR SUPPORT: HEART TURCICA-2

Kucukaksu Suha Deniz[1], Goksedef Deniz[1], Bulbul Serhat[1], Yildiz Cenk Eray[1], Lazoglu Ismail[4], Ciblak Namik[2], Akgun Mehmet[2], Okyar Ali Fethi[2], Öner Esra Sorguven[2], Sehirlioglu Murat[3], Ucak Canbolat[3], Egrican Nilufer[2]

*[1]Yeditepe University Hospital Cardiovascular Surgery Department, Istanbul, Turkey*
*[2]Yeditepe University Mechanical Engineering Faculty, Istanbul, Turkey*
*[3]Yeditepe University Electronical Engineering Faculty, Istanbul, Turkey*
*[4]Koc University Mechanical Engineering Faculty, Istanbul, Turkey*

**OBJECTIVE:** The patients who had the diagnosis of end-stage cardiac failure in Turkey have limited therapy options. After successful reports of the devices that were used for temporary left ventricle support (bridging), various devices are now available in the market. These devices are expensive for our country as well as other developed countries. Thus, Cardiovascular Surgery Department of Yeditepe University Hospital, Mechanical and Electronical Engineering Faculties of Yeditepe University and Mechanical Faculty of Koç University united their efforts and started to develop a radial (centrifugal) flow pump at April 2006.
**METHODS-RESULTS:**This totally implantable device was designed with CAD/CAM software and consists of an inflow cannula, inducer, impeller, diffuser, driving motor and an outflow cannula to the aorta. Computational fluid dynamics (CFD)-based hemolysis and thrombosis model was applied to the prototype. Various impeller designs, volute geometry, performance values at different patterns and Reynolds numbers were studied and the designs were modified for excellence.
**CONCLUSION:** It is planning that the use of this prototype for bridging to transplantation or recovery for end stage cardiac failure will be suitable after invitro testing and animal trials. **REF0585**

# PERICARDIAL AND MYOCARDIAL DISEASES CARDIAC TUMORS AND TRAUMA

## O129 - PENETRATING CARDIAC WOUNDS IN CHILDRENS

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**BACKGROUND:** Cardiac penetration wounds have high mortality which need a rapid diagnosis and surgical intervention in child. In fact there is insufficient information about this subject although the incidence of cardiac injuries among the pediatric population has increased due to the proliferation of terrorism and acts of violence in the community. In this study, we present our experiences of pediatric cardiac injuries due to penetrating injuries, along with the demography of the injuries, their arrival hospital, the accompanying injuries of our treatment choices in our clinic.
**METHODS:** Retrospective analysis of cardiac injuries due to penetrating wounds in children was carried out. This group included 14 pediatric patients under the age of 16 with cardiac damages due to penetrating wounds that were treated between January 1977 and December 2005 in the Cardiovascular Surgery Clinic, Medical School of Dicle University.
**RESULTS:** The male to female ratio was 13:1, the age range was 3-15, and the average age was 13,28±3.14. The time period within which the patients to the hospital was as follows 57,78 min. Cardiac trauma score:4,21 Ivatury score:2,92.
**DISCUSSION:** Total blood volume in infants and children is small. However, effective compensatory mechanisms cannot meet the blood loss. Efficient fluid resuscitation and rapid confirmation of diagnosis with echocardiogram should decrease mortality. Stable patients with a precordial wound should undergo cardiac ultrasound. The survival chance of the cases can be increased with rapid diagnosis and surgical intervention. **REF0648**

## O130 - RIGHT ATRIAL ANGIOSARCOMA: CASE REPORT

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**BACKGROUND:** Angiosarcoma is the most common primary malignant cardiac tumor. There is a possibility of the tumor to produce intracardiac blood flow obstruction, pericardial effusion, and tendency to invade the nearby and far tissues.
**CASE:** The patient was a 32 years old female. We detected pericardial effusion and cardiac tamponade with transthoracic echocardiography. The patient was taken to operation emergently because of pericardial effusion and filling defect occluding the whole right atrial cavity on computerized tomography. During operation, macroscopic findings of tumor tissue infiltrating the right atrial wall filling the the right atrial cavity, pressing on the caval veins and infiltrating the whole heart were seen. The free right atrial wall was completely resected till the caval veins. The resulting defect was closed with Dacron patch. But the tumor tissues were not able to be resected totally from the whole heart. The vital findings were stable following the operation. With the result of the pathological research, it was detected that the tumor was an angiosarcoma.
**RESULTS:** The patient was discharged with clinical recovery. The patient who is now on her 8th month postoperatively completed the procedures of radiotherapy and chemotherapy. According to control echocardiographies, no pleural effusion was detected and no filling defect was seen inside the cardiac spaces.
**CONCLUSION:** Angiosarcoma is one of the pathologies to be thought about for the differential diagnose of dispnea and cardiac tamponade. Even that the surgical therapy is palliative, it is the most effective method of releaving the patient's symptoms and preventing complications. **REF0254**

**Figure 1**

View of the Tumor on Computerized Tomography

**Figure 2**

Peroperative view of the tumor from right atrium

## O131 - FIVE CASES OF CARDIAC AND PERICARDIAL HYDATID CYSTIC DISEASE

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**OBJECTIVES:** Hydatic disease, caused by Echinnococcus granulosus, is a parasitic disease affecting most commonly liver and lung. Cardiac echinococcosis is rare 0.5-2% of all cases. In this study the results of the 5 patients who were operated at our clinic was discussed beyond the literature.
**METHODS:** We have operated 5 hydatic cyst patients between Jan 2004 - May 2006. In 2 cases cysts were located at the right ventricle, and in 3 cases at the left ventricle. All patients were operated under cardiopulmonary bypass and after sterilisation with hypertonic saline solution injection and aspiration, the cyst was opened and germinative membrane and daughter vesicles were removed. The cyst cavities were capitoned with few stitches.
**RESULTS:** All patients were male and the mean ages were 45.17±11.35. In two cases cysts were intramyocadial and a few myocardium was exized. Also in one case tricuspit valve repair was done. There were no operative and hospital mortality. One patient was died at the 8th month due to accident.
**CONCLUSION:** Early diagnosis and surgical treatment could be life saving, preventing potentially lethal complications. **REF0433**

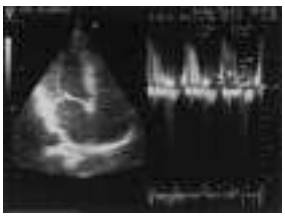
**O133 - FIVE-YEAR FOLLOW-UP OF A PAPILLARY FIBROELASTOMA INVOLVING THE MITRAL VALVE IN A YOUNG PATIENT**

Kucukarslan Nezihi, Ozal Ertugrul, Kuralay Erkan, Sahin Mehmet Ali, Gramatnikovski Nikola, Demirkilic Ufuk, Arslan Mehmet, Tatar Harun

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

Papillary fibroelastomas are primary cardiac tumors of valvu-lar tissue, located on valves, mostly the aortic valve. They are usually seen in elderly patients. In this report, we presented a 21-year-old male patient who underwent surgery for a papillary fibroelastoma involving the mitral valve and was fol-lowed-up for five years. No recurrence was encountered, but a minimal increase in mitral valve insufficiency was observed. **REF0091**

**PFE**



**O134 -TRICUSPID STENOSIS DUE TO RIGHT ATRIAL LIPOMA**

Kucukarslan Nezihi, Kuralay Erkan, Ozal Ertugrul, Sahin Mehmet Ali, Gramatnikovski Nikola, Demirkilic Ufuk, Arslan Mehmet, Tatar Harun

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

Cardiac lipomas are benign and nonmyxomatous tumors. Although generally asymptomatic, cardiac lipomas can be detected by routine echocardiography examination. A patient with dyspnea was admitted to our hospital. Before one week she underwent an abdominal hysterectomy because of uterine myomatosis. A transesophageal echocardiography (TEE) and computerized tomography (CT) was ordered for further evaluation. The study showed a mass in the right atrium. The patient was scheduled for surgery to resect the mass. After operation symptoms regressed dramatically. We aim to highlight the important diagnostic and surgical approach by presenting a case with a successfully removed right atrial lipoma. **REF0089**

# CORONARY ARTERY DISEASE: PERSPECTIVES IN INTERVENTIONAL AND SURGICAL THERAPHY

## O136 - IMPACT OF GRAFT CHOICE AND ANASTOMOSIS SITES ON PROGNOSIS IN CORONARY SURGERY

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*[2]Baskent Universitesi Tip Fakultesi, Ankara, Turkey*

**OBJECTIVE:** In coronary artery bypass grafting surgery (CABG), it is a crucial decision which grafts to use and which coronary artery site to anastomose them. Our objective is to examine grafts' patency rates and impacts on prognosis.
**METHODS:** We retrospectively collected data from 215 patients undergoing isolated CABG surgery and had control coronary angiographies. We checked preoperative risk factors, reviewed re-angiograms and calculated patency rates.
**RESULTS:** 588 graft angiograms; 53,4% saphenous vein (SV), radial artery (RA) 9,7%, RITA 0.6 % and LITA 36,3% were studied. Mean number of grafts per patient was 2.8±1.07 (1-5). The mean period from operation to re-angiogram was 46±38 (1-168) months. SV graft patency was 56%, RA patency was 75.5% and in-situ LITA patency was 88%. RA anastomosed to RCA and intemediate artery were more likely to be patent (81.2%). On the contrary, patency rate of RA anastomosed to CXPL was 67%. Similiarly, the highest patency rate of SV was 57.4% which were anastomosed to RCA and lowest was 47.1% which were anastomosed to CXPL. Patency rate of LITA to LAD was 87% whereas patency rate of SV to this position was 57.2%. Unlike patients with failed SV grafts whose sum of preoperative risk factors was 165%, in patients with patent SV grafts it was 93%.
**CONCLUSIONS:** This study shows that grafts have a great impact on prognosis. Not only the histological structure of the grafts but also how and where they are anastomosed; preoperative risk factors affect prognosis as much as type of the graft. **REF0415**

## O138-COMBINED CORONARY AND LOWER EXTREMITY REVASCULARIZATION IN HIGH RISK PATIENTS

Tarhan Ibrahim Arif[1], Yilmaz Mehmet[1], Kehlibar Tamer[1], Arslan Ismail Yucesin[1], Dumantepe Mert[1], Berkoz Mehmet Kazim[1], Pancaroglu Cansin[1], Yilmaz Hale[2], Akoglu Tayfun[3], Sahin Sinan[3], Bilgen Fuat[1], Ozler Azmi[1]

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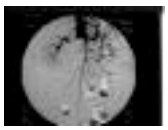
The coexistence of CAD with aorto-iliac disease is not rare. Management of these patients is controversial. Staged procedures are usually recommended. In rare instances simultaneous coronary and peripheral arterial revascularization may be required.
Between April 1994 and November 2005, fourteen patients underwent combined procedure. Except first patient, all patients were male and mean age was 59±6,8. In twelve patients median sternotomy and in two patients anterolateral limited thoracotomy were administered. CABG was established on CPB in six patients and OPCAB is used in the rest. Femoral arteries were bypassed with prosthetic grafts descended from the ascending aorta and passed through the preperitoneal abdominal wall tunnel in twelve patients. We used descending aorta as inflow vessel in two patients. Both patients recovered well and experienced no angina or claducation at the early postoperative period. Mean hospital stay was 10,5 days. Patients were followed up using different methods. Long term angiographic controls were obtained with multislice-CT angiography in half of patients. The remainig patients were evaulated by physical examination, doppler sonography and echocardiography.
Patients with PVD are at increased risk for periprocedural complications after either CABG or PTCA than patients without PVD. In staging the vascular or the cardiac procedure may cause unexpected situations, such as an urgent vascular procedure or peroperative myocardial infarction. This technique is simple, safe and good alternative in patients with previous abdominal surgery or massive adhesions, obesity, extensive calcifications of the abdominal aorta and respiratory insufficiency. Long term radiologic and clinical results are acceptable.
**REF0225**

**Figure 1**



Computerized tomography scan shows the obstruction of abdominal aorta at infrarenal segment

**Figure 2**

Multi slice CT angiography scan shows the patency of bifurcated graft

**Figure 3**

Multi slice CT scan shows the course of graft which performed with anterolateral thoracotomy

## O139 - MID-TERM RESULTS OF CORONARY ENDARTERECTOMY AND SAPHENOUS VEIN PATCH PLASTY COMBINED WITH CORONARY ARTERY BYPASS GRAFTING

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

**BACKGROUND:** Endarterectomy of the coronary vessels has been a surgical treatment method for the vessels with long segmental lesions and for diffuse coronary artery disease. We undertook this prospective study in order to evaluate mid-term results of our surgical endarterectomy method.
**METHODS:** 20 patients had underwent coronary artery bypass grafting (CABG) with coronary endarterectomy and safen vein patch plasty (CE+SVP) (totally 21 procedures) between May 2004 and September 2005. CE+SVP combined with CABG was performed on all of the patients. The left anterior descending artery (LAD) of all patients was by-passed by left internal thoracic artery. The anastomosis performed on other than LADs, we used safenous vein grafts. The patients was controlled with 16-Channel Multidetector-Row Computed Tomography 6 months after the operation.
**RESULTS:** 2 patients (% 10) died in the peri-operative period. There were no aneurysms neither on the saphenous vein patch nor in anastomotic line. In 12 (%63,15) endarterectomised and grafted coronary vessels both the anastomosis and the grafts was patent. In 2 (%10,52) of these the grafts could not be visualised by tomography where in 5 (%26,31) of these obstructions 2-3 cm. proximally to the distal anastomotic line was diagnosed.
**CONCLUSION:** CABG with CE+SVP increases the surgical risc when compared with CABG alone. Although the patency rates in the 6 month follow-up is not favourable, rapid cover-up after the operation and the favourable clinical outcomes of the patients shows that diffusely ill coronary arteries and coronary arteries with long segmental lesions deserve this surgical technique. **REF0422**

## O140 - ANGIOGRAPHIC RESULTS OF CORONARY ENDARTERECTOMY

Sareyyupoglu Basar[1], Eren Ercan[1], Rabus Murat Bulent[1], Tuncer Altug[1], Yildirim Ozgur[1], Bal Ebru[1], Yanartas Mehmet[1], Okten Murat[1], Mansuroglu Denyan[1], Yaymaci Bengi[2], Kirali Kaan[1], Yakut Cevat[1]

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**BACKGROUND:** To evaluate the patency of endarterectomized coronary vessels, we studied patients having recathetererization after coronary artery bypass grafting.
**METHODS:** Clinical and angiographic variables were analyzed in 60 study patients who had coronary endarterectomy (CE).
**RESULTS:** 60 patients had 179 anatomoses with 69 CEs. The left coronary artery was the most commonly endartercetomized vessel (37 of the 69 endaretrectomized vessels). The left internal mammary was grafted in 48 patients (%80). At a mean of 23,1 months of follow-up, significantly fewer bypass grafts were patent compared with nonendarterectomized vessels (54% of endaretectomized vessels compared with %70 of nonendarterectomized vessels in study patients). Distal run-off in endarterectomized vessels were excellent in %61 of CEs.
**CONCLUSIONS:** These results show that patency in bypass grafts to endarterectomized vessels is less common than in nonendarterctomized vessels. We consider that elective CE should be reserved only for arteries that are truly inoperable by other means. **REF0194**

## O141 -CORONARY ENDARTERECTOMY FOR DIFFUSELY DISEASED CORONARY ARTERIES: IMMEDIATE AND LONG-TERM RESULTS

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**BACKGROUND:** Many early reports demonstrate a high incidence of postoperative morbidity and mortality in coronary bypass surgery combined with adjunctive coronary endarterectomy (CE). The increasing incidence of diffuse coronary artery disease in the recent years challenges cardiac surgeons in accomplishing their goal of complete revascularisation. In this study, we assessed clinical and angiographic results of our experience with this procedure to evaluate the early and late outcome and to determine the independent predictors of early and late mortality and morbidity of this procedure.
**METHODS:** Between May 1995 and December 2004, 248 (1.95%) patients required at least one coronary artery endarterectomy. Of these 214 CE applied patient datas were exemined retrospectively and compared with a control group who had isolated primary CABG of 214 patients, matched for age, sex, LV function and euro score. The following outcomes were compared: perioperative myocardial infarction, postoperative ventricular arrhythmias, cerebrovascular accident, renal impairment, early and late mortality.
**RESULTS:** CE was applied in 226 branches ( 212 patients had 1 vessel CE, 9 patients had two vessel CE, 1 patient had three vessel CE) including 122 left anterior descending arteries, 15 diagonal arteries, 21 left circumflex arteries, and 68 right coronary arteries. There were 22 (10.4%) nonfatal myocardial infarctions in the endarterectomy group and 4 (1.86%) in the control group ($p<0.05$). Use of inotropic drugs and IABP support was more frequent in the CE group (33.6% versus 10.7%, $p<0.001$; and 7.94% versus 1.86%, $p=0.004$, respectively). The endarterectomy group had a higher incidence of, reexploration for bleeding, postoperative dysrhythmias (inc. atrial fibrillation, ventricular arythmias) ($p\leq0.05$). There were 12 (10.4%) nonfatal myocardial infarctions in the endarterectomy group, and 4 (1.86%) in the control group ($p< 0.05$). 12 patients (5.6%) in the endarterectomy group, and 6 (2.8%) in the control group, died within the first 30 days ($p =0.13$). Late follow-up for 126 CE group patients was 37.9 months (126 of 214 endarterectomised patients could be controlled), and actuarial survival during the follow-up period was 97.47% for control group and 95,24% for endarterectomy group. The difference between survivals in groups is not significant (log rank statistic 1.58, sign..2081).
**CONCLUSIONS:** Overall, these satisfactory early and londterm results do not support the universal use of coronary endarterectomy, but suggest that there is potential benefit associated with this procedure in an increasing number of patients with advanced complex coronary artery disease. **REF0370**

## O142 - LEFT ANTERIOR DESCENDING CORONARY ENDARTERECTOMY: EARLY AND LATE RESULTS IN 227 CONSECUTIVE PATIENTS WITH REPEAT CORONARY ANGIOGRAPHY BACK-UP

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**OBJECTIVE:** Following advances in percutaneous coronary interventions, many patients that referred for coronary artery bypass grafting have diffuse coronary artery disease. We performed this retrospective study to determine whether left anterior descending (LAD) coronary endarterectomy is a safe and effective therapy to whom cannot otherwise be completely revascularized.
**METHODS:** Between November 1996 and October 2005, 227 of 9064 (3%) consecutive patients underwent LAD coronary endarterectomy with coronary artery bypass grafting. Median age was 59 years, 42% had unstable angina, and 54% of patients had left ventricle dysfunction. All patients underwent LAD endarterectomy with coronary artery bypass grafting to the LAD. The left internal mammary was grafted to the LAD in 194 patients (%85), and 15 of 194 (%8) of these required and additional vein patch to the endarterectomized bed. 227 patients had 632 anastomosis with 271 endarterectomies.
**RESULTS:** Overall hospital mortality was 2% (4 of 227). One-year survival was 94%, whereas 5-year survival was 85%. Freedom from cardiac events (angina, myocardial infarction, congestive heart failure, percutaneous coronary interventions) was 90% at 1 year and 72% at 5 years. Clinical and angiographic variables were analyzed in 60 study patients who had coronary endarterectomy (CE). At a mean of 15,2 months of follow-up, bypass grafts on 62% of endarterectomized vessels were patent.
**CONCLUSIONS:** Despite the presence of diffuse coronary artery disease, coronary artery bypass grafting with LAD endarterectomy offers excellent results with very low hospital mortality and morbidity, and favorable long-term survival. **REF0193**

## O144 - EFFECTS OF CARDIOPULMONARY BYPASS ON ANTIPHOSPHOLIPID ANTIBODY LEVELS

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**BACKGROUND:** Antiphospholipid antibodies are associated arterial and venous thrombosis and this clinicopathologic entity is named thrombophilic syndromes.Thrombophilic complications may observed in patient who underwent extracorporeal circulation. We studied the change of ACL(anticardiolipin) Ab level who underwent open heart surgery.
**METHOD:** 40 patients were studied and they were separated into two groups as group I and group II. In group I patients who underwent CABG by using cardiopulmonary bypass(CPB) and in group II patients who underwent CABG by off-pump. Serum samples were collected before the operation, after heparin infusion, 20. and 40. minutes of CPB, in the end of the CPB, postoperative 24. hour and 7. day. Samples were tested for IgG and Ig M ACL using ELISA
**RESULTS:** A significant increase levels of ACL Ab were detected in group I patients after the operations 24.hours and 7.day comparing with group 2. We also found significant increase levels of ACL Ab IgG and Ig M when comparing between preoperative and postoperatively 24. hours and 7. day. in groupI patients. However differences were detected when compare the level of the ACL Ab Ig G and Ig M in groupII after early and late postoperatively period.
**DISCUSSION:** increased levels of ACL Ab IgG and Ig M were detected in groupI after CPB. It may cause a risk of venous or arterial thrombus or early graft thrombosis in patients underwent CPB after early and late postoperative period. Anticoagulant therapy may be decided and close clinical fellow up may be required. **REF0533**

## O145 - MID TERM ANGIOGRAPHIC EVALUATION OF LEFT INTERNAL THORACIC ARTERY GRAFTS

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**OBJECTIVE:** We investigated the functional failure of left internal thoracic artery grafts(LITA) and the possible reasons for the failure of this graft in 115 patients who underwent coronary bypass grafting (CABG) and who had postoperative coronary angiography in our hospital.
**METHODS:** Data were obtained from patient files and operation plans that has been done by a cardiac surgeon and a cardiologist. Preoperative and postoperative angiographic images were evaluated.due to the lesions in the native coronary arteries. Patency rate of LITA, quality of flow pattern and anastomosis, the quality of the native coronary vessel and ventricle functions were evaluated.
**RESULTS:** In 5 patients (4.34%) LITA was occluded, in 7 (6.08%) LITA was defined as functionally insufficient(string sign). In 8 of these patients the mean preoperative and postoperative percentages of stenosis in Left Anterior Descending (LAD) artery were 63.7±9.1% and 33.7±7.1% respectively. In 3 patients the native coronary artery bed was defined as poor. In patients with patent LITA, the mean preoperative percentage of stenosis in LAD artery was 88.6±11.8 %. There was statistically significant difference in the mean preoperative percentage of stenosis in LAD between the patients with patent and insufficient ITA grafts(p=0.01). However there was no difference in terms of LVEDP and the mean period between the operation and control angiography.
**CONCLUSIONS:** We conclude that predicting the degree of stenosis in LAD and quality of the native coronary artery are the major factors in the insufficiency of LITA. A better evaluation of these parameters may increase the patency rate. **REF0378**

# RHYTHM DISORDERS AND CARDIAC SURGERY

## O147 - DO CARDIAC NEUROPEPTIDES PLAY A ROLE IN THE OCCURRENCE OF ATRIAL FIBRILLATION AFTER CORONARY BYPASS SURGERY?

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The myocardium is innervated not only by cholinergic and adrenergic nerves but also by peptidergic nerves that synthesize and secrete neuropeptides. We analyzed the plasma levels of substance P (SubP), neuropeptide Y (NPY), and angiotensin II (Ang II) in patients who underwent elective, on-pump CABG.
**METHODS:** This prospective study group included 83 consecutive patients scheduled for elective, on-pump CABG. Depressed LV function, concomitant cardiac procedures, atrial fibrillation, use of class I or III antiarrhythmic drug, and hemodynamic deterioration were exclusion criteria. Pre- and postoperative serum levels of SubP, NPY and AngII were measured by radioimmunoassay (RIA) technique.
**RESULTS:** Postoperative AF occurred in 27 patients (32.5%). Using multivariate logistic regression analyses, only decrease of SubP level (OR= 1.87, 95% CI= 0.767-0.99, p= 0.031) and increase of AngII level (OR= 2.61, 95% CI= 1.002-1.021, p= 0.023), increased age (p= 0.02), diabetes mellitus (p= 0.023), preoperative use of beta blocker (p= 0.024), proximal RCA involvement (p= 0.024), low preoperative sodium levels (p= 0.023), low left ventricular ejection fraction (p= 0.013), and increased mitral E wave deceleration time (p= 0.044) were found to be independently associated with AF.
**CONCLUSION:** These results indicate for the first time that the increase of AngII and the decrease of SubP following CABG may play a role in the occurrence of postoperative AF. Further studies are needed to define the physiologic and pathologic relevance of these substances at the occurrence of AF in patients who undergo CABG. **REF0062**

## O149 - PRE-OPERATIVE B-BLOCKER USE REDUCES ATRIAL FIBRILLATION IN OFF-PUMP CORONARY BYPASS SURGERY

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Atrial fibrillation after constitutes the most common sustained arrhythmia and results in many complications. The purpose of this study was to assess the effects of prophylactic use of B-Blockers against atrial fibrillation in off-pump surgery patients in the early post-operative period.
**MATERIALS AND METHODS:** From 2002 to 2005, 78 patients were enrolled. 41 patients recieved 50mg. Metoprolol daily which was initiated minimum 4 days prior to surgery. Preoperative b-blocking therapy was continued until the morning of surgery. 37 patients were free of B-Blocker therapy. Esmolol was used within same range of doses in both groups during operations.. The frequency of AF occurrence was analyzed, from operation time to the sixth postoperative day.
**RESULTS:** 16 patients developed AF with an overall incidence of 22.5 %. 4 patients from study group, 3 patients from control group were excluded from the study because of conversion to on-pump surgery.. There were no difference with regard to number of grafts performed, duration of operations and ventilation, intensive care unit stay and inotropic need among groups. Length of hospital stay did not differ among groups, either. There was a higher incidence of postoperative AF in patients without B-Blocker prophylaxis (11.7 % - 32.4 % p = 0.049).
**DISCUSSION:** Low-dose postoperative beta-adrenergic blockade is valuable for patients who receive these medications before off-pump coronary artery bypass grafting procedures and may be beneficial against atrial fibrillation in all patients. **REF0093**

## O150 - POSTERIOR PERICARDIOTOMY SIGNIFICANTLY REDUCES THE INCIDENCE OF ATRIAL FIBRILLATION AFTER CORONARY ARTERY BYPASS GRAFTING

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**OBJECTIVE:** Atrial fibrillation (AF) is the most common arrhytmia in the general population world-wide.1 For unknown reasons, the frequency of AF increases markedly after cardiac surgery, affecting between 25% to 40% after coronary artery bypass graft surgery (CABG).2 The etiology of AF is likely multifactorial. The aim of this study was to demonstrate the effect of posterior pericardiotomy on the incidence of AF after CABG.
**MATERIALS-METHODS:** Three hundred patients who underwent elective, isolated and first time CABG were divided into two groups; each group included 150 patients. A 4-cm longitudinal incision paralel and posterior to the left phrenic nerve, extending from the left pulmonary vein to the diaphragma was performed to group I patients while posterior pericardiotomy was not performed to group II patients.(control group).
**RESULTS:** Atrial fibrillation developed in 7 (4,7%) patients in the posterior pericardiotomy group and in 22 (14,0%) patients in the control group (p<0,009). There was no statistically significant difference between group I and group II considering the chest drainage (551.20±372.712 vs 535.33±325.666;p=0,695) and transfusion (1.41±1.056 vs 1.23±0.993; p=1.44). The postoperative length of hospital stay and intensive care unit stay were not significantly different in both groups.
**CONCLUSION:** Posterior pericardiotomy significantly reduces the incidence of AF occuring after CABG. We seriously recommend this safe, easy and effective technique to all cardiac surgeons for a comfortable postoperative period. Posterior pericardiotomy has to become a routine procedure for all CABG operations. **REF0073**

# DISEASES OF AORTA AND PERIPHERAL ARTERIES: UNRESOLVED ISSUES

## O153 - AORTIC ANEVRYSMS ' HEALING BY ENDOVASCULAR STENT GREFT IMPLANTATION

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**TARGET:** To search about the effectiveness of aortic anevrysms' healing by endovascular stent greft implantation.
**REQUISITE AND METHOD:** 9 aortic stent greft had been applied to 8 male and 1 female patient of whose assessments were done as CT at three patients and multi silice CT at six patients.
9 of the patients' anevrizmas were placed by infrarenal abdominal aort. Stent greft implantation took place in radiologyanjiography section in common with aort surgical and radiology.
Both of the femoral areas had been prepared for the operation by 6-8 cm skin cut with local anaesthesia. 500iü heperin had been applied to the patient by means of iv before and after the operation. Bilateral talent endovasküler stent greft had been placed to 9 patients. The had been kept under control in post op KVC intensive care section for 1 day.
**SYMPTOMS:** We lost one of the patients after 12 hours of endovascular stent greft because of cardiac arrest.Law Hb and Hct was seen in one of the patients during endovasküler greftboperation as the result of hemorrhage. This patient was discharged from the hospital without any problem after blood transfusion. It is seen that anevrizma wall was completely trombozed but no change was seen in the diameter of the anevrizma of the patient.
**RESULT:** The cure of aort anevrizmas by endovasküler stent carries less motality and morbitite than classical surgeon. The stent greft may be alternative for the surgeon due to this reason. **REF0602**

## O154 -SURGICAL TREATMENT OF CHRONIC TYPE A AORTIC DISSECTION COMBINED WITH CORONARY ARTERY BYPASS GRAFTING

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**OBJECTIVE:** The aim of the study was to evaluate the operative and postoperative findings of patients operated for concomitant chronic type A aortic dissection and coronary artery disease.
**METHODS:** Between 1995 and 2005 a total of 83 patients were operated for chronic Stanford type A aortic dissection. Among these patients 14 (16.87%) had associated severe CAD that was treated concomitantly. Mean age of the 14 patients was 58.07. Twelve patients were male and 2 were female. Hypertension was the most common associated disease present in all patients. Only ascending aorta was replaced in 8 patients (57.14%). Ascending aorta and hemiarch replacement was performed in 3 patients (21.43%). The right coronary artery was the most frequent revascularized vessel in this study.
**RESULTS:** Two patients (14.29%) died in the early postoperative period. The reason of death was low cardiac output in one patient and neurologic complication in the other one that also received carotid endarterectomy in the same session. Morbidity was seen in 3 patients (21.43%). One patient developed hemiparesia that resolved completely in one month, wound infection was detected in the second patient and low cardiac output in the third.
**CONCLUSIONS:** CABG was indicated in 16.87% of patients with chronic type A aortic dissection in our study. This shows us that it is important to perform coronary angiography in patients with chronic type A aortic dissection. The mortality and morbidity rates were relatively high in patients with chronic aortic dissection that received combined aortic repair and CABG. **REF0263**

## O155 - SURGERY FOR ACUTE AND CHRONIC TYPE B AORTIC DISSECTIONS: MIDTERM RESULTS

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**OBJECTIVES:** Diseases of the thoracic aorta pose a significant challenge to the surgeon.We present our mid-term data with type B aortic dissections treated surgically in our clinic.
**METHODS:** Perioperative data regarding the patients with acute (operation in less than 14 days) or chronic type B (operation later than 14 days) dissections were identified. Technically, a left posterolateral thoracotomy with selective lung ventilation was used for surgery. Proximal clamp proximal to left subclavian artery and a distal clamp to midthoracic aorta were used with a partial cardiopumonary bypass system between left femoral vein and artery.
**RESULTS:** A total of 29 patients operated for type B aortic dissection (14 acute, 15 chronic) were identified between 1996-2006. In 4 patients with acute dissection, peripheral perfusion from false lumen was present. In patients with chronic dissection, anastomosis to both false and the true lumens was required in 7 patients. 4 patients expired due to cardiogenic shock and multiple organ failure. Transient monoparesia was observed in 1 patient and a phrenic nerve palsy in another in the acute dissection group. Mean followup time was 3 years (1-7 years). False lumen patency was observed in 2 patients and 6 patients in the acute and chronic dissection groups, respectively. 3 patients in the chronic group showed persistant aneurysmatic dilation of the aorta and necessitated a reoperation.
**CONCLUSIONS:** Reoperation rate in chronic type B dissections is higher than in acute B dissections. False lumen patency in midterm followup may be an indicator for adverse outcome.

**Figure 1**

CAT scan of a patient with type B aortic dissection

**Figure 2**

Postoperative CAT scan of a patient with type B aortic dissection

**REF0206**

## O156-DESCENDING AND THORACOABDOMINAL AORTIC ANEURYSM SURGICAL REPAIR WITH DISTAL FEMORO-FEMORAL PERFUSION TECHNIQUE

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**OBJECTIVE:** Distal vital organ damage is an important problem during the surgical management of descending and thoracoabdominal aortic aneurysm. Surgical repair of descending and thoracoabdominal aortic aneurysm and/or dissection with femoro-femoral perfusion technique was retrospectively evaluated.
**METHOD:** Between September of 2000 and January of 2005, fifteen surgical interventions were done for 13 patients with femoro-femoral perfusion technique who were diagnosed to have thoracoabdominal aortic aneurysm and/or dissection. Eleven of our patients were female (15.4 %). Mean age of our patients was 56.11 year (29-80). Twelve of our operations (80%) were elective cases, and 3 of them (20%) were emergencies. While proximal arterial and venous filling pressures were maintained, distal perfusion was carried out at 60-70 mmHg and 1000-1500 ml/min. Rectal temperature was kept over 30-32 C. Mean follow-up period was 18.9 months (4-30).
**RESULTS:** Four patients (26.6%) died at early postoperative period. Respiratory problems were seen in 3 patients (20%), acute renal failure was seen in 3 patients (20%), paraplegia was seen in 1 patient (6.6%) and temporary paraparesis was seen in 1 patient (6.6%).
**CONCLUSION:** Surgical treatment of descending and thoracoabdominal aortic aneurysms is still a dilemma in the world. We believe that surgical repair with femoro-femoral perfusion technique would decrease the mortality and morbidity with preventative measures from visceral organs and spinal cord ischemia. **REF0195**

## O157- A NEW TECHNIQUE FOR CORONARY ARTERY BYPASS GRAFTING IN PATIENTS WITH ATHEROSCLEROTIC DISEASE OF THE ASCENDING AORTA

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**OBJECTIVE:** Patients with atherosclerotic disease of the ascending aorta, carries high risk of cerebral embolism during cardiac surgery. Here we describe a novel technique for CABG operation which significantly reduces the risk of intraoperative atheroembolic events.
**METHODS:** Between December 1998 and April 2006, moderate or severe degree of atheromatous plaque formation has been determined with epiaortic echocardiography in 366 patients who underwent standard myocardial revascularization. Surgical strategy was modified. In 174 patients unsuitable for OPCAB, CPB was instituted by the cannulation of the axillary artery and the right atrium. The patients were cooled to 22 ° C. Aortic cross-clamping and cardioplegia were not used during the construction of the distal anastomosis and mean arterial pressure was maintained between 60 and 70 mmHg. With the completion of distal anastomosis, the flow of CPB and mean arterial pressure were then reduced to obtain a blood pressure of 20 mmHg. While on low-flow bypass, SVG's were sutured to a nondiseased area of the ascending aorta. Rewarming was started at the completion of all proximal anastomosis and LITA graft was anastomozed to LAD.
**RESULTS:** The mortality rate in the entire cohort was 3.4 %. Six patients died postoperatively because of low cardiac output. Permanent major stroke has not been observed and the incidence of minor neurologic events was 2.3 %.
**CONCLUSIONS:** For patients with a "atherosclerotic aorta" in whom OPCAB is not suitable, hypothermia with low-flow CPB should be considered as a valid and safe alternative which reduces the risk of postoperative stroke. **REF0209**

## O158 - THORACOABDOMINAL APPROACH TO JUXTARENAL, SUPRARENAL ABDOMINAL AND THORACOABDOMINAL EXTENT IV AORTIC ANEURYSMS

Goksel Onur Selcuk[1], Harmandar Bugra[1], Sayin Omer A[1], Ugurlucan Murat[1], Sungur Zerrin[2], Alpagut Ufuk[1], Tireli Emin[1], Dayıoglu Enver[1]

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**OBJECTIVES:** Surgical approach to suprarenal and juxtarenal abdominal aortic and thoracoabdominal extent IV aortic aneurysms is cumbersome in comparison to infrarenal aneurysm. Similarly, endovascular approach to infrarenal aneurysm is frequent, but adequate experience and data have yet not formed for the above-mentioned lesions. We present our data regarding suprarenal and juxtarenal abdominal aortic and thoracoabdominal extent IV aortic aneurysms where we used a thoracoabdominal incision for repair.
**METHODS:** Between1998-2006, 6 patients operated for thoracoabdominal extent IV aortic aneurysm, 3 patients with juxtarenal abdominal aortic and 3 patients with suprarenal aortic aneurysm were identified. Perioperative data were reviewed. Technically, left anterolateral thoracotomy from 7th intercostals space extended to abdominal wall to expose retroperitoneal space. Circumferential division of the diaphragm from the anterolateral abdominal wall was performed to allow adequate surgical exposure.
**RESULTS:** The mean age of the patients were 57.54±4.74 years (range 50 to 71, 8 males) The mean aortic diameter was 64.63±5.25. Reimplantation of the visceral and renal arteries was performed as a single island in 4 patients. In 2 patients, visceral arteries and in 5 cases, right renal arteries were included in the proximal anastomotic line. In 6 cases, left renal artery was separately reimplanted using carrel button technique. 2 patients expired (one with juxtarenal abdominal aortic, one with thoracoabdominal extent IV aneurysm) due to multiple organ failure.
**CONCLUSIONS:** Thoracoabdominal approach to abdominal aortic aneurysms involving visceral and renal arteries allows adequate exposure. **REF0211**

## O159 - MODIFIED BENTALL TECHNIQUE: 10 YEARS EXPERIENCE

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**OBJECTIVE:** Surgical technique preferred for aortic root is replacement of aortic root with a composite graft integrated with prosthetic mechanical valve. The aim of our study is to evaluate the results of 10 years in aortic root replacement with new modified Bentall technique.
**METHOD:** Between January 1996 and May 2006 191 patients underwent aortic root replacement procedure by using flanged composite graft. Operation indications consisted of true or false aneurysms, ascending aortic aneurysms with severe calcified aortic stenosis or severe aortic insufficiency, acute dissections and combinations of all. 156 of the patients were male (81,6%), 35 were female (19,4%) and mean age was 49.5±13.6. 42 patients (21,9%) underwent more than one cardiac procedures.
**RESULTS:** Mean aortic cross clamp time was 91.2±29.1 min and cardiopulmonary bypass time was 147.3±46.5 min. Retrograde cerebral perfusion was performed to 37 patients. Mean operation time was 4.8 ± 0.9 hours. Operative mortality was 8.3% with 16 patients. There were no patient mortality by the complications of flanged technique and no patient was reoperated. Late mortality was observed only in 8 patients (4.2%).
**CONCLUSION:** Flanged composite graft has favorable late results with the fewer complication percentages due to prosthetic materials. Newly reconstructed sinuses by the help of flanged technique are useful especially to remain the physiologic functions of aortic root. **REF0357**

## O160 - HYBRID APPROACH FOR ILIAC ARTERY AND DISTAL LESIONS

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**INTRODUCTION:** The morbidity of the patients who treated endovascular for iliac artery and then surgical treatment for its distal lesions was improved by hybrid approach.
**MATERIAL-METHOD:** 110 patients(105 male(95.45%),5 female(4.55%)) operated between October 2001-April 2006. 28 (26%) of 110 patients treated firstly with iliac PTA-stent and femoro-popliteal or femoro-distal by-pass was made 15-30 days later.For cardiac investigation dypradamol myocard perfusion spect was applied.All patients underwent to aorta-femoro-popliteal and/or cardiac angiography. PTA-stent desicions has made with experienced interventional radiologists (TASC A and B iliac lesions).Surgical treatment only was applied TASC C and D iliac lesions.Klopidogrel tablet 75mg/daily treatment ceased 5 days before from surgery and LWM heparin was continued. Ankle/ brachial index was measured in all patients. Patient follow-up was made with physical examination,doppler US and MR angiography postoperatively.
**RESULTS:** During the by-pass procedure, proximal blood flow was perfect and at the end of the operation ATA and ATP pulsations was palpable.The patients who treated by hybrid therapy was used 6mm or 8mmPTFE graft in the above-knee by-passes (57.14%), saphenous vein (5 patients-17.86%) and 6 mm heparin-bounded PTFE (7 patients-25%) in the below knee by-passes.Nobody had early graft thrombosis. Late graft thrombosis was seen in 2(7.14%) patients.Medical treatment of graft thrombosis patients was continued warfarin.Nobody had amputation or mortality. Late infection was seen in only 1 (3.57%) patient.
**CONLUSION:** Life comfort increased by hybrid approach for iliac artery and its distal lesions, instead of a major vascular surgery operation smaller intervention was applied. Perfection of proximal blood flow was effected graft patency positively. **REF0100**

## O161 - SAPHENOUS LOOP TO COMMON FEMORAL ARTERY FOR ARTERIOVENOUS FISTULA: A PRACTICAL AND SAFE ALTERNATIVE

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**INTRODUCTION:** Patients with end stage renal dysfunction are living longer than in the past, and the provision of vascular access for dialysis is a growing problem. The increasing number of patients requiring regular hemodialysis for many years produces a number of problems, one of which is the vascular access.
**METHODS:** We present here our clinical experience with the greater saphenous vein to common femoral artery loop arteriovenous fistula is presented. A retrospective analysis of 33(61.1%) male and 21(%38.8) female patients was made with a mean age of 53.8(range, 19-71) years. At preoperative period patients were evaluated by Doppler USG for the patency, insufficiency and caliber of the greater saphenous vein.
**RESULTS:** Perioperatively, no acute occlusion was developed. Infection at surgical area was detected at 13(24.0%) patients, in whom 7 were female. Groin wound infection in 9 of these patients resolved with local wound care and specific antibiotic administration, other 4 patients required surgical drainage. Early patency at the end of first month was %87.0(47/54), and late patency was found to be 77.7%(42/54). Patent loop fistulas were functional for hemodialysis at long term period. 19(35.1%) patients developed mild to moderate edema at corresponding leg, managed by compression stockings.
**CONCLUSIONS:** Use of saphenous loop anastomosis to common femoral arley for dialysis access has accaptable results for alternate accesses. Factors recognized to be important for success were adequate size of saphenous vein, critical positioning of the loop and serious critical preoperative evaluation. **REF0128**

## O162 - THE FACTORS ASSOCIATED TO MORTALITY IN ACUTE ARTERIAL OCCLUSIONS

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**INTRODUCTION:** Acute arterial occlusion (AAO) caused by embolus or thrombosis is an acute ischemic event with high morbidity and mortality. AAO accompanied with chronic atherosclerotic peripheral arterial disease (PAD) and coronary artery disease (CAD) is associated with high cardiovascular morbidity and mortality.
The aim of the study was to invastigate the risk factors for the mortality in the patients who admitted the our clinic with AAO.
Between January 2003-November 2005, 103 patients ( mean age 67 67.86 ± 12.09, 60 males) with AAO were eveluated retrospectively. Embolectomy was done in 82 patients (%79.6) on lower extremities and in 21 patients (%20.4) on upper extremities. Localizations of the occlusion were femoropopliteal region in 76 cases (%73.7), brachial region in 21 cases (%20.3) and aortailiac region in 6 cases (%5.8), respectively. Non of the patients who underwent operations on upper extremities had additional reembolectomy or any other procedures.17 of the patients who underwent operations on lower exremities had to undergo reembolectomy do to recurrent ischemia.
**RESULTS:** Over all the rates of the limb salvage and mortality was 92.2% (95 cases) and 10.7%, respectively. Mean age of the patients who died was 73.63 ± 7.31 (62-87) and eight of the patients was over seventy years old. In the group of patients who died, there were CAD in ten patients and PAD in eight patients.
**IN CONCLUSIONS:** We think that in the patients in advanced age and with AAO, concomitant CAD and PAD may increase the rate of mortality. **REF0430**

# ADVANCES IN SURGICAL TREATMENT OF ATRIAL FIBRILLATION

## O163 - SURGICAL TREATMENT OF ATRIAL FIBRILLATION IN RHEUMATIC MITRAL VALVE DISEASE BY USING RADIOFREQUENCY ABLATION CATHATER

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**BACKGROUND:** The chief aim of this study is to restore sinus rhythm by use of radiofrequency ablation in patients with rheumatic mitral valve disease and chronic atrial fibrillation.
**METHODS:** Our study included 25 patients with rheumatic mitral valve disease and chronic atrial fibrillation. The ablation procedure was performed with standart cardiopulmonary bypass after aortic cross clamping and before the main surgical intervention (valve reconstruction or replacement). Bipolar ablation was performed in 11 patients whereas monopolar ablation was performed in 14.
**RESULTS:** Upon cessation of cardiopulmonary bypass normal sinus rhythm was restored in 21 patients whereas atrial fibrillation was persisting in 2 patients. One patient had atrial fibroflutter and one had nodal rhythm. On discharge, 16 patients (64 %) had sinus rhythm, 8 (32 %) had atrial fibrillation and 1 (4 %) had nodal rhythm. On postoperative third month 19 patients (76 %) were in normal sinus rhythm. Atrial fibrillation was present in 4 patients (16 %), atrial fibroflutter was present in one (4 %) and nodal rhythm was present in one (4%). We didn't observe any early morbidity and mortality. Permanent pacemaker implantation was performed in one patient in postoperative 8th month.
**CONCLUSION:** We had satisfactory early results with radiofrequency ablation for treatment of atrial fibrillation. This procedure is a successful, safe, easily performed and effective method which increases quality of life and reduces costs of treatment. It is important to choose patients suitable for this treatment and follow a standart protocol carefully.

**REF0061**

## O164 - COMPARISON OF ATRIAL FIBRILLATION FOLLOWING CORONARY ARTERY BYPASS GRAFTING WITH AND WITHOUT CARDIOPULMONARY BYPASS

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**BACKGROUND:** Atrial fibrillation (AF) is the most frequent arrhytmia disorder following CABG, with an incidence of 20-40% in different series.Cardiopulmonary bypass, cardioplegia solutions, cross clamping, atrial manuplation for cannulation are factors mostly claimed for triggering AF.Because of less invasiveness, causing fewer morbidity and lower costs Off-pump CABG technique is gaining more popularity. We compare AF frequency following CABG with and without cardiopulmonary bypass.
**METHODS:** Total of 281 patients undergone CABG by the same surgical team between December 2002 and September 2004 were included.Patients were divided into two groups; Group1 (n=174) off-pump CABG and Group2 (n=107) CABG with cardiopulmonary bypass. Patients with comorbidities like valvular diseases, endocrine disorders and preoperative AF were excluded. Pre-, per-, and postoperative data were evaluated.
**RESULTS:** Preoperative data of the two groups were identical except average age Off-pump group was older.Angiographic evaluation showed that total number of diseased vessels and right coronary artery lesions were less in the Off-pump group while other variables were statistically insignificant.Post-operative data reveals; CK-MB values after surgery and total blood loss was lower, period of mechanical ventilation and both ICU and hospital stay times were shorter in group1. Comparison of initiation of AF and the initiation time in both groups showed no statistical difference.
**CONCLUSIONS:** In our study, incidence of post-operative AF were not statistically different in both groups.This result should courage investigators to focus on the factors like reperfusion injury to myocardium, postoperative pericardial effusion, perioperative catecholamine discharge and etc., of which were the same for both groups.
With widespread application of beating heart technic, patients with severe left ventricle dysfunction have been considered to have the likelyhood of more secure revascularisation procedure. Hovewer to early results have been expansively quantitied and encouraging outcomes have been achieved, long term results are still obscure due to lack of enough evidence. From 2001 through 2006 38 consecutive patients with severe left ventricle dysfunction (ejection fraction < %35) underwent coronary revascularisation. The great deal of patients was in Canadian Cardiovascular Society Class III-IV (%86) Group-1 patients were operated with beating heart technic (n=15) and Group-II (n=23) by conventional technic using cardiopulmonary bypass. Properative mean disatıolic and systolic diameters of Group-I and Group-II were 62,5±8,2 cm versus 63,2±4,9 cm and 52,1±5,9 cm versus 50,3± 7,2 cm respectively. (p=ns). Overall in hospital mortality was %7,8 (three patients). Group II patients had higher low cardiac output syndrom, longer postoperative and hospital stay days but better late follow-up functional capacity than Group I patients. Follow-up was %89,4 complet without statisticaly significance between two groups. Both technics are equallay safe and effective in early postoperative period. Hovewer, whereas Group II patients suffer more troublecome early postoperative period, long term functional capacietes seem to be better.

**REF0379**

### O166 - EARLY AND MIDDLE TERM RESULTS OF BIPOLAR LEFT ATRIAL ABLATION IN PATIENTS UNDERGOING OPEN HEART SURGERY

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**OBJECTIVE:** Chronic atrial fibrilatıon is a frequent problem in patients undergoing open heart surgery. In this study we present early and middle term result of surgical treatment in bipolar left atrial ablation
**METHODS:** Between 2004-2006,bipolar left atrial ablation was performed in 66 patients. Of these patients 25 had isolated mitral disease, 12 had miral+tricuspid valve diseases, 8 had mitral+aortic valve diseases, 7 had mitral valve+ coronary artery disease, 4 had aortic valve disease, 8 had coronary artery disease 1 had atrial septal defect,1 had ascendan aort aneurysm.
Only left atrial ablation was performed to all patients. Left atrial appendix resection also was done additionaly in patients undergoing mitral valve surgery.
OPCAB was done in two coronary artery patients Addionally cordorane was given orally. All patients in follow-of period, EKG patterns were recorded just after operation, on dischange day, and on postoperative 1.,6.,12.,and 24. months.
**RESULTS:** During early post operative period 51 of the patients were on sinusal rythym, 10 were on atrial fibrilation and 5 were on nodal rythym.Hospital mortality was 5 patients. ( %7,5).
44 patients (%72,1) were dischanged on sinusal rythym, 17 were on atrial fibrilation (27,8).
Sinusal rythym rates in 1.,6., and 12. months, were %70,%72 and %76 respectively.
Analysing statistically, there was no reason responsible for ongoing atrial fibrilation during preoperative and postoperative period.
**CONCLUSION:** Concomittant bipolar left atrial ablation and amiadoron medication are to be effective in patients with atrial fibrilation undergoing open heart surgery. **REF0579**

### O167 - RESULTS OF UNIPOLAR-BIPOLAR RADIOFREQUENCY ABLATION AND ELECTROCAUTERY ABLATION IN ATRIAL FIBRILLATION

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**INTRODUCTION:** Various techniques have been developed recently to convert AF to sinus rhythm in patients undergoing open heart surgery. In this study, we report our results of different types of maze procedures including, unipolar-bipolar radiofrequency (RF), electrocautery ablation.
**METHODS:** Between December 2002 and August 2005, 145 heart valve operations. Thirty two patients underwent three types of maze procedures (unipolar-bipolar radiofrequency and electrochotery ablation) for atrial fibrillation. Mean age of the patients was 49,1 (30-75) years. 22 patients were female (68,7 %). 23 of the patients (71,8 %) underwent mitral and/or tricuspid valve procedures. All patients received amiodarone for 6 months. Patients were followed-up by clinical examination, ECG and echocardiography.
**RESULTS:** There was no mortality or major morbidity. Sinus rhythm was restored in 18 patients (56,2 %) in the early postoperative period (9 in 12 patients with unipolar RF (75 %); 10 in 14 patients with electrocautery (71,4%)). Atrial fibrillation persisted in all patients who underwent bipolar RF. 25 patients (78%) were followed-up. Mean follow-up period was 14,4 months. There was no mortality. 13 patients (52 %) were in sinus rhythm during follow-up.
**CONCLUSION:** Sinus rhythm is restored in limited number of patients with AF. Results with electrocautery ablation technique is similar to RF ablation. Bipolar ablation technique needs to be improved for better results. Further studies are necessary to determine the efficacy and reliability of the techniques. Proper patient selection might improve results. **REF0552**

### O168 -THE RESULTS OF OUR SIRFA AND MODIFIED MAZE APPLICATIONS IN PATIENTS WITH ATRIAL FIBRILLATION

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**PURPOSE:** atrial fibrillation is usually a benign type of arrhythmia that can be encountered in clinic practice most frequently. Atrial fibrillation mostly appears around the pulmonary vein orifices or in micro re-entries within the orifice. In this study, after a one year of follow up, we intended to evaluate the success rate of the SIRFA method applied to our patients with AF who underwent largely to cardiac valve replacement and/or restoration and to coronary bypass along with valve replacement.
**METHOD:** a total of 185 patients were enrolled between October 2001 and February 2006. Patients were followed prospectively with EKG and during 1, 6 and 12 months (last cases 1 month) after discharged. Other than routine follow ups, each one of problem patients were contacted. At routine follow ups 12 lead EKG and for those cases with suspicious amnesia a 24-hour holter monitorization was performed.
**FINDINGS:** there wasn't any operational or hospital mortality. There wasn't any revision due to bleeding. Only one patient required permanent pacemaker. 29 patients left CPB with temporary pacemakers and postoperative anti-arrhythmic (Amiodarone) therapy initiated for 94 patients. The rate of staying at sinus rhythm was 91.3 % at early postoperative period, 85.4 % at the end of first and sixth months and 82.8 % at the end of one year.
**RESULTS:** SIRFA which its annual success rate varies between 69-85 % in literature is accepted as a good alternative therapy in treatment of atrial fibrillation. **REF0335**

### O169 - FEASIBILITY OF PULMONARY VEIN ISOLATION ALONE FOR THE TREATMENT OF ATRIAL FIBRILLATION

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**BACKGROUND:** The aim of this study was to evaluate the feasibility of off-pump coronary artery bypass grafting combined with radiofrequency ablation and to compare outcomes between patients with permanent and paroxysmal atrial fibrillation (AF).
**METHODS:** Thirty-three patients underwent the combined procedure. Mean age was 62.34±8.20 years; there were 12 female and 21 male patients. Twenty-one patients were diagnosed as permanent AF (Group A) and 12 had paroxysmal AF (Group B). Rhythm was evaluated at discharge and at 6 and 12 months' follow-up. Patients in sinus rhythm underwent transthoracic echocardiographic examination to evaluate atrial contractility.
**RESULTS:** There was no operative mortality or major complications. The mean ablation time was 11±3.4 minutes, incluing multiple applications. At the end of the procedure 84.5% of patients were free of AF. Sinus rhythm was established in 56% (group A,52%;group B,58.3%), 70.5% (group A,58%;group B,83.3%), and 71% (group A,59%;group B,83.3%) of patients at discharge and at 6 and 12 months, respectively (p=0.249). Biatrial contractility was detected in 71% of group A and 76% of group B patients at 6 months' follow-up. More patients in group A returned to AF during follow-up when compared with group B (p=0.016). Female sex (odds ratio, 2.1), chronic lung disease (odds ratio, 1.40), left ventricular disfunction (p=0.016), and hypertension (odds ratio, 2.57), emerged as risk factors for AF recurrence after ablation.
**CONCLUSION:** Concomitant off-pump coronary artery bypass grafting and bipolar radiofrequency ablation was safe and effective. These patients should be considered for adjunctive treatment at the time of off-pump revascularization **REF0508**

# COMPLEX PROBLEMS AND NEW SOLUTIONS IN SURGICAL TREATMENT OF CONGENITAL HEART DISEASE

## O187 - NEW SCORING SYSTEM IN CONGENITAL CARDIAC SURGERY AND FIRST YEAR OUTCOMES OF DR. SAMI ULUS CHILDREN'S HOSPITAL CARDIOVASCULAR SURGERY CLINIC

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**INTRODUCTION:** The Aristotle project, involving a panel of expert surgeons, started in 1999 and included 50 pediatric surgeons from 23 countries, representing the EACTS, STS, ECHSA and CHSS.
**METHODS:** The complexity was based on the procedures as defined by the STS/EACTS International Nomenclature and was undertaken in two steps: the first step was establishing the Basic Score, which adjusts only the complexity of the procedures. It is based on three factors: the potential for mortality, the potential for morbidity and the anticipated technical difficulty. A questionnaire was completed by the 50 centers. The second step was the development of the Comprehensive Aristotle Score, which further adjusts the complexity according to the specific patient characteristics. It includes two categories of complexity, the procedure dependent and independent factors. After considering the relationship between complexity and performance, the Aristotle Committee is proposing that:
Performance =Complexity x Outcome.
**RESULT:** Last year we made 108 congenital cardiac surgical prosedures in our clinic. We used aristotle scoring system and the measured median complexity score is 6.25, median complexity level is 2, median mortality level is 2.06, median morbidity level is 2, and median difficulty level is 2.19.
**CONCLUSION:** Allowing accurate evaluation of surgical performance in congenital heart disease, the Aristotle score is a powerful vector of communication between patients, surgeons, cardiologists and health care payers. Evaluating the predictive values of the Aristotle method is in progress to confirm the validity of the method. **REF0498**

## O188 -THE COMPLEXITY CLASSIFICATIONS AND THE RESULTS OF OUR CONGENITAL HEART SURGERY RESULTS WITH THE ARISTOTLE SCORE

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**OBJECTIVES:** The motivation behind the Complexity Score Project was a growingfrustration of pediatric cardiac surgeons over the fact that their surgical performance was being evaluated based on hospital mortality without regard for the complexity of the operations performed. The aim of the study is to evaluated the results of complexity and the performance of our congenital surgeries by the Aristotle score.
**METHODS:** Totaly 207 patients were operated between the Jan 2002 and May 2006. All patients were diveded into 5 groups by their complexity. 65 ASD, 33 PDA, 27 VSD, 2 ASD+VSD, 1 DOLV, 2 DORV, 10 ASD + Mitral valve repair, 2 Endocardial cusion defect, 1 Cor-triatriatum, 8 aorta coarctation, 8 pulmonary valve stenosis, 2 TAPVC, 10 subaortic discrete membrane, 1 aorticopulmonary window, 1 pulmonary atresia, 28 TOF, 1 typeII truncus arteriosus, 1 supravalvular aortic stenosis, 3 TGA, 1CABG.
**RESULTS:** Mean ages of the patients was 9.70±12.57 years. Overall mortality is 11 (5.31%). The results of the complexity scores; Comp I-0/98 (0%), Comp II-2/63 (3.17%), Comp III- 5/33 (15.1%), CompIV- 1/6 (16.6%), Comp V-3/7 (42.8%). Expected mortality rates are; Comp I-1%, Comp II- 1-5%, Comp III- 5-10%, Comp IV- 10-20%, Comp V->20%. The avarage survival and the complexity of our patients results are close to the average expected survival value of the Aristotle score. Performance score is 5.7.
**CONCLUSION:** Beyond the Aristotle score, the survial and the complexity results of our congenital heart diseased patients are close to the deep numbered successful clinic's results. **REF0337**

## O189-ARTERIAL SWITCH OPERATION IN PATIENTS WITH COMPLEX CORONARY ANATOMY: IS NEOAORTIC ANASTOMOSIS PRIOR TO CORONARY REIMPLANTATION AN DISADVANTAGE?

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**OBJECTIVES:** Arterial switch (AS) is a corrective operation for the transposition of great arteries (TGA). Mortality and morbidity of the procedure is dependent on the coronary artery (CA) anatomy and myocardial ischemia following reimplantation of the coronary arteries. Several techniques have been suggested for patients with unusual CA pattern.
**METHODS:** Data regarding 9 patients that underwent AS for TGA and unsual CA pattern were reviewed. AS was performed by a single operating surgeon with the technique based on the CA anatomy. Neoaortic anastomosis was completed prior to CA reimplantation
**RESULTS:** 2 patients expired; one with low-birth weight due to sepsis on day 20 without any signs of myocardial ischemia and the other was lost in the early postoperative period.
**CONCLUSIONS:** Completion of neoaortic anastomosis prior to coronary artery buttons is not a disadvantage. **REF0628**

## O190 - REPAIR OF TRUNCUS ARTERIOSUS WITH CONTEGRA CONDUIT IN A NEONATE: VIDEO PRESENTATION

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**INTRODUCTION:** Truncus arteriosus is a complex cardiac anomaly with certain difficulties in preoperative evaluation, perioperative and postoperative management. In this video presentation, we present a case of truncus arteriosus in a 28 days old baby, who underwent successful surgical repair with Contegra conduit.
**CASE:** Twenty-eight days old baby was presented with feeding difficulties and dyspnea. Echocardiographic examination revealed truncus arteriosus, subaortic VSD, right arcus aorta and mild truncal valve insufficiency. Operation was performed under CPB and moderate hypothermia with aortic and bicaval cannulation. Right and left pulmonary arteries were occluded just after CPB. Right and left pulmonary artery originated from anterolateral side of ascending aorta with a very short segment of main pulmonary artery (type I). Coronary anatomy was usual. After aortic cross clamping, aortotomy was performed, right and left pulmonary arteries were resected from the aorta as a single button. Defect on the aorta was closed with gluteraldehyde treated pericardium. Right ventriculotomy was performed and VSD was closed with dacron patch by using interrupted pletgeted sutures. Contegra conduit (14 mm.) was implanted between distal pulmonary artery and right ventricle outflow tract. Interrupted sutures were used on anterior side of the distal anastomosis. PFO was partially closed with 3 mm. opening. CPB was discontinued without difficulty in sinus rhythm. Sternum was left open, and skin was closed. High frequency oscillation ventilation was used in postperative period due to interstitial emphysema.
**CONCLUSION:** Successful surgical repair of neonatal truncus arteriosus necessitates carefully planned surgical strategy, detailed operative technique and meticulous postoperative care. **REF0546**

## O191 - CARDIAC SURGICAL INTERVENTIONS IN MARFAN SYNDROME: EARLY AND LATE RESULTS

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**OBJECTIVE:** The main purpose of surgical therapy is to detect the cardiovascular involvement as early as possible and to avoid fatal complications in Marfan Syndrome. We made an analysis on the Marfan patients operated in our clinic to find the risk factors for early and late outcome.
**METHODS:** We operated 55 Marfan patients between Februrary 1987 and August 2005. Fourtyone were male (74.5%) and 14 were female (25.5%). The average age of the patients were 31.64 ± 10 (11-56) years. Sixtyeight surgical interventions were performed on these 55 patients. One or more reoperations were made for nine patients (16.4%). The most frequently performed procedure was aortic root replacement on 39 patients (70.9%).
**RESULTS:** Early mortality was 3.6% with two patients. Survival rates for 1, 5 and 11 years were 91.9% ± 3.9%, 88% ± 5.3% and 66% ± 19.5%. Risk factors were analysed for their effect on survival by means of univariate and multivariate analyses. Emergency operation (p=0.0001) and reoperation (p=0.0001) were found to be significant risk factors with univariate analysis whereas multivariate analysis showed emergency operation (p=0.0001) as the only risk factor significantly effecting long term survival. The most frequently encountered complication was arrhythmia in 10 patients (18.2%). Two patients were undertaken revision operations for bleeding. Two patients, who had normal renal functions preoperatively developed renal dysfunction.
**CONCLUSION:** Marfan Syndrome patients must be followed carefully for cardiovascular involvement. Although surgery is associated with improved survival, emergency operations may decrease life expectancy in long term follow-up. **REF0170**

## O192 - TOTAL CORRECTION OPERATIONS IN PATIENTS WiTH FALLOT TETRALOGY AND OUR METHODS USEDFOR ENLARGEMENT OF RIGHT VENTRICULAR OUTFLOWTRACT

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**PURPOSE:** complete correction operations used in the treatment of Fallot tetralogy (TOF) recently has become a method with a lower mortality. In this study we aimed to provide the outcomes of our patients who underwent complete correction surgery and our methods used for enlargement of right ventricular outflow tract.
**METHOD:** complete correction surgery was applied to 28 patients (15 men, 13 women) within the last four years. Right ventricular outflow tract was enlarged by using transannular and/or infundibular pericardial patch in 20 patients, pericardial monocuspid valve method in 4 patients and Contegra bovine jugular vein in 4 patients.
**FINDINGS:** There wasn't any intraoperative mortality. Postoperatively 2 patients died from congestive cardiac failure. Two patients reoperated due to bleeding in one and narrowness of the right ventricular outflow tract in other.
**CONCLUSION:** One-stage repair of TOF could be performed with low mortality and morbidity. **REF0497**

## O193 - IS OFF-PUMP EXTRACARDIAC FONTAN PROCEDURE APPLICABLE FOR ALL CASES?

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**OBJECTIVES:** Several advantages of off-pump exstracardiac fontan have recently been suggested as less perioperative inotropic need, lower postoperative pulmonary artery pressures and earlier weaning from mechanic respiratory support. Some authors, however, questioned the applicability and suitability of this technique to all patients.
**METHODS:** Perioperative data regarding the patients in whom off-pump exstracardiac fontan procedure was performed were identified. Technically, glenn anastomosis was performed prior to conduit anastomosis in all patients. In patients with staged-fontan procedure, anastomosis of the conduit to pulmonary artery was completed prior to IVC anastomosis. Right ventricle to pulmonary artery continuity was interrupted in al cases.
**RESULTS:** A total of 12 off-pump ekstrakardiyak fontan procedures were performed in our clinic. 9 were single-stage fontan and the remaining were staged-fontan procedures. In 11 cases, an external IVC-right atrium shunt was used for passive decompression during IVC-conduit anastomosis. Right pulmonary artery reconstruction was performed in 2 patients. A fenestration procedure between right atrium and the conduit was performed in 5 of the cases. Conversion to cardiopulmonary bypass was required in no patients. 2 patients expired on postoperative 3rd and 30th days, respectively due to low cardiac output state with fontan pressures higher than 18 mmHg. All other patients were weaned from mechanical respiratory support in the early postoperative period.
**CONCLUSIONS:** Unless an intracardiac surgical procedure is indicated, off-pump technique is applicable to all patients including those needing a pulmonary artery reconstruction. **REF0201**

## O194 - THE CHALLENGING PROBLEMS ENCOUNTERED IN FONTAN CONVERSION OPERATIONS

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**BACKGROUND:** Modified Fontan operations with atriopulmonary connection may result in right atrial dilatation causing late complications such as giant right atrium, intra-atrial thrombus, arrhythmias, and congestive heart failure after certain years. Conversion of the atriopulmonary connections to total cavopulmonary connection (TCPC) may provide clinical improvement in these patients. We present our experience in the conversion operations and discuss the problems encountered.
**PATIENTS AND METHOD:** Total of 44 patients had modified Fontan operation with direct anastomosis of right atrium to the pulmonary artery between the years of 1990 and 2005 in our hospital. Four of them had rehospitalized with late complications after mean of 9.6 years. Mean age of patients were 17.5 years at reoperation. All of these 4 patients had giant right atrium, atrial thrombus, peripheral cyanosis and signs of congestive heart failure. Additionally 1 patient had arrhythmia, sinus node dysfunction and another patient had stenosis of bulboventricular foramen.
**RESULTS:** One patient died in the early postoperative period. The oldest patient (28 year of age) who had pacemaker implantation for arrhythmia, with the fact that he has been better effort capacity, also had right heart failure signs. The other 2 patients are living stably. The follow up period is 1-3 years (6 patient-year). All surviving patients are on aspirin and oral anticoagulant therapy.
**CONCLUSION:** Fontan conversion operation is risky but should not be delayed. Beside the technical difficulties, pulmonary problems and resuming arrhythmias effect the postoperative outcome. Reoperation should planned in details and be performed by highly experienced surgical teams. **REF0204**

## O195 - AORTIC TRANSLOCATION AND BIVENTRICULAR OUTFLOW TRACT RECONSTRUCTION IN COMPLEX ARTERIAL TRANSPOSITIONS (MODIFIED NIKAIDOH OPERATION)

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**OBJECTIVES:** In spite of all advancements in pediatric cardiac surgery, there is still inadequate data regarding arterial transpositions with pulmonary stenosis and a ventricular septal defect. Rastelli procedure, commonly performed in these situations, does not serve as an optimal therapy. Anatomic correction is, however, achieved with aortic translocation and biventricular outflow tract reconstruction (Nikaidoh operation)
**METHODS:** Between 1998 and 2006, we performed modified rastelli procedures in 6 patients, arterial switch in 2 patients and a modified nikaidoh operation in a three-year old for complex arterial transposition.
**RESULTS:** Three-year old boy with complex transposition underwent a modified Nikaidoh operation and was weaned from mechanical ventilator early in the postoperative period. Postoperative echocardiography revealed normal ventricular fonction and no residual shunts. He was discharged on day 10.
**CONCLUSIONS:** Anatomic correction is achieved with aortic translocation and biventricular outflow tract reconstruction (Nikaidoh operation) in patients with arterial transposition with pulmonary stenosis and a ventricular septal defect. **REF0255**

# VENOUS DISEASE DIAGNOSIS AND TREATMENT

## O197 - DIAGNOSTIC VALUE OF WELLS CLINICAL SCORING SYSTEM FOR THE EVALUATION OF DEEP VEIN THROMBOSIS PATIENTS

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**INTRODUCTION:** In a prospective setting we have compared the Wells clinical scoring system with venous duplex ultrasound examination for the evaluation of patients with a suspicion of deep vein thrombosis.
**PATIENTS-METHODS:** 57 patients were enrolled in the study, of whom 28 patients (49.1%) were female. Mean age was 54.4 (the youngest was 20 and the oldest was 82 years old). 4 patients were pregnant women (7%). Ultrasonographically deep venous thrombosis was present in the right lower extremity in 27 patients (47.3%), in the left lower extremity in 25 patients (43.8%) and was bilateral in 5 patients (8.7%). Deep venous thrombosis was in acute phase in 17 patients (29.8%), acute-subacute in 8 patients (14%), subacute in 11 patients (19.2%) and was chronic in 10 patients (17.2%). 11 patients (19.2%) were found to be normal in venous duplex ultrasound evaluations, which were reevaluated for 3 times within the first week after initial evaluation. Wells clinical scores were calculated for each patient to assess the probability of presence of a deep vein thrombosis and compared to the results of duplex ultrasonography. Clinical scores have shown that 34 patients (59.6%) had a high probability, 17 patients (29.8%) had moderate and 6 patients (10.5%) had low probability of having a deep vein thrombosis. Venous duplex revealed similar results in all probability levels.
**CONCLUSION:** We can state that the Wells clinical scoring system without a duplex scan can be used to determine which patients are candidates for a deep venous thrombosis treatment.

**REF0673**

## O198 - SUBFASCIAL ENDOSCOPIC PERFORATOR VEIN SURGERY (SEPS): AN UNDERUTILIZED MODALITY FOR TREATMENT OF SEVERE PERFORATOR VEIN REFLUX, RECURRENT VARICOSE VEINS AND VENOUS STASIS ULCERS

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**OBJECTIVES:** Ligation of subfascial perforator veins with the classic Linton technique is fraught with high morbidity and increased incidence of wound complications. Subfascial Endoscopic Perforator Surgery (SEPS) is being used as an alternative to Linton technique.
**PATIENTS AND METHODS:** SEPS was performed in 32 patients (35 limbs) between August 2005 and May 2006. Mean age was 39.9 ±10.7 years and 13 were female. Severe perforator reflux was confirmed with preoperative Doppler ultrasound examination in all patients. Indications for SEPS were chronic venous ulceration or lipodermatosclerosis in 27 limbs and superficial venous reflux associated with significant deep venous reflux in 11 limbs. CEAP scores are demonstrated in Table 1. Five patients had previous venous surgery. There was an open ulcer in 5 limbs at the time of procedure. All patients underwent stripping of superficial venous system in addition to SEPS.
**RESULTS:** The mean number of perforator veins was 6. Average length of stay was 1.8 days. There was only one localized wound infection which responded to oral antibiotics. There was no other postoperative morbidity. Mean follow-up was 6±2.8 months. All ulcers healed during 8 weeks after the procedure. There was no ulcer recurrence or recurrent varicose veins during follow-up.
**CONCLUSION:** SEPS may be an underperformed procedure for treatment of lower extremity venous insufficiency. It can be performed with minimal morbidity and can prevent recurrent venous insuffiency and venous ulceration in correct patient population.

**REF0281**

**Table 1**

| CEAP Score | Number of limbs |
|---|---|
| 1 | 0 |
| 2 | 0 |
| 3 | 11 |
| 4 | 17 |
| 5 | 2 |
| 6 | 5 |

*CEAP Scores of the 35 limbs*

## O199 - SUBFASCIAL ENDOSCOPIC PERFORATOR VEIN SURGERY(SEPS) FOR TREATMENT OF CHRONIC VENOUS INSUFFICIENCY AND VENOUS ULCERATION

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**OBJECTIVES:** The complication rate in patients treated with the Linton procedure was unacceptably high. SEPS is minimal invasive treatment modality for chronic venous insufficiency and venous ulcers.
**MATERIAL-METHODS:** From May 2003 to January 2006 our group prospectively collected data on 56 limbs of 49 patients who underwent a SEPS procedure. Tourniquet was not used and two-port technique was preferred for operation.
**RESULTS:** According to CEAP clinical Classification 29 limbs were class 6, 23 limbs (class 5), 4 limbs (Class4) respectively. Greater saphenous vein stripping and varicose vein excision accompanied SEPS in 33 limbs who had combined Sapheno-femoral junction and perforator vein insufficiency (PVI) and SEPS was performed alone 23 limbs who had deep venous reflux (19) and PVI alone(4). Mean patient follow-up was 18 months. No early deaths or thromboembolism occurred. Complications included severe subcutaneous emphysema(1), neuralgia (7), 1 year later cellulites (1). Ulcers healed in 20 limbs in two months and nine limbs in 3 months. Recurrence or new ulcer was on 1 limb after 1 year but this ulcer healed after 2 weeks treatment. Clinical severity and disability scores improved significantly after surgery.
**CONCLUSION:** All venous ulcers healed with SEPS combined or not ablation of superficial venous reflux and remain healed and symptom-free during long-term follow-up. SEPS is an effective and safety treatment modality.

**REF0103**

## O200 - ENDOVENOUS LASER OBLITERATION OF THE SAPHENOUS VEIN. EARLY EXPERIENCE ON 106 LIMBS

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**AIM:** To report early results of endovenous laser treatment for great saphenous vein (GSV) reflux caused by severe saphenofemoral junction incompetence.
**MATERIALS-METHODS:** 106 GSVs in 98 subjects with varicose veins were treated over a 13-monts period with 980-nm diode laser. The procedures were carried out in the operating room with local or general anesthesia. All patients underwent concomitant mini-phlebectomy for associated tributary varicose veins. Patients were evaluated clinically and with duplex US at 1 month, 6 months and 1 year after the procedure. Aberdeen varicose vein questionnaire and SF-36 quality of life scoring were used for further evaluation.
**RESULTS:** Successful total occlusion of the GSV, defined as absence of flow on color flow Doppler imaging, was detected 103 of 106 GSVs. Bruising over the treated vein was noted in 13 patients. Tightness along the course of the treated vein was present in 52 limbs. There have been no skin burns, paresthesias, or deep vein thrombosis in this series. Aberdeen varicose vein questionnaire and SF-36 quality of life scoring were demonstrated significant improvement in comparison with the pre-procedure evaluation ($p<0.01$).
**CONCLUSIONS:** Our early experience on 98 patients treated with endovenous laser treatment for great saphenous vein demonstrates very high occlusion rate and patient satisfaction. Endovenous laser appears to offer this benefit with low complication rate. **REF0347**

## O201 - TUNNELED INTERNAL JUGULER VEIN CATHETER USE IN NEUTROPENIC MALIGNANCY PATIENTS

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**PURPOSE:**The use of tunneled central venous access catheter are being utilized increasingly more often in management of patients with disseminated malignancies. This study has focused on the durability of wide bore tunneled central vein catheters inserted through the internal jugular veins in high risk malignancy patients.
**METHODS:** 30 long term catheters in 29 patients (12K-17E) were analyzed. Mean age of the patients was 45±16 (range;11months-70y). Non Hodgkin lymphoma (12 pts), leukemia (8 pts) and metastatic carcinoma (7 pts) were the main underlying malignancies. All catheters were used for chemotherapy; additionally10 patients underwent stem cell transplantation through the catheters.
**RESULTS:** Mean catheter duration was 147±100 days (2-300days). During this period, seven patients died because of their malignancies, 13 catheters were removed and 10 patients are currently being followed with their catheters. The indications for catheter removal were: infection in 6 patients, completion of treatment in 6 patients and mechanical breakdown in 1 patient. There was a history of removal of a previous catheter because of infection in 3 of the patients. Twenty-five patients (%83) had at least one documented period of neutropenia with neutropenic fever during catheter use. None of the patients developed a catheter related vascular complication or central venous thrombosis during this period.
**RESULT:** Tunneled central venous catheters can be implanted and used, even in patients with disseminated malignancies and immunosuppression. Systemic infections can be managed in most patients without catheter removal. Access through internal jugular veins may prevent development of vascular complications. **REF0656**

## O202 - BASILIC VEIN TRANSPOSITION AS A MEANS FOR VASCULAR ACCESS FOR DIALYSIS

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**PURPOSE:** To show the experience, patency, complications and results of arteriovenous fistula with Basilic vein transposition technics on patients with chronic renal failure for the use of hemodialysis.
**MATERIAL-METHODS:** Between January 2000 and December 2005, out of 1286 complications chronic renal failure patients in total 1492 arteriovenous fistula operations were performed for the use of hemodialysis, at Prof. Dr. Siyami Ersek Cardiovascular and Thoracic Surgery's, Cardiovascular Surgery Clinic. Basilic Vein Transposition technic was performed on 38 patients. Age, sex, Hypertansion, Diabetes Mellitus, were consider in patient with Basilic Vein Transposition.
**FINDINGS:** Out of 1286 Chronic renal failure patients in total 1492 arteriovenous fistula operations were performed. 38 (%2.55) of these patients had Basilic Vein Transposition technicue performed. Out of these 38 patient, 13 (%34.21) were male, 25(%65.79) were female and the avarage age was 52.36 ± 3,26( the youngest 24 and oldest 73). 6 (%15.79) of these cases with Basilic Vein Transposition were hypertansion and 13 (%34.21) had diabetes mellitus. No complications occured with any of the cases. In 3 cases of the Basilic Vein Transposition, 1 (%2.63) had an early and 2 (%5.26) had a late inactivenen. The early occlusion was due to the early use of dialysis with out any maturation which led to a hematom. Because of the late admitance of the patient nothing was able to be done. 1 of the cases with a late occlusion had hypertansion and the other case was thought to have a late occlusim due to an operation which there was no use of any anticoagulant an antiaggregants.
**RESULTS:** Chronic renal failure aggects patients medically as well as socially, economically and psychologically. With the use of hemodialysis the survival and comfort of millions of Chronic renal failure patients has increased. To continue hemodialysis for the long term patients need appropriat surgery and technicues. Because the ratio of infection, rupture, aneurysm formation and occlusion are higher with PTFE grafts, as alternative Basilic Vein Transposition technicue should be considered; since autogenous source is used with a decreased cost and a more comfortable way for bath the patient and surgeon. We conclude that the avalvation of the patient carefully and performing an autogenous arteriovenous fistula such as a Basilic Vein Transposition before the prosthetic graft will be usefull. **REF0222**

# TREATMENT OF CONGENITAL HEART DISEASES: PERCUTANEOUS INTERVENTIONS OR LESS INVASIVE SURGERY

## O205 -THE OUTCOMES OF COMPLETE ATRIOVENTRICULAR OF SEPTAL DEFECTS: 8 YEAR AUDIT

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**BACKGROUND:** Atrioventricular septal defect is the 4th most common congenital heart defect (7.4 % of all congenital heart defects), and the most frequent (50-69 %) congenital heart defect in patients with Down syndrome. The outcomes and mortality reasons were discussed within this paper.
**MATERIALS-METHODS:** From 1998 through 2006, 24 patients were operated with diagnosis of complete atrioventricular septal defect diagnosis. Of 24 patients, 14 were with Down syndrome. Median age and weight were 4.9 years and 4.7 kgs respectively. Persistant Superior vena cava and patent ductus arteriosus were the leading associated cardiac anomalies.
**RESULTS:** Early mortality was seen in 3 patients and late mortality was in 1 patient.
Mean CPB and AXC time were 84±21 min and 54±18 mins. Single patch technique was used in 20 patients (Australian technique within 7 patients) and double patch in 5. Mortality reasons were sepsis, multi-organ failure, neurologic event. Mortality was found to be lower in Down patients compared to literature
**CONCLUSION:** atrioventricular septal defect correction can be accomplished with reasonable mortality and morbidity rates. Team organization is a keyword for succesful correction in those patients. **REF0095**

## O206 - LESS INVASIVE APPROACHES IN PEDIATRIC CARDIAC SURGERY

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**PURPOSE:** In cardiac surgery, lenght of surgical insicions and cosmetic results were considered less important. However, especially in female patients with certain simple cardiac malformations, surgical repair with smaller and more cosmetic surgical incisions could be possible. For this purpose, 14 female patients were operated with two different surgical approaches during last 12 months.
**PATIENTS AND METHODS:** A submammar reverse "V" incision was selected in 3 patients with breast development whereas a short straight incision located at lower 1/3 of sternal corpus was performed in younger girls in order not to interfere with symmetrical breast development in future. A complete median sternotomy was possible in all patients. Preoperative diagnoses were as follows: Isolated VSD in 5, VSD+ASD in 2, isolated ASD in 4, VSD+ASD+Double chamber RV in 1, Pulmonary stenosis+tricuspid regurgitation in 1 and subvalvular AS in 1. Ages of patients were between 4 and 14, their weights were between 16 and 41 kgs, and lenght of incisions were between 5 and 7 cms. All patients had an uneventful postoperative course without any wound complications. Reverse "V" incisions were obscured by submammar creases. In long term there was no complication in any of the patients.
**CONCLUSION:** More cosmetic results were possible with less invasive approaches in pediatric cardiac surgery.
**REF0637**

## O207 - THE EFFECTS OF THE TIMING OF THE OPERATION ON POSTOPERATIVE PULMONARY ARTERY PRESSURE IN PATIENTS WITH VENTRICULAR SEPTAL DEFECT

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**PURPOSE:** To investigate the impact of age at operation on out postoperative patient prognosis and alterations in pulmonary artery pressure in isolated
ventricular septal defects.
**MATERIALS AND METHODS:** A total of 49 patients undergoing surgery at our clinic due to ventricular septal defects were enrolled in the study. The patients were classified into two groups in terms of their ages at operation. Those who had been operated before the age of two formed Group 1 and those who had been operated after the age of two formed Group 2.
**RESULTS:** No statistically significant differences were observed between Groups 1 and 2 in terms of preoperative pulmonary artery pressure values measured echocardiographically ($p > 0.05$). However, mean postoperative pulmonary artery pressure value was observed to be significantly lower in Group 1 (24.41 ± 0.63 mm-Hg) when compared with that of Group 2 (37.06 ± 1.53mm-Hg) ($p = 0.0001$). No late mortality cases were observed in our patients monitored for a mean period of two years.
**DISCUSSION:** We maintain that operation is more beneficial at an earlier age before pulmonary vascular disease develops and pulmonary vascular resistance increases in patients established with Ventricular Septal Defect. **REF0180**

## O210 - OFF PUMP PEDIATRIC AORTIC ARCH RECONSTRUCTION AND ANTEGRADE SELECTIVE PERFUSION

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**SUMMARY:** Different surgical techniques are applied in aortic arch reconstruction at infants and neonates. Hypothermic circulatory arrest as commonly used before is not the technique of choice and correction can be made with different perfusion strategies.
**METHOD:** Biventricular repair and aortic arch reconstruction with median sternotomy is done in 11 cases of intracardiac and aortic anomaly. Eight of these patients are VSD and Coarctation of Aorta, two are Interruted Aortic Arch and one is Taussig Bing and Aortic arch hypoplasia. Antegrade perfusion via truncus brachiocephalicus cannulation is applied five of the cases. At six cases after aortic reconstruction with simple clamp technique in beating heart, intracardiac repair is applied in cardiopulmonary bypass.
**CLINICAL FINDINGS:** Early and late term mortality is not seen at any of patients. Neurological examination is normal. No significant coarctation gradient is found at postoperative Echocardiography.
**CONCLUSION:** Truncus brachiocaphalicus cannulation is optimal technique of ductus dependent proximal aortic arch hypoplasia cases. If the proximal aortic arch is normal and there is no ductus dependent circulation, aortic reconstruction can be done easily with simple clamp technique in beating heart. **REF0675**

# CURRENT PROBLEMS AND QUESTIONS IN HEART SURGERY

## O211 - DETERMINE TO MORTALITY WITH PREOPERATIVE EUROSCORE SYSTEM IN PATIENT WHO UNDERWENT OPEN HEART SURGERY

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**INTRODUCTION:** Euroscore system is 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 risk of the patients undergoing open heart surgery with Euroscore system.
**PATIENTS-METHODS:**488 patients who underwent open heart surgery in our clinic between 1999-2006 were investigated.
323 (66.2%) of the patients were male and 165 (33.8%) of them were female. According to Euroscore, 122(25%) of the patients were in low risk group, 214 (43.9%) were in medium risk group and 152 (31.1%) were in high risk group. The observed mortality rate and the expected mortality rate were 0% vs 1.36±0.31% ($p<0.05$), 4.21±0.20 % vs 2.9±0.95% ($p>0.05$), 10.5±30.7% vs 15.25±15.96% ($p<0.05$) in low risk group,medium risk group and high risk group, respectively. In overall, there wasn't statisticaly significant difference between the observed and the expected mortality ($P>0.05$). Areas under ROC curve was found 0.79.
**CONCULUSION:** Euroscore is a feasible system in open heart surgery. In addition, ıt helps both surgeons and patients to provide accurate and safe knowledge about the mortality risk of the operation which will be done. **REF0417**

## O212 - MYOCARDIAL INJURY DURING OFF-PUMP SURGERY: RISK FACTORS

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**BACKGROUND:** Recently innovative cardiac stabilization techniques have regained interest enabling cardiac operations performed on beating hearts. However, myocardial injury is also inevitable during off-pump surgery. the effect of intraoperative factors that contributes to myocardial ischemic injury during OPCAB surgery had not been clearly identified.
**METHOD:** We have prospectively investigated 123 patients being operated by a group of surgeons with off-pump technique between January 2001 and June 2003. Ninety-six of them were male and 27 were female. Mean age was 52.35± 3.32. Myocardial injury occurring during surgery was assessed by post-operative specific cardiac marker measurement. Blood samples were taken from all patients before anesthesia induction (T0), immediately after distal artery revascularizations (T1), then at 6 (T6), 12 (T12), and 24 (T24) hours after distal revascularization. Then, the relation between intraoperative factors (the heart rate and blood pressure during anastomosis and occlusion time) and postoperative cardiac troponin T release were statistically evaluated.
**RESULTS:** Analyses of cardiac markers revealed that all of them were increased during the postoperative period after off-pump surgery. However, maximal levels of cardiac troponins were achieved at the 24th hour after operation. When regarding the intraoperative risk factors, we found that the heart rate, blood pressure and occlusion time are the main determinat of myocardial cell injury occurring during OPCAB surgery. There was significant relation between double product and cTnT release at 24th hour after OPCAB surgery ($r= 0.82$ and $p= 0.0001$) (figure 2). Besides, there was also significant relation between the occlusion time and cTnT release at 24th hour ( $r= 0.56$ and $p= 0.0001$)
Comment: Although aortic cross-clemp and cardioplegic arrest were not used in off-pump myocardial revascularization, the ischemic myocardial cell destruction was also inevitable in off-pump technique. Therefore, management of heart rate and myocardial contractility was desirable not only for precise anastomosis but also for myocardial protection during OPCAB surgery. **REF0381**

## O213 - WORLD WIDE FIRST HOME MONITORING DEVICE "THROMBOCHECK" VIA DIGITAL FREQUENS ANALYSE FOR EARLY DETECTION OF COMPLICATIONS RELATED TO HEART VALVE REPLACEMENT. HEART CENTER BAD OEYNHAUSEN EXPERIENCE

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**OBJECTIVES:** Despite considerable progress with regard to the material, design and durability of the prostheses, patients with artificial heart valve implants are still at risk of serious complications (hemorrhaging, thromboembolism, reoperation). Depending on the type and position of the valve, the complications during the first ten postoperative years accumulate to 5-25%. This figure does not include technical defects, which today are negligible in mechanical heart valves. Relevant long-term complications are frequently linked to irregular oral anticoagulation or existing risk factors.
**METHOD:** Between November 03 and March 06 a total of 483 ThromboCheckR devices were handed out to patients with alloprosthetic heart valve replacements from 7 heart centers. The observation period was 550.7 patient years, with a median application period of 15.1 months (1-24 months). In each case a device was calibrated for a patient at the early postoperative stage and the individual heart rate pattern stored on computer. Taking control measurements, the device calculated deviations in the frequency and amplitude ranges using a Fast Fourier Transform (FFT) and sent a warning message to the display if any relevant changes occurred. A warning message was taken as cause to determine the morphological correlation of the disturbance using suitable imaging techniques, such as transthoracic echocardiography (TTE), transesophageal echocardiography (TEE) or fluoroscopy.
**RESULTS:** Suspicious valve sound analyses were returned 26 times from the 483 patients examined. In 25 patients (5.17%) a valve dysfunction suspected as a result of digital frequency analysis could be confirmed using imaging techniques.
11 patients (44%) immediately received thrombolytic therapy with streptokinase or rTPase. This led to complete normalization in the digital frequency analysis of the sound pressure phenomenon of the artificial valve.
In 4 patients (16%) INR levels were adjusted to within the therapeutic range by increasing oral anticoagulation (and temporary heparinization). In this way normalization of the valve sounds could be achieved within 3-7 days.
7 (28%) patients required reoperation despite lysis therapy. No clinical events undetected by the ThromboCheck device occurred.
Sensitivity was 100% during the observation period; specificity was 99%.
**CONCLUSION:** Digital frequency analysis (the ThromboCheck method) represents a reasonable addition to the monitoring of patients with artificial heart valve replacements and the early detection of prosthesis-related complications, and should in the future receive particular attention for the abovementioned risk constellations or in conjunction with the high-risk situations of a large number of heart valve patients.
**KEYWORDS:** Heart valve replacement, home-monitoring **REF0616**

## O214 - HEART VALVE REPLACEMENT AND ORAL ANTICOAGULATION, INDEPENDENCY FROM CLINICANS WITH INR SELF MANAGEMENT. HEART CENTER BADOEYNHAUSEN EXPERIENCE

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**INTRODUCTION:** World wide 6000000 patient needs oral anticoagulation, 130000 of them use self INR management without frequent hospital follow up.
**METHOD:** We analysed 10000 patients answers concerning INR self management(group A) and compared it with patients who lets INR management done by clinicians(Group B).INR therapy intervals,control frequency,quality of life,complications related to oral anticoagulation is observed.
**RESULTS:** INR follow up levels determined by us are found in Group A and in Group B 70.8%, 62.3% repectively.INR control frequency is;once a week 60%,twice a month 21% and rest once month in Grup A,18.5% once a week and 34.8% once a month in Group B. 14.6% from Group A didn't neccessitate any hospital check up in previous year.
**CONCLUSION:** INR self management is safe,reduces anticoagulation related complications and provides satisfactory therapy intervals without dependency on clinicians. **REF0654**

## O215 - CARDIAC SURGERY DURING PREGNANCY

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**PATIENTS-METHODS:** Between 1988 and 2005, 16 pregnant women underwent cardiac operations in our institution. A total of 12 closed mitral valvulotomy (3 urgently in the third trimester and 9 at term, concomitantly with cesarean delivery) and 4 mitral valve replacements (2 at term, concomitantly with cesarean delivery and 2 emergency reoperations for mechanical valve thrombosis in the second trimester) were performed. There was no maternal mortality and only one stillborn in those undergoing urgent closed valvulotomy. In addition to protective perinatal procedures, there were urgent or emergency operations which became unavoidable during the course of pregnancy. In patients with mitral stenosis, closed mitral valvulotomy is life-saving and offers low feto-maternal risk.
**CONCLUSION:** When cardiopulmonary bypass becomes mandatory, shortest possible periods of mildly hypothermic or normothermic cardiopulmonary bypass with a high flow-high pressure strategy should be followed. **REF0645**

## O216 - RETROSPECTIVE ANALYSIS OF OPERATED ENDOCARDITIS CASES

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**OBJECTİVE:** The aim of this study to analyze cases operated due to native and prosthetic valve endocarditis, retrospectively.
**METHOD:** Seventeen cases, who are operated between the dates of April, 2001 and April 2006, were analyzed in details of their demographical, etiological and operational findings and evaluated by mortality and morbidity ratios.
**RESULTS:** Surgical treatment was applied on 17 patients, consist of 11 males and 6 females whose average ages 37 years (from 4 to 73 yrs) because of native and prosthetic valve endocarditis (in short, NVE and PVE, respectively). Agents were determined as follows in remaining cases, staph aereus, alpha hemolytic streptococcus, salmonella, peptostrep species in one for each, and staph epidermiditis in two cases. Operations were done in twelve cases due to NVE and in 5 cases due to PVE. AVR in 3, MVRin 6, removal of pace maker lead in one, posterior leaflet resection plus bicuspidalization in one and Kalangos mitral ring annuloplasty in one cases of NVE have been done. On the other hand, MVR in 3, AVR plus MVR plus PVR in one and TVR in one cases of PVE have been done. Three cases were lost as one case in operation (intraoperative) and two cases in late phase due to sepsis. Then, mortality ratio was recorded as 17%.
**CONCLUSION:** It is continued to be a severe complication for cardiac surgeons either native or prosthetic valve endocarditis with high mortality and morbidity though all developments in medical and surgical applications. **REF0405**

## O217 - CLINICAL AND ECHOCARDIOGRAPHICAL EVALUATION OF KALANGOS BIODEGRADABLE PROSTETIC TRICUSPIDE RING IMPLANTATION IN EARLY PHASE

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**OBJECTIVE:** The aim of this study is to evaluate the clinical and the echocardiographical results of Kalangos biodegradable tricuspid ring implantation in cases with tricuspide deficiency resulted from left system valve disease in early phase.
**METHODS:** Between October, 2005 and April, 2006, Kalangos biodegradable tricuspide ring implantation was applied on the cases with tricuspide deficiency resulted from left system valve disease for this prospective study. Eight female and 5 male patients 13 in total, whose ages between 17 and 58 (38 in average), were clinically and echocardiographically evaluated in preoperative period, at the first week and the first month of postoperative period. Twenty-six numbered ring in one, 28 in 7, 30 in 4 and 32 in one cases were used.
**RESULTS:** In preoperative echocardiographical examination, the 3rd level tricuspide deficiency in ten cases and the 4th level deficiency in three cases were observed. Nevertheless, there was no tricuspide deficiency in 9 cases in postoperative echocardiography. Only 4 cases were found to have the 1st level deficiency. Mortality and morbidity were not found due to Tricuspide surgery.
**CONCLUSION:** Kalangos biodegradable tricuspide ring is seemed to be an appropriate choice because of both being easily applicative and providing satisfactory results in clinical and echocardiographical examinations in early phase. **REF0407**

## O218 - ASSOCIATION OF EDGE-TO-EDGE REPAİR TO DE VEGA ANNULOPLASTY FOR SEVERE FUNCTIONAL TRICUSPID INCOMPETENCE

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**BACKGROUND:** Positive results of edge-to-edge technique encourage us to analyze whether association of this method to De Vega annuloplasty would result in less residual tricuspid insufficiency in patients with massive regurgitation.
**METHODS:** 57 patients with TR > 3 consisted study population and were randomized in a double blind fashion to undergo modified De Vega alone (group D, 28 patients) or associated with edge to edge repair (group E, 29 patients). All patients had preoperative and two postoperative (early and mid-term) echocardiography. The tricuspid regurgitation, diameter of tricuspid valve annulus, pulmonary artery pressure and right ventricular ejection fraction were recorded. Follow-up was completed in all patients.
**RESULTS:** Early postoperative echocardiography indicated less residual TR in group E (mean TR; 1.2+0.2 vs 0.6+0.1 p: 0.0243) while other parameters (diameter of TVA, TTV gradient, PAP and RVEF) were comparable. The mean follow-up period was 28.2+5.4 months. Mid-term postoperative mean TR was 1.9+0.8.vs 1.0+0.4 (p: 0.0384) indicated less redevelopment of TR in group E. Additionally TVA re-dilatation was found more prominent in group D. One patient (% 3.5) in group D underwent operation for recurred TR. Most of the patients enjoyed symptomatic relieves in both groups however less patients were found at NYHA grade 3 or 4 in group E.
**CONCLUSION:** Our results suggested that association edge-to edge technique to De Vega annuloplasty in patients with severe TR has resulted in reduced residual TR and less incidence of recurrence of TR and TVA dilatation. **REF0004**

# APPROACHES TO MITRAL VALVE DISEASE

## O220- MINIMALLY INVASIVE MITRAL VALVE SURGERY VIA HEARTPORT TECHNIQUE

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Minimally invasive mitral valve surgery was undertaken using the Heartport technique on a population of 33 patients in a single cardiac centre. Thirty day survival was 97%. Postoperative complications were low including reopening and cerebrovascular accident. The ITU requirement, ventilation time and total postoperative stay were lower than by conventional techniques. Mean duration of hospital stay prior to full mobilisation was 5.8 days with 61% of patients potentially dischargable at day 4 with modification of anticoagulation policy. This technique offers patient and hospital resource benefits that merit further development. **REF0063**

## O221 - OUR APPROACH TO CORONARY BYPASS IN ADDITION TO MITRAL VALVE SURGERY IN CHRONIC ISCHEMIC MITRAL DEFICIENCY: RETROSPECTIVE ANALYSIS OF 53 CASES

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**OBJECTIVE:** The aim of this study is to explore our approach for treatment in chronic ischemic mitral deficiency cases underwent coronary bypass in addition to mitral valve surgery.
**METHODS:** Between April, 2003 and April, 2006, were analyzed in detail in regard to demographical, clinical and operational findings for 34 male and 19 female patients.
**RESULTS:** Fifty-three cases with coronary arterial disease in total, consist of 34 males and 19 females aged from 43 to 78 years (59 yrs in average), underwent operation because of the disease and chronic mitral deficiency resulted from this. In preoperative echocardiographical and angiographical evaluation, it was found that 2nd degree deficiency in 5 cases, 3rd degree in 32 cases and 4th degree in 16 cases were present. In addition to CABG operation, alfieri mitral double orifice technique in 7 cases, alfieri plus mitral and annuloplasty in one case and mitral repairment in one case were done. Out of these cases, mitral annuloplasty were applied on 37 cases in total, consist of ring in 11, band in 21 and biodegradable ring in 5 cases. Total mortality was found to be in 6 cases (11%). One case was lost intraoperatively. Two cases out of remaining part in late phase and 3 out of them in early phase were lost.
**CONCLUSION:** Agreed with the literature, we suggest that eradicating mitral deficiency together with coronary bypass in the cases with mitral deficiency above the 2nd degree diminishes ratios of the long term mortality and morbidity.

**REF0413**

## O222 -PROTECTION METHODS FOR LEFT VENTRICULAR FUNCTIONS DURING MITRAL VALVE SURGERY

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**PURPOSE:** Mitral subvalvular apparatus plays a vital role in systolic and diastolic LV functions. During mitral valve replacement a complete cordal incision may lead to a significant decrease in left ventricular performance and during contraction disynergy. We aimed to suggest our results of mitral valve surgery which were directed toward protection of the left ventricular functions and performed in our clinic within the last four years.
**METHODS:** A total of 36 patients (22 women, 14 men, mean age of 40 years) were operated by using this method. 22 patients had rheumatic etiology, 8 patients ischemic and 6 patients degenerative etiology. Posterior leaflet protection was performed in 18 patients, ring-band annuloplasty in 7 patients, Alfieri in 4 patients and total leaflet (cordal) protection in 7 patients. In addition, SIRFA was applied to 12 patients concurrently. All patients were assessed with transthoracic echocardiography prior to discharge and at 1, 6 and 12 months postoperatively.
**FINDINGS:** There wasn't any case requiring reoperation. It was observed that there was a significant improvement in end-diastolic and end-systolic volumes in short term and in EF in long term. Results; In order to maintain left ventricular functions during mitral valve surgery the papillary muscle-cordal-anular junction point should be protected. **REF0334**

## O223 - POSTERIOR ANNULOPLASTY WITH PERICARDIAL STRIP FOR ISCHEMIC MITRAL REGURGITATION

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**BACKGROUND:** Ischemic mitral regurgitation (MR) is an important risk factor of coronary bypass operations. Postoperative residual MR has negative effect on survival and life quality of the patient. For these reasons mitral valve should be evaluated in details and if necessary, plasty procedures or replacement should be performed. Pericardium is a good alternative as annuloplasty material and have advantages such as preserving annular physiology and being an autogenous material.
**MATERIAL-METHOD:** Between the years of 2002 and 2006, 14 patients out of 565 who were undergone coronary bypass operation had also posterior mitral annuloplasty by using pericardial strips for ischemic MR. Five of the patients had moderate to severe and 9 of patients had severe MR. The results of plasty procedures were evaluated by intraoperative transeusophageal echocardiography and all procedures were found satisfactory.
**RESULTS:** Postoperative early evaluation at one month was performed by transthoracic echocardiography. Neither MR nor gradient was detected in 10 patients. 3 patients had mild and 1 patient had moderate MR. 4 patients had a mean of 3-4 mmHg transvalvular gradients. Longest follow up was 4 years, and above mentioned results persist in all patients.
**CONCLUSION:** Autogenous pericardial strips is as effective as other commercially available flexible rings and theoretically doesn't preclude cyclic movement of annulus as done by rigid rings. Besides, it doesn't increase the cost and available almost in every patient. We think that, posterior pericardial annuloplasty can be done with an acceptable success rate.

**REF0436**

## O224 - EARLY RESULTS OF RING ANNULOPLASTY IN ISCHEMIC MITRAL INSUFFICIENCY

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**BACKGROUND:** Although mitral valve replacement totally eliminates insufficiency, this procedure detoriates integrity of mitral apparatus leading decrease in ventricular systolic function. In addition it has increased morbidity related to the prosthesis. On contrary use of mitral ring is favorable when operative procedure and postoperative morbidities are concerned. This study presents early results of mitral ring implantation as a good alternative in surgical treatment of ischemic mitral insufficiency.
**METHODS-RESULTS:** Between February 2001 and April 2006 36 patients (20 men and 16 women, mean age 63.0+/-3.2) were admitted at the Department of Cardiovascular Surgery of Gaziosmanpasa Safak Hospital and underwent coronary revascularation together with mitral ring annuloplasty. Patients eligible for revascularization that presented a moderate or more severe mitral valve regurgitation at echocardiography were considered for annuloplasty with a Sovering ring.NYHA III/IV was present in 26 patients (72.2%). A previous acute myocardial infarction was reported in 13 patients (36.1%). The mean number of graft anastomoses was 2.8 and the left internal mammary artery was used in 30 patients (83.3%). In-hospital mortality was 8.3% (3 patients), due to unsuccessful weaning from cardiopulmonary bypass and multiple organ failure, respectively. Left ventricle ejection fraction improved from 38.4% +/- 5.3% preoperatively to 45.2% +/- 7.2% at follow-up and a significant reduction in NYHA III/IV was detected: from 26 patients preoperatively (72.2%) to 11 (30.5%) at follow-up.
**CONCLUSION:** In our experience combined coronary artery bypass grafting and ring annuloplasty for ischemic dilated cardiomyopathy can be performed with acceptable risks for in-hospital mortality and morbidity.

**REF0565**

## O225 - EMERGENT SURGICAL INTERVENTIONS AFTER PERCUTANEOUS MITRAL BALLOON VALVOTOMY

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**OBJECTIVES:** Percutaneous mitral balloon valvotomy (PMBV) is proposed as reliable options for noncomplicated isolated mitral stenosis (MS) with suitable valve morphology. Emergent conditions following PBMV such as cardiac tamponade (CT) and acute severe mitral regurgidation (MR) is rarely seen.
**MATERIAL-METHODS:** This study includes 590 patients subjected to PMBV between January 1994 and October 2005. Thirteen (2,2%) of them needed emergent surgical intervention. All patients transferred the operating room within 8 hours following PMBV. Patients' preperative demografic characteristics, operative findings, compliacations and results of surgery were investigated.
**RESULTS:** Thirteen patients needed emergent operation because of acute MR (8 patients, 61.5%) ant CT (5 patients, 38.5%). Postoperative low-cardiac output was present in 5 patients (38.4%) and 3 of them needed intra-aortic balloon counterpulsation. There is one (7,6%) operative mortality as a result of mediastinitis.
**CONCLUSION:** Althoug it is rare, in the case of emergent condition after MBV, early diagnosis of complications and urgent surgical treatment may be life-saving.

**REF0575**

## O226 - RESTRICTIVE ANNULOPLASTY FOR TREATMENT OF ISCHEMIC MITRAL INSUFFICIENCY

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We have analyzed early and mid term outcomes of patients undergoing restrictive annuloplasty for ischemic mitral insufficiency and have compared the results with a similar patient group who underwent mitral valve replacement with CABG in the same period of time.
Methods. Between January 2004- May 2006 8 (1F-7M) patients underwent a restrictive ring annuloplasty procedure (26 or 28 mm rigid Carpentier Edwards ring) in combination with coronary bypass surgery. These patients were compared to 10 patients (4F-6M) that have undergone mitral valve replacement with CABG. Valve replacements were performed with a bileaflet mechanical prosthesis and the posterior leaflet was spared.
**RESULTS:** Mean age (64y vs 66y), mean number of distal anastomosis (3.5 vs 3.8), preoperative functional capacity (3.2 vs 3.1) was similar for both annuloplasty and replacement groups. In both groups there was significant left ventricular dysfunction with similar preoperative ejection fractions (%35.4 vs %37.8). One patient in each group had a previous CABG.. Hospital mortality in the restrictive annuloplasty group was 1 patient (%12.5), 2 patients in the replacement group (%16). An intraoperative transeosophegeal and trans thoracic echocardiography was performed in all patients undergoing restrictive annuloplasty. None of the patients have a mitral insufficiency greater than grade 1 and all patients are being followed with a functional capacity grade of 1 or 2.
**CONCLUSION:** In selected cases ischemic mitral insufficiency can be treated successfully with a restrictive annuloplasty procedur. Operative mortality is similar to mitral replacement for ischemic mitral insufficiency. Valve repair increases functional capacity significantly in these patients.

**REF0659**

## O227 - ROBOTIC-ENHANCED TOTALLY ENDOSCOPIC MITRAL VALVE REPAIR AND ATRIAL SEPTAL DEFECT CLOSURE

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**BACKGROUND:** The aim of this study was to assess the feasibility of totally closed robotic mitral valve repair (MVR) and atrial septal defect (ASD) closure using the da vinci tele-manupulation system.
**METHODS:** Two patients with mitral valve disease underwent mitral valve repair (mitral comissurotomy in one and comissurotomy and Reed annuloplasty in other); 4 patients with secundum ASD underwent primerly ASD closure. All patients were female.
**RESULTS:** There were no procedure-related complications. The mean ischemic, cardiopulmonary bypass and operation times were 85, 110, and 300 minutes respectively for MVR; 75,155, and 285 minutes for ASD closure operations.
**CONCLUSION:** Totally closed robotic MVR and ASD closure was feasible with good clinical outcomes. The described technique may find broader appliction in selected patients with the continuing evolution in technology. Operational and ischemic times are longer than port-access techniques and this is a limitation. **REF0589**

# AORTIC VALVE DISEASE: NEW SOLUTIONS

## O228 - ACOUSTIC COMFORT OF STENTLESS AORTIC BIOPROSTHETIC VALVE USE

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**BACKGROUND:** The noise of the new valve is one of the common complaintments of the patients who underwent mechanical valve replacement procedure. In this study we aimed to evaluate the quality of life of patients who underwent biological valve replacement procedure, by the means of acoustic comfort provided by biological heart valves.
**METHODS:** In this study, between January 2005 and December 2005, 10 patients underwent stentless aortic bioprosthetic valve replacement procedure and at the same time interval randomly selected 10 patients underwent mechanical valve replacement procedure as a control group. Seven of the patients in the study group were male and mean age of the all patients was 64±14. Following 15 days of discharge patients were called for control to measure their valve noise level with digital sound level meter (Lutron-SL-4022) and applied an inquiry test.
**RESULTS:** According to the inquiry, the seven of ten patients who underwent mechanical valve replacement was hearing the valve noise. The click sound was disturbing three of patients in daily life and four patients declared they would be pleasured in case they had less noisy valve. In study group all the patients declared they were positively affected by the acoustic comfort that was provided by biological valves.

**CONCLUSION:** Positive effect of biological valves to quality of life with their noiseless properties, would determine not only surgeons' but also patients' and their families' decisions. **REF0059**

## O229 - CONCOMİTANT OPERATİONS OF AORTİC VALVE REPLACEMENT AND CORONARY ARTERY BYPASS GRAFTİNG

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**PURPOSE:** Concomitant operations of aortic valve replacement(AVR) and coronary artery bypass grafting(CABG) usually have high mortality rates.Our purpose was to estimate retrospective evaluation of 117 patients that had combined operations.
**METHODS:** Patients were with a mean age of 65 and also % 78 of them were male.%24 of the patients had a heart attack before.Their mean EF was %54.% 39 of patients (46) had one- vessel disease,%34 of them (40) had two vessels disease, %23 of the patients (27) had three vessels disease.LİMA was used at %69 patients (83).At the post op period 13(%11) patients were lost.Mean postop ICU period was approximately 3,5 days and also hospitalization period was 8,5 days.8 patients (%6,8) acquired revision operations.As a complication, 4 patients (%3.4) required mechanical ventilation more than two days, 6 patients(%5) had CVD, 14 patients(%12) used inotropic agents, 10 patients(%8.5) used İABP.Only one patient had Gİ complications.3 patients(%2.5) had ARF and also 5 patients(%4) had enfection.
**RESULTS:** Patients with AVR in addition to CABG operations had high mortality rates.At our point of view, with optimal surgical timing we can decrease the mortality rates at these patients **REF0360**

## O230 - OUR EXPERIENCES IN AORTIC VALVE REPLACEMENT WITH STENTLESS 3F THEURPOTICS PROSTETHIC VALVES

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**OBJECTIVE:** Bıological prostethıc valves have been prefered to mechanıcal ones in older aget patients: In this study we present our experıences ın aortıc valve replacement wıth stenless
3 F theuropotics prostethıc valves
**METHODS:** aortıc valves replacement with 3F Threurpotıcs stentless were performed in 6 potients. 3F them were male, and 3 were female. Average age og the patıents were 67,5 years old.
They were in NYHA clas III.during preoperative period. Morbid obesity was present in 2 COPD and systemıc hypertentıon in 3 patients. 5 patients had aortic stenosıs mean aortic gradient was 69,8+8,6 Hg Pure aort regurgitation was presentin 1 patient. Additionally,1 had mitral regurtitation patient
And 2 had coronary artery disease
**RESULTS:** Patients were followed-up clinically and with echocardiographically during in hospital period. 5 patients were taken to ICU in NSR and without inotrophic support
1 patient had complete AV Block and permanent pacemaker was implanted. All patients were discharged. Average hospital especially due to extacardiase reasons. In postopeprative chocardiagraphıc studies aortic valve gradient was 7 mmHg and only 1 patient had minial aortic regurtation.
**CONCLUSION:** Stentless bioprosthetic valves are to be ehosen in older aged patients because of their anticogulaion -free structure and better hemodynamıc performanes. On the other hand careful follow -up during middle and longterm period must be performed. **REF0584**

## O231 - SUCCESFULL SURGICAL RE-REPLACEMENT OF AORTIC VALVE UNDER BIFEMORAL EXTRACORPORAL CIRCULATION AND CARDIOPULMONARY RESSUCITATION BECAUSE OF ACUTE PROSTETIC VALVE THROMBOSIS

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**INTRODUCTION:** Prostetic valve thrombosis (PVT) is a very important and rare long term major complication after valve replacement.The major cause of re operations because valve dysfunction in patients with mechanical valves. As the number of patients undergoing cardiac valve replacement has grown valve reoperations have become increasingly frequent.Valve and non valve related complications still constitute a major cause of morbidity and mortality.Re operations are technically more demanding than the original valve procedures,risk inceases in certain conditions such as the presence of prostetic valve endocarditis and the patient being operated on an emergency basis.
**CASE:** We report a case of a 45 years old male patient who was transfered to our hospital with acute thrombosis of a prostetic aortic valve.His admission INR was subtherapeutic.
He is presented with cardiac decompensation,a global cardiac insufficiency wıth severe pulmonary stasis and a pulmonary infection.The patient has undergone an aortic valve commisurotomy at 1974 because of congenital aortic valve stenosis and an aortic valve replacement with a mechanical aortic valve at 1988.
During anaesthetical preparations we had to ressucitate the patient because of ventricular fibrılation.We decided to admitt a femora-femoral extracorporal circulation before we start with thoracotomie,we slowly cooled down the patient and performed a succesfull re replacement of aortic valve.
**CONCLUSION:** The femora-femoral bypass approach and coolıng the patıents because of redo operatıons can be performed succefully.In suspect of PVT all patients must undergo a TEE.
Inadequate anticoagulation is the enemy of the majority of patients. For PVT early operation is effective and safe especially ın patients in stable hemodynamic condition preoperatively. **REF0653**

## O232 - UPPER MINI-STERNOTOMY FOR AORTIC VALVE REPLACEMENT: COSGROVE'S OPERATION

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Median sternotomy is the mostly preferred approach for cardiac surgery, including valve procedures. Alternative approaches aim to reduce the surgical trauma with concomitant decreased transfusion and costs, in addition to better cosmetic results. Since it has been described by Cosgrove, “J shaped” upper ministernotomy is a good method for aortic valve procedures. We have performed this incision in adult aortic replacement cases in our institution, and the results are very satisfying. A 5 cm skin incision is sufficient to perform a limited sternotomy approaching 6th intercostal space. Cosgrove’s incision is finalized with transverse cutting of the sternum at this level toward the mammary artery. We have modified this in our recent cases and achieved sufficient surgical exposure without transverse cutting of the sternum, where the risk of IMA injury is lower. Surgical procedure is almost always standard with central arterial and venous cannulation. A modified twin hole aortic cannula is used in all cases. Transseptal dearing requires further attention. Cosmetic results are excellent with shorter duration of hospitalization. We have operated 6 adult cases without any complications. All cases were discharged from the hospital before the 6th postoperative day and total costs are comparably lower against aortic valve replacements with full sternotomy approach. Preparation for the pump circuit, cardiopulmonary bypass and aortic ceoss clamping times are longer but acceptable. **REF0639**

Cannulation


Skin incision

## O233 - SEVERE PATIENT-PROSTHESIS MISMATCH AFFECTS EARLY MORTALITY AFTER AORTIC VALVE REPLACEMENT FOR AORTIC STENOSIS

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**BACKGROUND:** Small valve size and patient-prosthesis mismatch generates high postoperative transvalvular gradients and may decrease early and long-term survival. The objective of this study was to evaluate whether mismatch affects early mortality after aortic valve replacement (AVR) for aortic stenosis.
**METHODS:** The study included 701 patients who underwent AVR between 1985-2005 in Kosuyolu Heart and Research Hospital. The indexed effective orifice area (EOA) for each prosthesis was derived from published normal in vitro EOA divided by the patient’s body surface area (BSA). If the indexed EOA was > 0.85cm2/m2 PPM was considered clinically insignificant whereas mismatch was considered severe if the indexed EOA was ≤ 0.65 and moderate if it was >0.65 and ≤ 0.85. RESULTS: Early mortality was 5.4 % (38/701) and moderate or severe mismatch was present in 46.5 % of patients, neverthless severe mismatch was present in 12.8 % of patients. Multivariate analysis revealed age ≥ 70 years (p=0.001) and severe patient-prosthesis mismatch(p=0.001) as independent predictors of early mortality. Moderate mismatch was not a predictor of early mortality on both univariate and multivariate analysis.
**CONCLUSION:** Although moderate patient-prosthesis mismatch is not predictor of early mortality severe mismatch is independent predictor of early mortality in patients who underwent AVR for aortic stenosis. The indexed effective orifice area can be calculated at the time of operation and strategies to avoid severe mismatch should be developed. **REF0258**

# CURRENT THERAPEUTIC STRATEGIES IN THE TREATMENT OF DILATED CARDIOMYOPATHY

## O235 - RISK FACTORS ASSOCIATED WITH LONGER-TERM SURVIVAL FOLLOWING CARDIAC TRANSPLANTATION

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**BACKGROUND:** In recent data there was not a national study identifying long-term results and predictive factors associated with long-term survival after cardiac transplantation. The aim of this study was to evaluate risk factors associated with the long-term survival following cardiac transplantations in our center.
**METHOD:** Forty patients were operated on cardiac transplantation between 1989 and 2006. Our study population consisted of 16 patients (Group A) who survived>1 month, but died<2 years after cardiac transplantation and 17 patients (Group B) who survived more than 2 years. Evaluating preoperative, perioperative and postoperative data, two groups were compared and multivariate analysis was used to identify which factors predicted long-term survival
**RESULTS:** Multivariate analysis showed younger donor age (p=0.03), male donor (p=0.05), pre-transplant renal functional level (p=0.019), shorter ischemic (p=0.05) and aortic kross-klemp time (p=0.02), postoperative less blood product transfusion (p=0.009), better monitorization of rejection (p=0.003) were risk factors effecting long-term survival. Group B had lower pre-transplant creatinine levels, younger donor age and more male donor percentages. This group needed lesser inotrops, prostaglandin I2 and transfusions of blood products.
**CONCLUSION:** By improving short and long-term survivals, cardiac transplantation would be a real curative treatment modality. In this purpose avaliablity of the donor hearts, from younger male donors with the shortest ischemic times, would be the best factors improving long-term survival. The main strategy in cardiac transplantation should be shorthening ischemic times and applying strict postoperative follow-up.
**REF0197**

## O236 - CARDIAC SURGERY AFTER HEART TRANSPLANTATION

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**OBJECTIVE:** Due to the increasing necessity and shortage of donor organs, therapeutic procedures such as heart valve replacement in case of valve insufficiency and Coronary Artery Bypass Grafting (CABG) in case of Graft VasculoPathy (GVP) must be established to pressure the allograft function in order to spare retransplantation.
**METHOD:** We performed a retrospective analysis of patients who underwent surgical procedures after Orthotopic Heart Transplantation(HTx) since 1989, n = 1400 HTx.Valve replacement was necessary in 7 patients and CABG was necessary in 2 patients.5pts received valve prostheses (3 bio,2 mechanical valves) at Tricuspid position, two patients received a Hancock bio prostheses at Mitral position, one of them 3 years following HTx and the other 1 year following HTx while suffering from Mitral Insufficiency due to infective endocarditis. CABG in 2 patients with IMA. 1 pt received concomitant CABG with HTx at donor organ and the other 1 year after HTx because of rapidly progressive GVP at LAD.
**RESULTS:** Both of the patients who received CABG and 4 patients who received valve replacement are still alive and maintain good clinical performance. One patient with graft at Mitral position died 9 years after HTx and 6 years after Mitral valve replacement. Two patients with graft at Tricuspid position died 17 and 4 years after HTx (6 and 3 years after valve replacement) respectively. 1 patient with Biocor Bio prostheses at Tricuspid position had to be re transplanted 2 years following valve replacement while suffering from a paravalvular leakage.Cardiac surgical procedures can be safely performed after HTx. **REF0596**

## O237 - POST-OPERATIVE RESULTS OF ORTHOTOPIC CARDIAC TRANSPLANTATION WITH BICAVAL TECHNIQUE

Sareyyupoglu Basar, Tuncer Altug, Erentug Vedat, Sismanoglu Mesut, Mataraci Ilker, Erkanli Korhan, Ozkaynak Berk, Yildirim Ozgur, Erdogan Hasan Basri, Alp Mete, Kirali Kaan, Yakut Cevat

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**OBJECTIVE:** The aim of this study to evaluate early and late results and morbidity analyses of patients who underwent orthotopic cardiac transplantation in our center.
**METHOD:** Between 1989 and 2006, 40 patients underwent cardiac transplantation. Nine of these patients were operated with bicaval technique (Group A) and 30 of them underwent conventional orthotopic cardiac transplantation (Group B). Evaluating preoperative, perioperative and postoperative data, all patients were studied for early and mid-term results.
**RESULTS:** Mean aortic cross clamp time was 80,3±14,67 in group A and 72,78±12,17 in group B (p>0.05). In postoperative echocardiographic evaluation, mean tricuspid insufficiency was 0,77±0,83 in group A and 1,6±0,75 in group B (p<0.05). Sinus node dysfunction was observed only in one patient in group A temporarily. In group A fewer patients have right ventricular dysfunction and arryhtmia.
**CONCLUSION:** Orthotopic cardiac transplantation with bicaval technique decreases morbidity and increases quality of life. **REF0174**

## O238 - CAN STEM CELL TRANSPLANTATION BE A MAJOR ALTERNATIVE TO HEART TRANSPLANTATION IN FUTURE?

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**OBJECTIVE:** Stem cell transplantation is revealed as an alternative treatment way in patients with dilated or ischemic cardiomyopathy (CMP). In this study, we aim to evaluate one year's results of the stem cell transplantation in these group of patients.
**MATERIAL-METHOD:** 25 patients were carried out stem cell transplantation between November 2004 and September 2005 in Cardiovascular surgery clinic of Akdeniz University Hospital. 21 of these patients were ischemic CMP and 4 of them were dilated CMP. Ejection fractions (EF) of all patients are below the 40% in preoperative period. Patients were evaluated with the results of NYHA exertion capacity, transthoracic echocardiography and nuclear study (MIBI Spect, MUGA) in 4th, 8th and 12nd months.
**RESULTS:** 22 of 25 patients were male, 3 of them were female and mean age was 57,6 (43-73). Mean exertion capacity was 2.8, mean EF was 30% in transthoracic echocardiography and 22% in nuclear study preoperatively. In postoperative period, four patient died with reasons following as; left ventricular insufficiency, multiorgan dysfunction and ventricular arrhythmias. For this reason 21 patients were included for the postoperative evaluation. Postoperative mean exertion capacity was 1.4, mean EF was 36% in transthoracic echocardiography and 32% in nuclear study in included patients.
**DISCUSSION:** There is no sufficient information about long term results of stem cell transplantation. We observed a significant increase in exertion capacity and EF of patients after one year following. We think that stem cell transplantation will be a major alternative to heart transplantation in the treatment of patients with low ventricular function in the future. **REF0457**

## O239 - DO INCREASED PLASMA HOMOCYSTEINE CONCENTRATIONS CONTRIBUTE TO CARDIAC ALLOGRAFT VASCULOPATHY IN HEART TRANSPLANT RECIPIENTS?

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**OBJECTIVE:** In recent years, a number of case-control studies have established that hyperhomocysteinemia is a causal factor for coronary vascular diseases.
A toxic and pro-oxidative effect of homocysteine on the coronary endothelium may accelerate cardiac allograft vascular disease. In this study, we evaluated the influence of hyperhomocysteinemia on the course of cardiac allograft vascular disease.
**METHOD:** Between 1989-2006, heart transplantation was performed in 40 patients. 13 of the 17 survivors accepted to enroll in this study. Blood samples are collected from each of the patients and homocysteine levels are detected. In patients with elevated levels of homocysteine, control angiographies and intravenous ultrasonographic studies are performed to detect any allograft vasculopathy.
**RESULTS:** The mean plasma homocysteine concentrations were 19.4 ± 6.9 µmol/liter and ranged from 10.32 to >50 µmol/liter. Elevated homocysteine levels were detected in 6 of the 13 patients (46%). All of these 6 patients underwent angiographic examination. Intravenous ultrasonography was performed in 3 of them. Coronary arteries were found to be normal in all the patients.
**CONCLUSION:** The association between high levels of homocysteine and atherosclerosis of cerebral, coronary and peripheral arteries, the mechanism how homocysteine contributes to cardiovascular disease are still obscure. Morover, it is not an easy task to confirm its contribution to cardiac allograft vasculopathy. In our study, we did not find any association between hyperhomocysteinemia and allograft vasculopathy. Because hyperhomocysteinemia is treatable, further studies with larger groups are necessary to ascertain its contribution to progression of cardiac allograft vasculopathy. **REF0702**

## O241 - SURGICAL STRATEGY IN PATIENTS WITH LEFT VENTRICLE DYSFUNCTION

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**OBJECTIVE:** With widespread application of beating heart technic, patients with severe left ventricle dysfunction have been considered to have the likelyhood of more secure revascularisation procedure. Hovewer to early results have been expansively quantitied and encouraging outcomes have been achieved, long term results are still obscure due to lack of enough evidence.
**PATIENTS AND METHODS:** From 2001 through 2006 38 consecutive patients with severe left ventricle dysfunction (ejection fraction < %35) underwent coronary revascularisation. The great deal of patients was in Canadian Cardiovascular Society Class III-IV (%86) Group-1 patients were operated with beating heart technic (n=15) and Group-II (n=23) by conventional technic using cardiopulmonary bypass. Properative mean disatıolic and systolic diameters of Group-I and Group-II were 62,5±8,2 cm versus 63,2±4,9 cm and 52,1±5,9 cm versus 50,3±7,2 cm respectively. (p =ns). Overall in hospital mortality was %7,8 (three patients). Group II patients had higher low cardiac output syndrom, longer postoperative and hospital stay days but better late follow-up functional capacity than Group I patients. Follow-up was %89,4 complet without statisticaly significance between two groups.
**RESULTS:** Both technics are equallay safe and effective in early postoperative period. Hovewer, whereas Group II patients suffer more troublecome early postoperative period, long term functional capacietes seem to be better. **REF0708**

# POSTER PRESENTATION

# CARDIAC IMAGING

## P17 - MAGNETIC RESONANCE IMAGING IN CONGENITAL HEART DISEASE

Sayin Omer Ali[1], Dursun Memduh[2], Ugurlucan Murat[1], Akyol Yakup[2], Surmen Benguhan[1], El Helin[1], Goksel Onur Selcuk[1], Tireli Emin[1], Dayioglu Enver[1]

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**AIM:** In last few years, multiple slice cut CT and MRI have became very important in diagnosis of the heart diseases. In this area transthoracic echocardiography is the most commonly used diagnostic method. When ECHO is not sufficient, cardiac MR can be used as a less invasive method. MRI has a large usage area in cardiovascular system. Especially it is very important in searching the morphology of hearth and main vessels. Since MR and MR angiography show the morphological details, it is possible to diagnose almost all congenital anomalies in a accurate manner.
**METHOD:** Patients who had cardiac MR in our univercity due to congenital heart anomalies, were analyzed.
**FINDINGS:** MR imagings of patients who have congenital heart anomalies like trunchus arteriosus, ventricular septal defect, atrial septal anevrysm, bifid cardiac apex are analysed in a demonsrative manner.
**RESULT:** Magnetic resonance imaging has a many usage area in cardiovascular system. Especially when ECHO is not sufficient enough as a preoperative searching, a noninvasive method can have more important role **REF0580**

# CARDIAC PHARMACOLOGY

## P23-CORDARONE INDUCED ADRENAL INSUFFICIENCY IN A PATIENT WITH ADDISON'S DISEASE UNDERGOING CORONARY ARTERY BYPASS SURGERY

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**BACKGROUND:** Severe acute adrenocortical insufficiency or adrenal crisis are often elusive diagnoses that may result in severe morbidity and mortality when undiagnosed or treated ineffectively. Adrenal insufficiency can be primary or secondary. Delay in treatment while attempting to confirm this diagnosis can result in poor patient outcomes. **CASE:** A 68-year-old woman who had complaints of chest pain and dyspnea was admitted to the hospital for CABG operation. The patient was followed-up for Diabetes Mellitus type II, hipothyroidism followed by thyroidectomy operation, Addison's disease, osteoporpsis secondary to medication and senility and hypertension. On the 3rd postoperative day atrial fibrillation occurred and cordarone (amiodarone) continued with orally. Normal sinus rythym was accessed but adrenal insufficiency occured at the same day and hyperkalemia was detected. The patient was consulted and 100mg/day prednisolon, diuretic treatment, calcium gluconate and kayexelate was started. She also received 50mg prednisolon when potasium levels increased. Adrenal insufficiency sustained for about 15 days and remained resistant to any medication. Cordarone was suspected to have caused the adrenal insufficiency and was ceased. As soon as cordarone was stopped a dramatic recovery was seen. **CONCLUSIONS:** Addisonian crisis represents an endocrine emergency that requires a correct diagnosis with identification of the cause with prompt and appropriate salt and steroid replacements to save the patient. It is, however, unusual that the patient does not exhibit clear warning signs of this impending disaster long before the event. Thus, physicians should have a high index of suspicion in a variety of unexplained symptoms and signs. **REF0439**

## P24-THE EFFECTS OF CARVEDILOL AND METOPROLOL ON ATRIAL FIBRILLATION AFTER CORONARY ARTERY BYPASS SURGERY

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**OBJECTIVE:** Atrial fibrillation is a frequently faced complication after CABG. In these patients embolization to the cerebral, extremity, and visceral arterial beds can take place which increases hospitalization time and cost. Although beta blockers were proven to be effective in decreasing postoperative AF few randomized comparative studies are present. We compared to effects of carvedilol and metoprolol on decreasing postoperative AF after CABG.
**METHOD:** 103 patients undergoing isolated CABG surgery were included in this study and divided in two groups Patients in group-I (n=67) recived preoperative carvedilol while the patients in group-II(n=36) were put on metoprolol therapy. patients were excluded from the study in the presence of chronic atrial fibrillation and when additional cardiac procedures were performed. 27 of patients were female and other 137 were male. The mean age was 65.7.
**DISCUSSION:** There was no statistical difference between groups in terms of preoperative and operative parameters. The rate of postoperative atrial fibrillation was 13%(n=9) in group-I and 11% (n=4) in group-II but the difference was not statistically significant. The average age of patients with AF was higher than the patients who remained in sinus rhythm. Atrial fibrillation was found to prolong the time to discharge.
**CONCLUSION:** Although, postoperative AF generally converts to normal sinus rhythm within six weeks after CABG, increases morbidity thus these group of patients should be closely monitored. Carvedilol a novel beta-blocker agent having antiinflammatory, and antioxidant properties gained popularity in recent years. We suggest that carvedilol may be useful in prefenting postoperatif AF after CABG. **REF0438**

## P33- HYPONATREMIA, TREMOR AND ATRIAL FIBRILLATION DURING CITALOPRAM THERAPY AFTER CARDIAC SURGERY

Askin Goktan, Guler Adem, Ucak Alper, Kurtoglu Tunay, Sacar Mustafa, Us Melih Hulusi, Yilmaz Ahmet Turan

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**BACKGROUND:** Selective serotonin reuptake inhibitors (SSRIs) are frequently used antidepressant agents and are known to cause hyponatremia due to syndrome of inappropriate secretion of antidiuretic hormone(SIADH). Citalopram is a well known SSRI. The risk of hyponatremia seems to be highest during the first weeks of treatment especially in the elderly female patients with low body weight.
**CASE PRESENTATION:** A 66 year old female who was on Citalopram therapy (10 mg/day) in the preoperative period underwent mitral valve replacement due to serious mitral valve stenosis and insufficiency rheumatic in origin. The dose of antidepressant drug was doubled (20 mg/day) owing to exacerbation of deppression symptoms in the first postoperative week. One week after dose increament, hyponatremia with the findings of pleural effusion, edema, tremor and paroxysmal atrial fibrillation was onset. Laboratory tests revealed normal serum osmolality. However urine osmolarity and urine sodium concentration were found to be increased. SIADH was suggested and Citalopram was discontinued. Sodium replacement with fluid restriction was instituted. For treatment of atrial fibrillation amiodarone was initiated. Serum sodium returned to normal limits with disappereance of tremor and effusion. Sinus ryhtm was obtained and patient was discharged on the postoperative 22nd day.
**CONCLUSIONS:** SSRIs may lead to SIADH even with dose increament. We suggest that SSRIs should be used cautiosly in postoperative cardiac surgery patients as there is risk of electrolyte imbalance and arythmias. **REF0333**

## P35 - TRANEXAMIC ACID REDUCES BLOOD LOSS IN PATIENTS RECEIVED CLOPIDOGREL BEFORE CORONARY ARTERY BYPASS GRAFTING

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**OBJECTIVE:** Clopidogrel treatment before coronary artery bypass grafting(CABG) is usually associated with increased risk of bleeding and transfusion requirement. Use of antifibrinolytic agents reduces drainage and the need for blood product use in patients treated with Clopidogrel before CABG. The purpose of this study was to assess whether intraoperative use of tranexamic acid decreases bleeding and number of transfusions in patients received Clopidogrel before CABG.
**METHODS:** A total number of 120 patients treated with Clopidogrel before CABG were randomized to receive either tranexamic acid (Group-I, 57 patients) or placebo (Group-II, 63 patients) after the induction of anesthesia. The groups were compared postoperatively in terms of mean postoperative blood loss, need for blood product use and reoperation rate.
**RESULTS:** Both groups were comparable with respect to baseline demographic data and surgical characteristics. Mean postoperative blood loss was 650 ml. in Group-I versus 1075 ml. in Group-II ($p<0.01$).The blood product transfusion rate in Group-I was significantly lower than Group-II. The numbers of transfused packed red blood cells in Groups I and II were 0.8U and 1.4U, respectively ($p<0.01$). The numbers of fresh frozen plasma transfused during the early postoperative period in tranexamic acid and placebo groups were 1.2U and 2.1U, respectively ($p<0.001$). There were 5 patients in Group-II reoperated because of postoperative bleeding. There was no significant difference between groups in terms of postoperative morbidity and mortality.
**CONCLUSIONS:** Intraoperative administration of tranexamic acid decreases the amount of postoperative blood loss and transfusion requirements in patients received Clopidogrel before CABG. **REF0190**

## P36 - TERLIPRESSIN TREATMENT IN CARDIOVASCULAR INTENSIVE CARE UNIT

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**INTRODUCTION:** Terlipressin is a vasopressin analogue acting via vascular V1a receptors. Terlipressin therapy in cases of shock is associated with an increase in mean arterial pressure accompanied by a decrease in heart rate and oxygen consumption index. Terlipressin has favorable effects on systemic pressure in catholamine-resistant shock and increases survival rate compared with other vasoactive drugs.
**MATERIAL-METHODS:** The effects of Terliperessin following cardiac surgery in the intensive care unit patients with hypotension not responding to fluid resuscitation and high dose inotropes is determined by means of a retrospective study including 12 patients through evaluation of hemodynamic and laboratory parameters, and renal function. Baseline hemodynamic measurements were made and blood samples for biochemical studies were gained, then after those one or two boluse dose of Terlipressin (1 mg each dose) was applied for each.
**RESULTS:** Following the application of intravenous bolus dose of Terlipressin a significant increament in the systemic vascular resistance, mean arterial pressure, urine output, creatinine clearance occured. By contrast, cardiac output, heart rate, serum lactate concantrations and epinephrine infusuion dose decreased significantly.
**CONCLUSION:** The use of Terlipressin results in a significant increase in mean arterial pressure in patients with severe hypotension despite the use of high dose epinephrine, dopamine and fluid resuscitation. It is considered that Terlipressin traetment is not a an alternative therapy to vasoactive drugs but rather a regimen to be used in conjuction to them due to its beneficial effects on splanchnic circulation and renal functions. **REF0188**

# VENOUS DISEASES

**P38 - CENTRAL VENOUS CATHETERIZATION COMPLICATIONS OBSERVED IN PATIENTS HEMATOLOGICAL MALIGNANCY**

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**INTRODUCTION:** Central venous catheterization is an invasive intervention performed for therapeutic and diagnostic purposes especially in patients with hematological malignancy. It may be related with complications that may lead to dangerous outcomes in patients. Our aim was to discuss the complications observed in patients followed up by our clinic after central venous catheterization.
**METHOD:** 11 patients subjected to central venous catheterization and followed by acute leukemia were included in the study. We have evaluated the patients with respect to the applied central venous catheterization method, complications and reasons of the complications.
**RESULTS:** Complications occurred in 4 of the 11 patients subjected to central venous catheterization. The preferred method was subclavian vein catheterization in 4 patients. In the first patient that had been followed by acute leukemia, the intervention ended up with artery puncture and the patient developed hematoma The thrombocyte count of the second patient was 50000 mm3 this patient developed hematoma too. The third patient developed venous thrombosis obstructing the flow in the lumen from the right subclavian vein and proximal of the axillary vein and the brachial vein. It was also observed that the fourth patient had developed stenosis. The other patients had no complications.
**CONCLUSION:** Complications associated with central venous catheterization are observed in more than 15% of the patients. The probability of mechanical complications such as hemothorax ad pneumothorax associated with subclavian vein catheterization is higher than compared to those associated with jugular venous catheterization. One of the mechanical complications developed in our patients was associated with artery puncture, another one was the predisposition to bleeding in a patient having normal coagulation tests but thrombocyte count of 50000. The patient developed hematoma at all intervention sites (Bone marrow aspiration) This was associated with thrombocyte dysfunction. The patients undergoing central venous catheterization have a great risk of developing catheter associated thrombosis. Subclavian venous catheterization is the intervention having the least risk regarding catheter associated thrombosis. The third complication in our study, developing a thrombosis, was associated with L-asparaginase one of the reasons of acquired Protein C deficiency. The stenosis developing in our fourth patient was associated with double intervention into the same vein. Although the number of patients was small, it was concluded that subsequent usage of a vein should be avoided, the thrombocyte count should be over 50000mm3 in patients to be subjected to an intervention and all the coagulation tests including bleeding time should be normal; and despite all these, patients should be followed up closely for complications. **REF0114**

**P39 - ULTRASOUND GUIDANCE IN PEDIATRIC CENTRAL VENOUS CANNULATION:**

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**BACKGROUND:** Central venous cannulation (CVC) can be difficult in pediatric population particularly due to their small size. Although ultrasound-guided techniques are well-established, the majority of physicians preferred the landmark technique. These are the preleminary results of the randomized controlled study comparing the utility of ultrasound in internal jugular venous cannulation performed by two different anesthesiologists having different levels of experience in pediatric population.
**METHODS:** One hundred pediatric patients undergoing cardiac surgery were randomized into four groups. Group I (n= 26); landmark technique performed by inexperienced anesthesiologist, Group II (n=24); landmark technique performed by experienced anesthesiologist, Group III (n=25); ultrasound-guided performed by inexperienced anesthesiologist, Group IV (n= 25); ultrasound-guided performed by experienced anesthesiologist.
**RESULTS:** The average time to perform CVC and the number of attempts were not different between Group I and Group II ($p>0.05$). However, there were significant differences in average time and number of attempts between Group I and III and Group II and IV respectively ($p<0.05$). There was no arterial puncture in ultrasound groups, whereas there were 5 in Group I (19%) and 3 in Group II (12%). The procedure was failed 4 (15%) patients in Group I and 2 (8%) patient in Group II and an alternative site was tried. The overall succes rate was higher in ultrasound guided groups ($p<0.05$).
**CONCLUSIONS:** The time to perform central venous cannulation and the overall success rate of the procedure in pediatric patients is significantly improved with the use of ultrasound guidance regardless of the experience of the anesthesiologist. **REF0115**

**P40 - SURGICAL APPROACH TO INFERIOR VENA CAVA INJURIES**

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**AIM:** Even if the etiological factor is blunt or penetrating trauma in infrarenal inferior vena cava (IVC) diagnosis is generally made during surgical exploration. Almost always, abdominal multisystem organ injuries accompanies the trauma.
**MATERIAL-METHOD:** We determined infrarenal IVC injury in 16 patients who were admitted to our hospital's emergency service in a shock table and went under emergent exploratrice laparotomy because of intraabdominal hemorrhagy between January 2000 and December 2005. We joined the operation team when they wanted a peroperational consultation for retroperitoneal hematoma. Nine cases had stab (56.25%), 5 had blunt (31.25%) and 2 had gunshot (12.5%) injuries. In all cases lateral venorrhaphy method was used for primary repair. Intraabdominal organ injuries were treated by General Surgery team.
**RESULTS:** The only patient with politrauma in our series died in early postop period.Intravenous heparin and oral anticoagulants were used until oral feeding and then for 3 months respectively. Colored Doppler ultrasonography controls were made before and 3 months after discharging and it was found that IVC's are patent and do not have stenotic complication.
**CONCLUSION:** We believe that, for infrarenal IVC injuries diagnosed during surgical exploration with retroperitoneal hematoma symptoms organized evaluation, control, exposition and primary repair with lateral venorrhaphy if possible are the most important surgical steps for a successful outcome. **REF0395**

## P41-ALTERNATIVE VENOUS GRAFT PREPARATION PROCEDURES FOR THE SURGICAL TREATMENT OF THE SUPERIOR VENA CAVA SYNDROME

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**INTRODUCTION:** Alternative saphenous vein graft harvesting methods for surgical treatment of SVC syndrome were performed in the same patient and patency ratio's were evaluated 34-years-old man referred to our hospital with SVC syndrome. Venography revealed occlusion of the SVC, innominate and right subclavian vein.
**MATERIAL-METHOD:** At the operation proximal part of the SVC, innominate vein, left subclavian vein, distal part of the internal juguler vein were seen occluded. One of the saphenous veins harvested as a classical spiral graft with 8-10cms long and 1,5-2cms width. The other saphenous vein cutted longitudionally and sutured over forming a bit longer and narrow graft. This graft anastomosed to the right axillary vein and spiral graft anastomosed to the innominate vein. After an uneventful postoperative period he was discharged on the 7th day. At the first month, control venography revealed occlusion of the spiral graft and patent longitidunal graft. Endovascular recanalization attempt of the occluded graft was unsuccessful. At the 6th month, control CT venography revealed occlusion of the longitudinal graft. Superior vena cava syndrome occurs 80-90% from malignancies and 10-20% from benign etiologies. Mediastinal fibrosis is the most common benign etiology. Patients that are not suitable for endovascular therapy are treated with surgery. Although autolog saphenous vein grafts are diameterly most suitable graft material for innominate, jugular or subclavian vein systems, the long preparation time, restricted length and increased thrombogenicity due to possible endothelial disruption are disadvantages. Especially this effect is more prominent in the spiral grafts. Grafts that are prepared with longitudinal cutting may be occluded less frequently due to less endothelial disruption and shorter foreign body interaction time and longer grafts may be prepared shortly.
**CONCLUSIONS:** These suggestions are in correlation with our case. Spiral graft usage is frequent so the results are reported as good in the literature. Longutidunal graft preparation is rare in the literature so the comparison will be meaningfull when the numbers are adequate. Diameter of the spiral graft may be larger than the longitudinal grafts, but because of the narrower diameter the flow velocity may be higher in the longitudinal grafts. Spiral grafts mostly used between right atrium and innominate vein where external hematoma compression is common. Saphenous grafts patency may be improved if the graft is covered with prosthetic graft to protect it from external hematoma compression **REF0630**

## P42-SUBFACIAL ENDOSCOPIC PERFORATING VEIN SURGERY (SEPS). OUR FIRST EXPERIENCE

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**AIM:** Subfascial endoscopic perforating veins surgery (SEPS) is a modern surgical method used in the treatment of chronic venous insufficiency. The aim of this paper was to report our personal experience in two centers in the endoscopic treatment of chronic venous insufficiency with ulcerations and associated with incompetent perforating veins
**METHOD:** We performed SEPS on 43 patients 20 women and 23 men, with ages between 34-66 years (mean age 49,8), with chronic venous insufficiency at the inferior legs. In 21 patients we performed bilateral SEPS procedure. 22 of the patients have varicose veins at the same time. In those patients we made stripping in 9 patients. The observation period ranged after operation from 3 months to 4 years. All patients were followed up prospectively to assess ulcer healing, ulcer recurrence, and symptoms after SEPS.
**RESULTS:** No cases of recidivation have been reported in the patients who were successfully treated, but in spite of an improvement in cutaneous skin trophism, there were persistent dyschromic lesions in patients with ulcer who underwent SEPS. The time of healing and postoperative complications were reduced after SEPS procedures
**CONCLUSIONS:** Long-term SEPS results demonstrated the efficacy and safety of this surgical technique. SEPS is a new treatment method, especially for patients with ulcerations. But it's not a solution alone for the treating chronic venous insufficiency. Subfascial endoscopic perforating vein surgery **REF0237**

# PERIPHERAL ARTERIAL DISEASE

## P44 - OUR EXPERIENCES WITH ENDOVASCULAR TREATMENT OF ABDOMINAL VE THORACIC AORTIC PATHOLOGIES: 16 PATIENTS

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**AIM:** Thoracic and abdominal aortic surgery is still performed with considerable mortality and morbidity rates despite advances in diagnostic modalitis, anestheshesia and surgical methods. The endovascular methods which have lower mortaility rates are more frequently applied for the treatment. In this report we will present our experiences with the endovascular treatment of thoracic and abdominal aortic pathologies on 16 patients treated at our institution.
**METHODS:** Between 2004-2006, 7 patients with thoracic aortic pathology and 10 patients with abdominal aortic pathology have undergone endovascular treatment.
**RESULTS:** Six patients with infrarenal aortic pathology have undergone aortobiiliac endovascular grafting, and 4 have undergone endovascular tuıbe graft replacement. Thoracic endovascular grafting was performed for type B aortic dissections (2 patients), thoracic aortic pseudoaneurysms (2 patients) and descending aortic aneurysms (2 patients). Mean age of the patients was 64. Mean aneurysm diameters were 6,5cm and 6,4cm at the thoracic aorta and abdominal aorta respectively. Type 1 endoleak has occured in 2 patients in the early postoperative period. One patient required a secondary endovascular grafting. Iliac artery dissection ensued in one patient. Reversible neurologic complications occutred in 2 patients.
**CONCLUSION:** Endovascular grafting can safely be applied with low mortality and morbidity rates in patients in whom open radical surgical means could be performed with high mortality and morbidity.

## P45-MANAGEMENT OF CONCOMITANT CORONARY AND BILATERAL CAROTID ARTERY DISEASE: A CASE REPORT

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A small number of patients, who are undergoing coronary artery bypass grafting (CABG), present with symptomatic or significant bilateral carotid stenosis and management of these patients is challenging. Herein we describe our management of such a patient. A 75-year-old male with chest pain admitted to our institute. Bilateral carotid bruits were obtained on physical examination and carotid angiography revealed greater than 70% stenosis in the both internal carotid arteries. The coronary angiography showed greater than 70% stenosis in the LAD and in the first diagonal, first obtuse marginal and circumflex posterior diagonal branches. The patient was consulted to the department of Radiology and first, staged bilateral carotid artery stenting (CAS) and then, CABG operation was initially planned. However, due to the costs of carotid stents are not paid by health services and the patient could afford the cost of only one carotid stent, CAS on the one side before CABG and carotid endarterectomy (CEA) on the other side after CABG were then decided. Firstly, left CAS was done using a self-expandable monorail stent and a neurological protective device. One week later, CABG to the four vessels was done. Two months later, right CEA and patch-plasty was done under local anaesthesia. There was no any neurological or cardiac complication during or after any of the operations. We think the staged treatment, CAS plus CABG plus CEA, in a patient with concomitant severe coronary and bilateral carotid artery disease is feasible, safe and may be an alternative to combined CABG plus CEA. **REF0105**

## P46-ASCENDING-TO-DESCENDING AORTIC BYPASS VIA RIGHT THORACOTOMY FOR RE-COARCTATION OF THE AORTA

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**OBJECTIVE:** The purpose of this report is to present an adult patient with re-coarctation of the aorta who was successfully treated by extra-anatomic ascending-to-descending aortic bypass via right thoracotomy without cardiopulmonary bypass.
**METHODS:** 24-year-old male patient presented to our clinic with complaints including hypertension in upper extremities, fatigue and headache. He was previously operated in 2001 due to aortic coarctation via left thoracotomy with patch aortoplasty. Physical examination revealed absent femoral pulses and weak left upper extremity pulses. Thoracic computerized tomography demonstrated the hypoplasia of the aortic arch between left carotid and left subclavian artery. The patient was operated on without cardiopulmonary bypass under normothermia. A wide lateral right thoracotomy was accomplished. A 20 mm dacron tube graft was anastomosed to descending thoracic aorta and proximal end of the graft was anastomosed to supracoronary ascending aorta. Pulsatile blood flow was palpated on the descending thoracic aorta at the distal of anastomosis.
**RESULTS:** Postoperative period of the patient was uneventful. All upper and lower extremity pulses were palpable postoperatively. The patient was discharged at the 8th postoperative day with oral atenolol therapy and without any complication. Thoracic computerized tomography at postoperative 8th day confirmed the patency of ascending-to-descending aortic bypass graft.
**CONCLUSIONS:** Our successful experience with this patient contributes at attracting the surgeons' attention to extraanatomic ascending-to-descending aortic bypass via right thoracotomy which is a safer, less invasive and effective method for correction of the complicated forms of aortic coarctation and re-coarctations. **REF0213**

## P47 - AORTIC ARCH REPLACEMENT WITHOUT CIRCULATORY ARREST: A SIMPLIFIED TECHNIQUE WITH TWO GRAFTS

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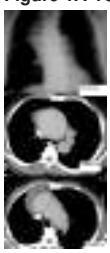
**OBJECTIVES:** Complex aortic arch reconstruction remains as one of the challenges to the cardiothoracic surgeon. Prolonged periods of cardiopulmonary bypass, as a result of lengthy periods of cooling and rewarming for circulatory arrest is a major determinant of postoperative adverse outcome. In this case report, we present a new simplified technique for aortic arch replacement where deep hypothermic arrest is not necessary.
**CASE:** We used this technique for our 61 year-old patient with aneurysmal ascending and transverse aorta and a pseudoaneurysm of the distal ascending aorta.
**DISCUSSION:** A major advantage of this technique is the avoidance from deep hypothermic circulatory arrest. Therefore, this technique may be preferrable for cases where circulatory arrest should be avoided or in centers with less experience in complex aortic surgery. **REF0199**

**Figure 1A-1C**



Plain chest X-ray of the patient with a widened mediastinum and a mass-like appearance on the ascending aorta (1A.). Aneurysmatic ascending aorta and the hematoma outside the aortic contour (1B.) Appearance of the aortic arch (1C.).

**Figure 2A-2B**

Appearance of ascending aorta with the pseudoaneurysm. Note that the branched Dacron graft connected to arch vessels and the perfusing line does not obscure the surgical field (2A.). Completion of the arch reconstruction with the branched graft anastomosed in end-to-side fashion to the "arch" graft (2B.).

**Figure 3A-3B**

3-Dimensional reconstruction of postoperative CAT scan. Note that the innominate and the left carotid artery are anastomosed to the branched graft in an end-to-side fashion (3A and 3B.).

## P48 - USAGE OF THE DESCENDING THORACIC AORTA AS AN ALTERNATIVE INFLOW SOURCE FOR AORTOFEMORAL REVASCULARIZATION

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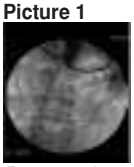
**OBJECTIVE:** The standard method of aortafemoral bypass revascularization for occlusive disease is through a transabdominal approach. Thoracofemoral bypass may be an alternative inflow source when the standard method is not feasible. Our aim was to demonstrate the efficacy and safety of the descending thoracic aorta as an ainflow source in selected cases.
**CASE:** A 48-year-old man was admitted to our service with disabling intermittent claudication. He had diabetes mellitus and hypertension but did not have a history of smoking. Both coronary and peripheral angiography were performed. The peripheral angiography revealed total occlusion of the abdominal aorta at juxtarenal level (picture 1). The chest, abdoman and both groins were prepared. A left anterolateral thoracotomy was performed through the 8 th intercostal level. Dacron bifurcated graft was used and end-to-side anastomosis was performed to the descending aorta. A tunnel was constructed from the left retroperitoneal space to the left and right groin and the graft limbs were drawn through this tunnel. Distal anastomosis were performed to each common femoral artery.
**RESULTS:** Duration of the operation was 4.5 hours and blood loss was 550 cc. He was discharged on the 6 th postoperative day. Postoperative angiography was performed two months later the grafts were all patent..
**CONCLUSION:** Thoracofemoral bypass is recommended in selected patients when conventional approach to the aorta is not feasible. We recommend this technique because it offers excellent inflow, satisfactory patency rates and may be the first choice in cases with juxtorenal aortic occlusion. **REF0203**

**Picture 1**



*Preoperative angiography*

## P51 -GUNSHOT INJURIES OF SHANK VESSELS

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**BACKGROUND:** With the optimal management of femoral and popliteal injuries established, management of of vascular injuries below the popliteal fossa, the so-called "shank arterial vessels," is still controversial.
**METHODS:** A retrospective review of 22 patients treated for gunshot injuries at shank vessels between January 1998 and November 2005 at a civilian vascular surgical unit with a large trauma workload was undertaken.
**RESULTS:** Vascular injuries concomitant with two (9.1%) bone fractures, ten (45.4%) nerve injuries, three (13.6%) hemopneumothorax and one (4.5%) abdominal injuries. The treatment of the injured arteries were seven (31.8%) saphenous vein interposition grafting, three (13.6%) end to end anastomosis, 2 (9.1%) primary suture, ten (45.4%) ligation. Two patients underwent amputation (9.1%) and fasciotomy was performed after vascular repair in three cases (13.6%).
**CONCLUSION:** At the shank vessel injuries is, the right timing, and also prompt treatment save the life of the patients and give better qualified living to the patient. **REF0127**

## P53 -ASCENDING AORTIC ORIGIN OF A BRANCH PULMONARY ARTERY: SURGICAL MANAGEMENT AND EARLY OUTCOME

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**INTRODUCTION:** Anomalous origin of a branch pulmonary artery from the ascending aorta (AOPA, hemitruncus arteriosus) is an unusual congenital heart malformation.This type of cardiac malformation was described first by Fraentzel in 1868. Since then, almost 200 cases have been reported in the literature with a high mortality among patients not surgically.
**PATIENT AND METHOD:** We report herein a 5-month-old female baby suffered from dispnea and congestive hart failure. Echocardiographic and angiographic examinations revealed anomalies origin of the right pulmonary artery from ascending aorta, right arcus aorta and patent ductus arteriosus(PDA). The operation was performed through median sternotomy via extracorporeal circulation. Left pulmonary artery was detached from aorta and brought on the main pulmonary artery for the end-to side anastomosis by using 6/O polidiaxonone suture.The aortotomy was closed primarily and PDA was ligated. The patient was sedatized for 24 hours and she was extubated on the 3th postoperative day. She was discharged on th 8th day uneventfully. Postoperative echocardiographic examination showed no gardient at the anastomotic site.
**CONCLUSION:** We conclude that this rare but serious condition is amenable to surgical repair particularly if operated on early in life. Direct anastomosis is our surgical procedure of choice. Patients presenting this anomaly may undergo correction using various surgical techniques with acceptable results. **REF0368**

### P54 - THORACIC AORTOBIFEMORAL ARTERY BYPASS TECHNIQUE IN CASES OF HIGH RISK LERICHE'S SYNDROME

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**OBJECTIVE:** Retroperitoneal descending thoracic aortobifemoral artery bypass technique as a primary treatment modality in patients with Leriche's syndrome is evaluated.
**METHOD:** Retroperitoneal descending thoracic aorta-bifemoral artery bypass was performed in 2 patients with Leriche's syndrome, in our clinic. Indications for this approach were lack of a suitable site for aortic clamping. In both patients, proximal anastomosis of a Dacron bifurcated graft was performed end-to-side at the lower descending thoracic aorta through a left anterolateral thoracotomy.. The graft limbs were drawn through posterior diaphragm at its attachment to the12th rib, then through a retroperitoneal tunnel to a short left transverse trunk incision, from which each limb of the graft was drawn through a subcutaneous tunnel to each side of the groin and anastomosed to each common femoral artery.
**RESULTS:** There was no operative mortality nor morbidity in the short term follow up. Graft failure was not encountered in any of the patients.
**CONCLUSION:** Thoracic aorta-femoral artery bypass is a useful technique for accomplishing lower limb revascularization in whom exposure or availability of the abdominal aorta poses a specific hazard. Thoracic aortofemoral bypass offers excellent inflow and reliable patency and may be considered for primary revascularization in cases where a suitable site for aortic cross clamping is not present, like Leriche's syndrome, aortoiliac occlusive disease in a patient with multiple previous abdominal operations including an abdominal-perineal resection and left lower quadrant colostomy, and idiopathic retroperitoneal fibrosis and multiple previous operations on the abdominal aorta. **REF0563**

### P55 - HUGE POPLITEAL ARTERIAL ANEURYSMS IN BEHÇET'S DISEASE; IS LIGATION AN ALTERNATIVE IN TREATMENT?

Goz Mustafa, Cakir Omer, Eren Mehmet Nesimi

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**INTRODUCTION:** Behçet's disease is a multisystemic disease characterized by relapsing uveitis, oral and genital ulcerations and vascular system involvement. The vascular involvement is seen as venous occlusion, arterial occlusion, and aneurysm formation in this disease and the surgical treatment of a Behçet's aneurism has technical difficulties. In this report we present that the huge popliteal artery aneurysm in Behçet's disease can be treated by ligation of the popliteal artery.
**CASE:** The 58 years old male patient was admitted to our clinic, because of the left below infrapopliteal great mass. Color Doppler ultrasonography and arteriography revealed a 71x54 mm aneurysmal dilatation at the distal popliteal artery. While operation we couldn't find any suitable arterial formation for apply by-pass to the distal area of popliteal artery. For this reason, we applied ligation to distal and proksimal edges of aneurismal dilatation at the distal popliteal artery. The patient tolerated the operation well and had no ischemia signs postoperative period.
**DISCUSSION:** In conclusion, especially in aneurysm of arteries such as popliteal artery which had critical importance for maintaining distal perfusion, the ligation may be a treatment method, if there are no other alternatives. **REF0453**

### P56-A CASE OF RUPTURED AND UNRUPTURED TWO ATHEROSCLEROTIC ANEURYSMS OF SUPERFICIAL FEMORAL ARTERY AND REVIEW OF THE LITERATURE

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*Mersin University School of Medicine, Department of Cardiovascular Surgery, Mersin, Turkey*

**INTRODUCTION:** An 82 year-old male patient with the complaints of left leg ischemia and medially located mass on his left lower thigh with diffuse ecchymoses was admitted to the hospital. Two separate aneurysms, one being ruptured, on the left superficial femoral artery were diagnosed by using ultrasonography and angiography. No accompanying aneurysms in the abdominal aorta or other peripheral arteries were found.
The patient was undertaken an emergent operation. Resection of aneurysms and ring reinforced PTFE graft interposition was performed after the evacuation of the hematoma. However, necrosis of the left 1st, 2nd and 3rd toes developed during the early postoperative period. The search of the literature revealed three different atherosclerotic aneurysms on the same superficial femoral artery in one patient. Superficial femoral artery aneurysms are usually single and distinctly unusual. Complications such as rupture, thrombosis or embolization are effective in mortality and morbidity.
**CONCLUSION:** Early diagnosis and surgical intervention of the patients with superficial femoral artery aneurysms are mandatory before the complications develop, as was in this case. **REF0104**

### P57-DIAGNOSTIC AND SURGICAL APPROACH TO A DESCENDING THORACIC AORTA SACCULAR ANEURYSM CASE

Kucukarslan Nezihi, Ozal Ertugrul, Kuralay Erkan, Sahin Mehmet Ali, Gramatnikovski Nikola, Demirkilic Ufuk, Arslan Mehmet, Tatar Harun

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**INTRODUCTION:** Descending aorta saccular aneurysms are seen less than fusiform aneurysms. All symptomatic saccular aneurysms must be operated. In this study, we present a saccular aneurysm case developed at the descending aorta one year after a motor vehicle crash. Following an aorta-LAD saphenous vein graft anastomosis performed in beating heart, the aneurysm neck was closed with a Dacron patch under deep hypothermic circulatory arrest. All signs and symptoms removed dramatically after the operation.
**CONCLUSION:** Regarding this case, we recommend that the surgical treatment must be performed in accordance with localization and specialties of aortic aneurysms. **REF0090**

## P58 - GIANT RIGHT CORONARY ARTERY CAMERAL FISTULA WITH CONCOMITANT TRIPLE VESSEL CORONARY ARTERY DISEASE UNDERGOING SURGICAL REPAIR - CASE REPORT

Ahmed Sohail, Attawar Sandeep, Dutta Prabhat, Solaiman Abdullah, Haider Zulfiqur, Shamsuddin Abul, Kumar Sunil, Saha Sanjay, Badruddoza Abu Naser

*Apollo Hospitals Dhaka, Bangladesh*

A 54 year old Bangladeshi male presented with Class III NYHA symptoms and long standing right heart failure. He had been on ACE inhibitors and oral furosemide for 5 years after his initial symptoms. Detailed evaluation and cardiac catheterisation revealed multivessel CAD with a Giant Right coronary artery to coronary sinus fistula. He was subjected to multivessel coronary artery bypass surgery and surgical interruption of the fistula. The case is being presented for it's unique nature and absolute rarity of a combination of adult congenital heart disease and concomitant coronary artery disease. The discussion will involve a slide show of the pathology and techniques of surgical correction involved.

**Aneurysmal RCA** **CAG**


*Giant aneurysmal Right Cornary Artery*

**CXR** **Dismanteling RCA and closure of right coronary ostium**


*Cardiomegaly*

**Final stage after closure of coronary cameral fistula**

**REF0032**

## P59-A RIGHT CORONARY ARTERY ANEURYSM WITH ATHEROSCLEROTIC DISEASE: A CASE REPORT

Demirag Mustafa Kemal, Keceligil Hasan Tahsin, Yucel Semih Murat, Sarac Atilla, Bahcivan Muzaffer, Urkmez Melih, Kolbakir Fersat

*Department of Cardiovascular Surgery, Ondokuz Mayis University, Samsun, Turkey*

Various aneurysmal transformations can be observed in the coronary arterial system. Such transformations are caused either by acquired or hereditary factors. Coronary arterial aneurysms are rare and are usually discovered during the cardiac catheterization procedures carried out for other reasons. Although the isolated coronary arterial aneurysm is usually asymptomatic, in rare cases it can manifest itself through acute or chronic symptoms which are different from the symptoms of the accompanying cardiac diseases. Such rare cases are related with the aneurysm's complications.
We have successfully carried out a simultaneous coronary bypass + aneurysm ligation operation on a patient with coronary heart disease and an aneurism within the right coronary artery. Since this is not a very recurrent subject in academic literature we find it worthy of discussion.

**REF0092**

## P60-BEATING HEART AXILLOCORONARY BYPASS SURGERY

Selli Cuneyt, Demir Deniz, Aydin Mehmet Salih, Kocarslan Aydemir, Kunt Alper Sami, Andaç Mehmet Halit

*Department of Cardiovascular Surgery, Harran University Research Hospital, Sanliurfa, Turkey*

**CASE:** We report an axillocoronary bypass in a 72-year-old woman with unilateral leg protshesis she walks by a crutch.The patient had non- insulin dependent diabetes mellitus,hypertension,dislipidemia and had 2-vessel coronary artery disease with a lesion in the left anterior descending artery other lesion of coronary artery non critical She underwent an axilary artery-left anterior descending artery bypass with a saphenous vein graft without aortic cross-clamping.An easy,safe procedure, axillocoronary bypass is a viable option in coronary artery bypass grafting for patients difficulty in walking,who needs support for walking

**REF0294**

## P61-OUR TRANSPERITONEAL AND RETROPERITONEAL APPROACHES IN INFRARENAL AORTIC SURGERY

Manduz Sinasi, Katrancioglu Nurkay, Sapmaz Ismail, Aydın Murat, Atli Hayri, Sanri Umut Serhat, Dogan Kasim

*Cumhuriyet Univesity Cardiovascular Surgery, Sivas, Turkey*

**INTRODUCTION:** Abdominal aortic surgery is performed becasue of aortic and iliac occlusions and abdominal aortic aneurysm.
**METHOD:** Transperitoneal surgical aprroaches were performed on 55 patients who were diagnosed aorto iliac oclusion or abdominal aortic aneurysm between the years 1994 and 2006 in Cumhuriyet University's Cardiovascular surgery department. Retroperitoneal approach was performed to 35 patients. These patients were evaluated according to age, gender, surgical approach type, early and late period complications, morbidity and mortality.
**RESULTS:** Average age being 64.5 years in the transperitoneal group, with the average age was 58.6 years in retroperitoneal group. There were 48 males and 7 females in the transperitoneal group. All the patients were male in the retroperitoneal group. Average time of staying in hospital was 12 days for transperitoneal group. This time was 9 days for retroperitoneal group. 7 patients died in late period of operation in transperitoneal group. There was no mortality in retroperitoneal group. Periodic medical examination of patients were done through 18 months for transperitoneal group. This time was 24 months for retroperitoneal group.
**CONCLUSION:** Our results are in harmony with literature. Retroperitoneal approach was different according to anesthesia kind, postoperative morbidity and mortality, time of hospital staying and billing. It is better than transperitoneal approach. We recommend retroperitoneal approach although it is more difficult as a technique than transperitoneal approach.

**REF0404**

## P62 - CAROTID BODY TUMORS: DIAGNOSIS AND MANAGEMENT IN 10 PATIENTS

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*[2]Department of Radiation Oncology, Erzurum Numune Hospital, Erzurum, Turkey*

**OBJECTIVE:** Carotid body tumors usually locate carotid bifurcation. These benign neoplasms consist lower than 0.5% of all tumors. They also consists 2/3 of the glomus tumors in the neck. Malignant transformation risk is 3%. Ten patients with carotid body tumor referred to our clinic in last two years (between 2004–2006 years), and was discussed with literature.
**METHODS:** Ten cases with carotid body tumor, operated in our clinic in the last two years. One of the patients was men and 8 women of the patients were women. The age was between 38–52. All patients were referred with neck swelling. Computerized tomography and color-flow-doppler ultrasonography were performed to all patients. Magnetic resonance angiography was performed to five patients. According to Shamblin classification six patients were type II, the other was type I. One patient had bilateral carotid body tumor. In any patients that operated was no used shunt, and was performed only total resection with subadventitial dissection.
**RESULTS:** Histopathological examinations of the extirpated bodies were paraganglioma. No complication was detected in any patients.
**CONCLUSIONS:** Developments in the diagnostic tools and vascular surgical techniques allow rapid diagnosis and operation with lower morbidity and mortality risk. Magnetic resonance, magnetic resonance angiography and/or computerized tomography are follow-up techniques. Surgical excision and radiotherapy are treatment procedures. In young patients total excision with appropriate surgical technique is the best treatment procedure. **REF0456**

## P63 - THE EVOLUATION OF CLINICAL EFFICIENCY OF ILOPROST IN THE PATIENTS WITH TROMBOANJIITIS OBLITERANS

Kaygin Mehmet Ali[1], Ceviz Munacettin[1], Erkut Bilgehan[1], Sahin Ali[2], Unlu Yahya[1], Ayan Arif Kursad[2], Erdem Ali Fuat[3], Kocak Hikmet[1]

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*[2]Department of Nuclear Medicine, Medical Faculty of Ataturk University, Erzurum, Turkey*
*[3]Department of Anesthesiology, Medical Faculty of Ataturk University, Erzurum, Turkey*

**OBJECTIVE:** In this study resting pain, increasing of claudication distance, wound healing and ankle/brachial index (ABI) were prospectively evaluated in 15 patients (1 woman, 14 men) diagnosed with TAO, ages between 20 and 55, by using iloprost.
**METHODS:** 0.5-2 ng/kg/min dose iloprost was administered intravenously in 5 % dextrose in 6 h for 28 days. The efficiency of the treatment on the 1st, 3rd, 7th and 28th day and 6th month of the treatment with iloprost was evaluated by comparing the symptoms and findings before the treatment.
**RESULTS:** It was found that the findings on 28th day and 6th month had beneficial therapeutic effects according to the findings before iloprost administration and were statistically different ($p<0.05$). For the evaluation of the efficiency of iloprost not only the subjective findings, but before and after treatment (6th month) the increase of perfusion rate by posterior images at shank region of the lower extremity at 15th min (exercise) and 1st h (resting) after 20 mCi Tc-99m piroposfat injection were evaluated. The increase of perfusion rate after treatment was statistically different ($p<0.05$). During 28 days of treatment by iloprost no side effects needed to stop the treatment were observed.
**CONCLUSION:** It was shown in this study as subjective and scintigraphically that iloprost administration to the patients with TAO had obvious beneficial efficiency for healing of ischemic ulcer, increasing of claudication distance, recovery of resting pain and increase of ABI and these beneficial effects had continued for 6 months. **REF0465**

## P64 - THE COMPARISON OF INVASIVE AND PERCUTANEOUS TREATMENT MODALITIES FOR THE REPAIR OF A SUBCLAVIAN PSEUDOANEURYSM: A CASE REPORT

Balci Ahmet Yavuz[1], Vural Unsal[1], Kayacioglu Ilyas[1], Sensoz Yavuz[1], Tuygun Abdullah Kemal[1], Idiz Mustafa[1], Baysal Ayse[2], Alkan Pinar[1], Yekeler Ibrahim[2]

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**INTRODUCTION:** The incidence of a subclavian pseudoaneurysm is rare. There is a possibility of rupturing that is related with high incidence of mortality and the risk of compression of the venous system may cause compromise in the circulatory, neurologic and pulmonary systems.
**CASE:** This is a report of a 48 year-old male patient who has a history of chronic renal insufficiency and was under hemodialysis for five years who presented with right sided mass in his chest. Doppler ultrasonography revealed a pseudoaneurysm at a branch of the subclavian artery and hematoma in its surrounding tissues. The percutaneous intravascular method for repair of the pseudoaneurysm was planned and patient was scheduled for operation. The next morning there was a sudden increase in the right sided mass in the chest and the paresthesia and weakness in the right arm caused a necessity for urgent surgical exploration and drainage of the hematoma and repair of the aneurysm.
**DISCUSSION AND CONCLUSION:** The treatment modalities for repair of pseudoaneuysms of subclavian or other peripheral arterial aneurysms have recently shown variations including percutaneous noninvasive repair. Although it may have advantages, it has the risk of not been able to visualize the surgical field, preventing to have access to evaluate the unexpected bleeding, compression and damage to the nerves or other tissues around the area. **REF0474**

Ruptured subclavian pseudoaneurysm

## P65 - THE RIGHT EXTERNAL JUGULAR VENOUS ANEURYSM

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**OBJECTIVE:** True venous aneurysms are rarely encountered local dilatations, in contrast to arterial aneurysms. We present a case of aneurysm of the right external jugular vein, which we treated successfully with surgical approach.
**METHODS:** A 4-year-old male was admitted to our clinic with a progressive swelling in the right side of the neck. The swollen parts had developed in the 2 months. The mass was in the above of the external jugular vein at the lateral of the right sternocleidomastoid muscle. Physical examination revealed soft, round, mobile, non-pulsating masses approximately 5 x 4 cm in diameters. Results from the examination of the other systems were normal. Diagnosis was made using multi-slice computed tomography. Multi-slice computed tomography imaging of those regions revealed external jugular vein aneurysms (Fig.1A/B). An operation was performed under general anesthesia in the supine position. The aneurysms were freed from the neighboring tissues by separation with supraclavicular incision, and aneurysmal dilatations were extracted by binding from the proximal and distal.
**RESULTS:** The postoperative course was uneventful. Histopathological examination revealed congestional vein structures with thinning in the elastic layer. The lesions were therefore evaluated as true venous aneurysms. The patient was discharged the day after surgery, and remained asymptomatic for the next 6 months.
**CONCLUSIONS:** Although these are quite rare, we suggest that such venous aneurysms should be considered for surgery, because of its important complications as pulmonary embolism, thrombophlebitis, rupture and thrombus formations. **REF0475**

## P66 -ASCENDING AORTIC ANEURYSM AND AORTIC INSUFFICIENCY DEVELOPING MANY YEARS AFTER BLUNT TRAUMA TO THE CHEST: A CASE REPORT

Balci Ahmet Yavuz[1], Idiz Mustafa[1], Vural Unsal[1], Baysal Ayse[2], Sensoz Yavuz[1], Ates Mehmet[1], Tuygun Abdullah Kemal[1], Keser Mustafa[1], Yekeler Ibrahim[2]

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

**INTRODUCTION:** Trauma related aortic aneurysms have a prolonged course throughout the years developing slowly and providing clinical data insidiously presenting in a chronic respiratory insufficiency state or diagnosed in routine clinical exams.
**CASE:** A 36- year-old female have been abused by her husband 15 years ago and had blunt trauma to her chest on several occasions mostly occured during that time period and possible chronic trauma to her chest throughout the years. She presented with a history of chronic fatigue and dyspnea on exertion and penetrating chest pain. After a plain chest x-ray showing calcified arcus aorta the echocardiographic exam revealed an enlarged ascending aortic aneurysm and mild to moderate aortic insufficiency. The computerized tomography of the chest supported the findings. The operation included excision and replacement of aneurysm with aortic dacron graft and resuspension of aortic valves. There was pulmonary artery adherences that needed dissection and a defect of the artery was repaired with pericardial patch.
**DISCUSSION AND CONCLUSION:** Aortic aneurysms may develop secondary to chronic trauma to the chest in abused patients and have been reported rarely in the literature. Especially the gunshot wounds and traffic accidents may be the source of chronic trauma.The adherence to the adjacent tissues may cause increased risk of complications such as bleeding in surgery or pulmonary compromise in intensive care unit. The surgeons should be aware of the necessity for additional repair of adjacent tissues that may be life-treatening for the patient. **REF0492**

## P67-ZENKER DIVERTCULUM RESECTION AND CAROTID ENDARTERECTOMY: IS IT POSSIBLE TO MAKE CONCOMITANTLY

Tuygun Abdullah Kemal, Olgac Guven, Alkan Pinar, Tuygun Aybanu, Sensoz Yavuz, Balci Ahmet Yavuz, Vural Unsal, Kayacioglu Ilyas, Yurtseven Nurgul, Kisa Ugur, Kanca Atilla, Yekeler Ibrahim

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**INTRODUCTION:** Zenker diverticulum is more common elderly. Dysphagia, regurgitation, aspiration and severe loss of weight typical symptoms. Zenker diverticulum and atherosclerotic diseases seen concomitantly with accidentaly.
**PATIENT AND METHOD:** The patient was referred our center who diagnosed Zenker diverticulum according to barium esephagogram. He was 72 year old. He had a systolic murmur in aortic area and systolic sufl over left carotid artery. Senile aortic stenosis with 40mm Hg systolic gradient found in echocardiographic examination. In carotid duplex, 90%, ulcerated carotid plaque was found. An operation was planned carotid endarterectomy and diverticulum resection concomitantly.
CEA was done in a usual manner. And then we reached to the esephagus behind the carotis artery. We dissected the diverticulum completely, that was 4x3cm dimensions and resected with stappler. Crico-pharygeal myotomy was done 3 cm of each distance of diverticulum to proximaly and distaly.
Naso-gastric sonda was left in 3 days and he nutrieted parenterally. He was discharged without any complaint in postoperatively 8 days. On his 6th.month follow up, hadn't symptoms.
**CONCLUSIONS:** Zenker diverticulum occurs due to partially weakness of posterior area of inferior constrictor muscle and herniation of pharygeal mucous membrane. Treatment of choice surgery and its mortality rate is %1-2. Endoscopic stapling technique is a favourite procedure due to lower mortality rate, non-invasive, return to normal swallowing early and shorter hospital staying.
CEA individually has about 3% mortality-morbidity rate. It would be expected that a simultaneous operation of CEA and external resection may inrease mortality. But only appropriate patients should be operated concomitantly with certain condition. **REF0599**

## P68 - TRAUMATIC ISOLATED TRUE AXILLARY ARTERY ANEURYSM DUE TO BLUNT TRAUMA

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Aneurysms of the axillary artery are rare but potentially dangerous lesions that threaten the upper extremity with vascular and neurologic compromise. The majority of the cases arise as pseudoaneurysms secondary to blunt or iatrogenic trauma. Traumatic isolated true axillary artery aneurysms are relatively rare in comparison with false aneurysms and other peripheral arterial aneurysms. A 22 year-old female patient with distal axillary artery aneurysm due to blunt axillo-thoracic trauma is presented. The aneurysm was excised with subpectoral-axillary approach and saphenous vein graft interposition was applied. Patient was discharged from hospital with no complication.

**REF0600**

## P69 - PER-OPERATIVELY DIAGNOSED ASCENDING AORTA PATHOLOGIES. WHO IS LUCKY, PATIENT OR SURGEON?

Ozler Azmi, Tarhan Ibrahim Arif, Kehlibar Tamer, Yilmaz Mehmet, Arslan Yucesin, Dumantepe Mert, Berkoz Kazim, Pancaroglu Cansin

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**OBJECTIVES:** In cardiac surgery deficiencies in diagnostic techniques may make surgeons face unexpected states during operation. We present two patients who underwent elective coronary bypass surgery with ascending aorta pathologies which were diagnosed per-operatively.
**CASES:** First patient was 62 years old male. He underwent coronary bypass surgery with cardiopulmonary bypass. After finishing last distal anastomose under aortic cross clamp, openings for proximal anastomoses were made using a punch. Soft ulcerative plaque material was detected through openings. Ascending aorta which was totally full with soft plaque was replaced with supracoronary Dacron graft.
Second patient was 56 years old male who also underwent coronary bypass surgery with cardiopulmonary bypass. After harvesting left internal thoracic artery when pericardiotomy was made, a 3x2 cm sized tumor on the proximal ascending aorta was detected. The lack of aortography during angiography caused the pathology not to be diagnosed pre-operatively. When an incision was made on the tumor, thrombus material was evacuated and tear in aorta was detected. Pseudo aneurysm was resected and patchplasty was performed.
**RESULTS:** Both patients' postoperative courses were uneventful.
**CONCLUSIONS:** Suspicion, careful management and radical decisions can protect both the patient and the surgeon from ascending aorta complications. We suggest the use of aortic cross clamp instead of partially occlusive, side-biting clamp as it is more preventive in atherosclerotic aortas. **REF0554**

Figure 1
Ascending aorta of case 1 which was totally full with soft plaque

Figure 2
Pseudoaneurysm of case 2 on the proximal ascending aorta

## P70 - "DELAYED PRESENTATION OF A PENETRATING SUBCLAVIAN ARTERIAL INJURY: CASE REPORT''

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**INTRODUCTION:** Subclavian arterial injuries are quite rare. While these arterial injuries can be detected easily at times, their related symptoms may not be detected at all in some cases.
**PATIENT AND METHOD:** Indirect evidences of arterial injury were detected in our fifty-eight-year-old case who was brought in with a firearm injury. Arterial injury was confirmed by tests performed on the case while under observation in the hospital due to indirect symptoms. Surgical therapy was performed on the patient whose condition suddenly worsened in the 20th hour of clinical follow-up.
**CONCLUSIONS:** Follow-up on cases who have soft signs in the hospital setting for a certain period will prevent possible lethal complications.
**REF0632**

Figure 1: Pseudoaneursym due to injury in the central one-third portion of the subclavian artery in the MR angiography performed in the preoperative period of the patient

## P71 - AN ALTERNATIVE TECHNIQUE FOR COMBINED CORONARY AND LOWER EXTREMITY REVASCULARIZATION: DESCENDING AORTA TO FEMORAL BYPASS

Tarhan Ibrahim Arif, Yilmaz Mehmet, Arslan Yucesin, Kehlibar Tamer, Ozler Azmi

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**INTRODUCTION:** Coronary artery and aortoiliac disease frequently coexist. The patients with significant coronary artery disease and severe limb ischemia are candidate for combined procedure. Patients who have previous abdominal surgery and adhesions, extensive calsifications of abdominal aorta, malignancy and renal insufficiency are high risk patients for direct anatomic aortic reconstruction..
Myocardial revascularization on the beating heart through anterolateral thoracotomy-coronary artery bypass is a less invasive and traumatic procedure. Combination of this procedure with descending aorta to femoral bypass is a good alternative for high risk patients.
**CONCLUSIONS:** We present this alternative technique in this report. This technique is simple and easy. It doesn't need intraperitoneal procedure. It has good postoperative rehabilitaion and short hospital stay.
**REF0642**

## P73 - ACUTE AORTIC DISSECTION IN PREGNANCY

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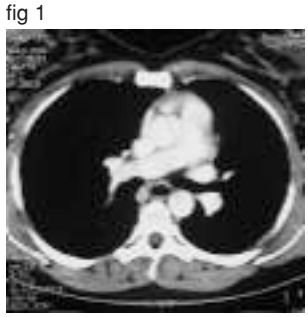
**INTRODUCTION:** Acute aortic dissection in pregnancy is a rare life-threatening emergency event for both the mother and the fetus. It occurs usually during the third trimester or puerperium, and requires an immediate multidisciplinary approach.
**PATIENT AND METHOD:** In this report a case of a 32 year old pregnant woman at 38 weeks gestation, who was admitted to the hospital with acute chest pain, is presented. Electrocardiogram showed ST segment changes suggestive of acute myocardial infarction. Echocardiography, however, revealed acute aortic dissection. An emergency caesarean section took place under general anaesthesia, with extraction of a healty male newborn, weighing 3250 g. At the same operative procedure, under hypothermia and cardiopulmonary bypass, ascending aortic replacement was performed. The postoperative course was uncomplicated. The patient was extubated postoperative 6th hour and she was able to start breast-feeding on second day and discharged from the hospital on day 7.
Pathology revealed disruption of the elastic lamina, elastic fragmentation and mucoid degeneration of the aorta. A subsequent one-year follow-up period was uneventful, both for mother and child.
**CONCLUSIONS:** Acute aortic dissection in pregnancy is a rare and life-threatening condition. The primary goal of management in aortic dissection during the pregnancy is to ensure an emergency multidisciplinary approach to improve fetal-maternal prognosis. The gestational age influences the timing of surgery and dissection should be repaired whenever suspicion is made.
**REF0536**

fig 1



assending aortic dissection above the aortic valves

fig 2

axial view showing the fetus

# PERICARDIAL AND MYOCARDIAL DISEASES, CARDIOMYOPATHIES, CARDIAC TUMORS & TRAUMA

P74 -
Echocardiography

Operation photo

photo specimen

## P74 - BENIGN CARDIAC TUMOR: A CASE OF PAPILLARY FIBROELASTOMA CAUSING STROKE AND MITRAL INSUFFICIENCY

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**CASE:** 41 year-old-woman presented with left upper and lower limb weakness. She complaind of effort related dyspnea and ortopnea. She has been having these symptoms for the last 3 years. The transthoracic echocardiography revealed a pedunculated mobile echogenic mass attached to the atrial aspect of the anterior leaflet of the mitral valve with dimensions of 1,75x1,70 cm.The mass was described as irregular shaped and heterogeneous in texture. The mass on the anterior leaflet of the mitral valve was suspected to be either papillary fibroelastoma(PFE) or myxoma with advanced mitral insufficiency. Cranial CT scan showed acute right parietal lobe infarction.
The patient underwent cardiothoracic surgery. Unfortunately the mass was attached tightly to the anterior leaflet of the mitral valve, hence along with the mass the valve was also resected and replaced with a prostetic valve.
**CONCLUSION:** PFEs are rare benign cardiac tumors which usually involve cardiac valves. PFE is usually an incidental finding. They are often asymptomatic. In symptomatic patients the clinical presentations may vary and depend on the location, size and the motility of the tumor. The most feared complication is the systemic embolization. The most common presentation is stroke or transient ischemic attack(TIA). If the tumor is on the aortic valve, the most prevalent manifestations are sudden death and myocardial infarction whereas in mitral valve tumors stroke dominates.Predominant or isolated valvar insufficiency is rare in the literature. **REF0665**

## P75 - METASTATIC AORTIC EPITHELIAL MALIGNANT TUMOR PRESENTED WITH DISTAL ARTERIAL EMBOLIZATION

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**INTRODUCTION:** Primary and secondary malignant tumors of the aorta are extremely rare. Secondary metastatic involvement of the aorta by tumor in one of the way of the aortic involvement. Preoperative diagnosis of these tumors is more the exception than the rule. The most common symptom, present in 70%, was pain. The pain was caused by local tumour invasion, metastatic disease, ischemia resulting from occlusion of arterial brances, or from distal ischemia due to embolic occlusion of arteries.
**CASE:** A 68-year-old woman, presented with peripheral embolism to both femoropopliteal arteries is reported and was found to have tumor fragments in blood clots but no evidence of a primary tumor. Computed Tomography (CT) and Magnetic Resonance Imaging (MRI) revealed an intraluminal aortic mass in the descendan aorta. Transthoracic Echocardiography showed no evidence of an intracardiac source of embolism. Neither a source embolism nor an intraluminal tumor was detected.Through a left thoracotomy, The descending aorta was resected and reconstructed with a dacron tube graft. The pathological finding was a metastatic epithelial malignant tumor.
**CONCLUSION:** In conclusion, On clinical signs and symptoms alone, aortic tumors as a rare neoplasm, is difficult to diagnose. Treatment includes aggressive en bloc resection of the aorta and affected tissues with chemoradiation for metastatic disease. **REF0550**

## P77 -GIANT RIGHT ATRIAL MYXOMA MIMICKING HEPATIC CIRRHOSIS

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**BACKGROUND:** Right atrial myxoma is a relatively uncommon lesion, comprising 18% of all myxomas. Here, we report a case of giant right atrial myxoma mimicking hepatic cirrhosis.
**CASE:** A 52-year-old man was admitted to our department with congestive heart failure, cardiomegaly and hepatic cirrhosis. He had admitted to another hospital previously and was followed due to hepatic cirrhosis and esophageal varices. They didn't diagnosed right atrial mass. In our department transthoracic echocardiography was performed and it revealed a large right atrial mass (82x61 mm) which moved into the tricuspid orifice during diastole. Cardiac catheterization showed that circumflex coronary artery was giving branch to the mass. Cardiac CT showed large solid polypoid mass in the right atrium. The patient underwent open heart surgery. There was a large lobulated tumor (100x80 mm) almost filling the entire right atrium. It had a broadbased attachment to the dorsal free wall of the right atrium and the interatrial septum. The tumor was completely excised from the atrial wall and the interatrial septum with pedicle. Defect of the right atrium repaired by primary stics.
**DICUSSION:** Right atrial myxoma is uncommon.The most common symptom of cardiac myxoma is congestive heart failure, followed by pulmonary emboli. The most important thing in this case the symptom is hepatic cirrhosis. In such case it is necessary to investigate all the cirrhosis etiology including cardiac mass. **REF0428**

## P78 - RECURRENT LEFT ATRIAL MYXOMA

Ciloglu Ufuk, Ariturk Cem, Komurcu Gurkan, Depboylu Burak Can, Erzurum Hamit, Dagsali Sabri

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**CASE:** 18 years old female admitted us with mild dyspnea and palpitation. As she had palpitation episodes and 98/min. sinus rhythm we performed a transthoracic 2D echocardiography. Left atrial myxoma of 5,8x4,6 cm.s was diagnosed. The surgery was planned and performed with open heart technique. The patient was discharged on the 5th postoperative day. She followed the routine post-operative control examinations on the 1st week and 1st month after discharge. The control transthoracic echocardiography in the post-operative 3rd month did not mention any tumours within the heart. On the postoperative 9th month she was readmitted with severe dyspnea. As we followed up the medical work-up, right pulmonary upper lobe infarct was diagnosed. With the transthoracic echocardiography, a reccurent myxoma of 3x3 cm.s in the left atrium was diagnosed and contrasted computed tomography of the chest showed us the involvement of the upper pulmonary vein. The second surgical therapy was performed with open heart technique. The patient was followed monitorised for 2 days in the intensive care unit and was discharged 7 days after the operation.
**CONCLUSION:** Left atrial myxoma is the most common tumour of the heart in the adults and is usually (%75) located in the left atrium. It is benign in nature but shows a great significance because of its localisation and surgical therapy method. %1-3 of the left atrial myxomas recurres after the resectio. As its localisation is unusual and its recurrence is uncommon we decided to present this case. **REF0416**

## P82 - AORTA-RIGHT ATRIAL FISTULA AFTER VSD OPERATION

Ozay Batuhan, Ketenci Bulend, Gunay Rafet, Gorur Alper, Sari Sibel, Elibol Ahmet, Cimen Serdar, Demirtas Murat

*Siyami Ersek Thoracic and Cardiovascular Surgery Research and Training Hospital, Istanbul, Turkey*

**CASE:** We describe a late complication after ventricular septal defect surgical repair. Proximally the fistula propagated into the right atrium, resulting in an aorta-right atrium fistula. This is a previously unreported iatrogenic complication after a cardiac operation. An aorta-to-right atrial fistula developed within 14 years after closure of an atrial and ventricular septal defect.
**CONCLUSION:** Previous ventricular septal defect operations should be remembered as one of possible causes of aorta-right atrial fistula. Surgical correction was required. **REF0226**

**Fig 1**

**Fig 2**

## P86 - MALIGNANT FIBROUS HISTIOCYTOMA OF THE HEART

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*Department Of Cardiovascular Surgery, Cukurova University, Adana, Turkey*

**CASE:** A 28-year-old male admitted to the hospital because of epigastric pain, dyspnea, fatigue, and loss of appetite for several weeks and dizziness once a time. Chest x-ray, transthoracic echocardiography(Figure 1) and helical CT (Figure 2) examination were performed. The left ventricular and left atrial walls, right ventricular outflow tract and main pulmonary artery and the root of the aorta were invaded by the tumor. In the operation the mass was unresectable. **REF0009**

**Figure 1 EKO**

*Figure 1: Transthoracic echocardiography: Parasternal short axis view shows multicystic mass adjacent to the left ventricle. (Left ventricle: LV).*

**Figure 2 CT**

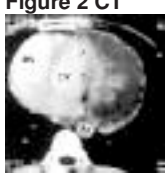

*Figure 2: On the left side, a mass with mostly cystic component at the caudal part and adjacent to the great vessels and the left ventricle is seen ( Right ventricle: RV, Left ventricle: LV, Aort: Ao, Mass: M )*

## P87 - HYDATID CYST OF THE HEART

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**INTRODUCTION:** Cardiac echinococcus is an uncommon lesion which occurs in less than 2% of all patients infested by parasite.The purpose of this article is to describe our experience with four patients operated on with cardiopulmonary bypass techniques.
**MATERIAL-METHODS:** From 1997 to 2004, four patients with cardiac cyst were operated on. Three were female and one was male with ages ranging between 28 to 61 years.In our patients were identified three myocardial cyst of the left ventricle wall, and one right atrial cyst.
**RESULTS:** The cyst size ranged from 4 cm to 10 cm in diameter.The early and late postoperative course was satisfactory in all patients. No peroperative and postoperative mortality occured.
**CONCLUSION:** Intracavitary cardiac hydatid cysts are rare and they may be asymptomatic but it is associated with an increased risk of lethal complications if left undiagnosed and untreated. The treatment is based a surgical excision.Medical treatment is recommended as prophylactic against cyst recurrence. **REF0397**

## P88 - EXTRACARDIAC-INTRAPERICARDIAL HYDATID CYST ACTING LIKE CONSTRUCTIVE PERICARDITIS

Ariturk Cem, Ciloglu Ufuk, Komurcu Gurkan, Depboylu Burak Can, Dagsali Sabri

*Department of Cardiovascular Surgery, Siyami Ersek Thoracic And Cardiovascular Surgery Research and Training Hospital*

**CASE:** 65 years old male patient admitted by us with dyspnea and fatigue. With the telecardiography, transthoracic 2D echocardiography, computed chest tomography and ELISA we diagnosed the extracardiac intrapericardial cyst hydatic disease. The surgery was planned and in the operation day, after the Swan Ganz catheterisation of the heart we prooved that the cyst was causing constructive pericarditis. We performed the surgery under general anesthesia via midsternal sternotomy. The cyst was excised. The patient was surgically revised in the postoperative day 9 because of cardiac tamponade. In the postoperative follow up the clinical, biochemical, hematologycal and the hemodynamic values improved and the patient was discharged in the postoperative day 16.
**CONCLUSION:** The cyst hydatic involving the heart is not common. In the literature there were some types of cyst hydatics involving in different parts of the mediastinum and the heart. As we explored the literature we realised that the clinical features vary due to the localisation of the cysts. Furthermore the localisation of the cyst determines the morbiditity and mortality rates. We decided to report this case because of its uncommon clinical consequences. **REF0412**

**The cyst seen on the computed tomography of the chest**

## P89 -AORTIC VALVE INSUFFICIENCY DUE TO RUPTURE OF THE RIGHT CORONARY CUSP AFTER BLUNT TRAUMA

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Blunt injury to the cardiac valves leads to progressive acute ventricular failure, which often requires urgent surgical management. In this case report, we describe an aortic valve insufficiency due to rupture of the right coronary cusp in a patient with blunt trauma caused by falling from a high place
**CASE:** In our case, a 21 year old male referred to our instution with exertional dispnea which occurred in the last 30 days after falling from a high place. Chest radiography revealed a higher than normal cardiothoracic index. Auscultation revealed an early diastolic murmur, with a grade 3/4 intensity. Transesophageal echocardiography showed 3+, 4+ aortic regurgitation due to a tear in the right coronary cusp. Cardiac catheterization showed normal coronary arteries and severe aortic regurgitation with pulmonary artery pressure 50mmHg. We approached via a conventional median sternotomy. After initiation of cardiopulmonary bypass, we induced and maintained cardiac arrest with St'ThomasII cardioplegia. After aortotomy, we found the tear of the right coronary cusp (Fig1, Fig 2). Having decided that the aortic valve was irreparable, the case was treated successfully by surgical replacement of the aortic valve with a No. 25 SJM prosthesis. The patient was extubated on the 1st postoperative day and discharged from hospital without any complication on the 6th day. Chest radiography performed at 3-month follow-up demonstrated that the cardiothoracic index had diminished, and the new prosthesis was seen to be competent on TEE. Ten months after his aortic valve replacement, he remained free of symptoms. **REF0290**

**Rupture in the excised cusp**

**Rupture of the right coronary cusp intraoperatively**

## P91 -SEPTAL HYDATIC CYST PRETENDING PULMONARY STENOSIS

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**BACKGROUND:** Cardiac hydatic cysts represent 0.5-2% of all infestations. They are mainly located in the left ventricular myocardium (60%); this is followed by right ventricle, pericardium, pulmonary artery and interventricular septum (10%, 7%, 6% and 4% respectively). Septal involvement is rare but important for its possible complications.
**MATERIAL-METHOD:** 7 year old girl had 3 degree systolic murmur at the pulmonary area and suspected as pulmonary stenosis. Transthoracic echocardiography revealed 25x25mm cystic mass is in the upper interventricular septum extending to right as well as left outflow tracts. Outflow tract narrowing was dominant in the right side and 84 mmHg systolic gradient is measured. Serological test for hydatic cyst was negative and there was no other visceral organ pathology.
**RESULT:** She has taken to open heart surgery. Septal myocardium was bulky just beneath tricuspid septal leaflet and it was extending toward the right outflow tract causing quite a narrowing at subpulmonary area. After being deactivated, cyst was taken out completely without damaging it. Remaining cavity closed primarily without capitonage. Recovery period was uneventful. Neither residual cavity nor mass was detected in the septum two years after surgery.
**CONCLUSION:** Only 10% of patients have symptoms depend on localization and size of right cardiac cysts. Valvular and conduction system dysfunction, heart failure and compression of coronary arteries are the causes of morbidity. Subendocardially localized cysts may easily rupture into the cavity resulting anaphylactic reactions or embolisation. Waiting for spontaneous or therapeutic shrinkage may result in fatal complications. **REF0445**

## P92 - ASYMPTOMATIC THROMBOSED RIGHT VENTRICULAR CYST HYDATID

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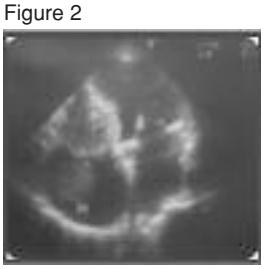
*[2]Department of Heart Surgery, Istanbul University Cerrahpasa School of Medicine, Istanbul, Turkey*

**PATIENT AND METHOD:** A 81 year old patient with hypophyseal mass causing panhypopituitarism was consulted because of a diastolic murmur of 3/6 intensity best heard near left sternal border. He was planned to have an elective surgery for hypophyseal mass and preoperative cardiac evaluation was carried out with transthorasic echocardiography for the better deliniation of valvular pathology.
Patient was totaly asymptomatic and have never complained of sign or symptom of cardiovascular diseases. TTE showed a semi-cystic mass with a dimension of 5x6 cm, located at the right ventricular side of interventricular septum just beneeth the septal leaflet of tricuspit valve causing functional tricuspid stenosis. A pediculated 2,5x2 cm thrombotic mass was located at rigth atrium possibily due to stasis of blood behind the right ventricular inflow tract (Figure 1.3) Patient was admitted to hospital and thorasic CT scan showed the cystic mass in right ventricule, enlarged right atrium with a gaint thrombus inside comfirming the findings of TTE (Figure 4). Patient was heparinized and amphiric albendazole treatment started before so planned operation for cardiac mass.
**CONCLUSION:** Prior medical history revealed an operation of liver due to cyst hydatid in 1984. Serologic examination was negative for Echinoccocus Granulosis. Despite negative serologic result, etiologic diagnosis was thought to be cardiac cyst due Echinoccocus Granulosis. Cardiac surgery was carried out via right artiatomy with the insicion of fibrous capsule. Large thrombus formation between the fibrous capsule and cystic mass was seen. (Figure 5,6). After pathological examination the final diagnosis was cardiac cyst hydatid. **REF0557**

Figure 1

Trans thorasic apical four chamber view of a 5x6 cm mass inside the right ventricule.

Figure 2



Thrombus formation in right atrium

Figure 3.

Parasternal short axis view of the mass at aortic valve level.

## P94 - ROLE OF TRANSESOPHAGEAL ECHOCARDIOGRAPHY IN THE SURGERY FOR LUNG CANCER INVADING THE LEFT ATRIUM: A CASE REPORT

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**INTRODUCTION:** Lung cancers invading the cardiovascular structures were previously considered inoperable, recent development in technology and the imaging tools have enabled the operability of such cases. The aim of this case report is to demonstrate the role of transesophageal echocardiography (TEE) in combined pulmonary and cardiac tumor surgery.
**PATIENT AND METHOD:** A 65 year-old male with primary lung cancer invading left atrial wall was admitted to our hospital for surgery. Intraoperative TEE revealed the cancer invasion to the posterolateral wall of left atrium by providing high-resolution images and allowing a well visualization of posterior cardiac structures. Left pneumenectomy with partial resection and patch reconstruction of the left atrium was performed under cardiopulmonary bypass by both cardiac and thoracic surgeons. Postoperative hemodynamic state was stable and the patient was discharged on the 10th postoperative day. Patient has been well for 5 months.
**CONCLUSION:** TEE plays a significant role in the management of the patients by defining the severity and extent of cardiac invasion. It is usefull, easy and low-cost imaging method for assessing the thoracic tumors involving

# CONGENITAL HEART DISEASE AND SURGICAL TREATMENT

## P117 - ALCAPA SYNDROME: DIRECT CORONARY TRANSFER DESPITE DIFFICULT ANATOMY, A CASE REPORT

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**PATIENT AND METHOD:** A 4 years old girl with atypical chest pain and cardiomegaly underwent to cardiac catheterization and a left coronary artery (LCA) originating from main pulmonary artery (PA) was revealed. LCA was filled via large collaterals supplied by overgrown right coronary system and a high volume steal to PA was evident. During preoperative evaluation, a tunnel repair (Takeuchi operation) was planned since ostium of LCA was located at nonfacing posterolaterally located valsalva sinus of pulmonary artery and a direct coronary artery transfer was assumed not possible. However, during surgical exploration it was revealed that coronary ostium was located at the bottom of the laterally located valsalva sinus which was farthest point from aorta. Since the pulmonary valve leaflets were located on the way of presumed tunnel track and need for dissection of leaflets from pulmonary annulus and constructing a tunnel behind the pulmonary annulus with possible dangers of pulmonary stenosis+/-regurgitation and tunnel stenosis along with other risks of tunnel repair make us to prefer to push for a direct coronary transfer. The whole sinus of valsalva was resected from pulmonary artery, LCA carefully freed up and a trap door was created at the sinotubular junction of aorta just above of left sinus. LCA was anastomosed to aorta with the help of trap door aortotomy without any problem.
**CONCLUSION:** In ALCAPA syndrome despite unsuitable anatomy, direct coronary artery transfer is possible with some modifications of surgical technique and it may be preferrable to tunnel repair.**REF0641**

## P118 - DELAYED REFERRAL OF A PATIENT WITH HYPOPLASTIC LEFT HEART SYNDROME: THE MODIFIED NORWOOD OPERATION

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**OBJECTIVES:** Hypolastic left heart syndrome (HLHS) is a congenital heart pathology with various anatomical forms consisting of severe hypoplasia of left ventricle, mitral valve and ascending aorta and is 7-9% of all congenital heart pathologies diagnosed in the first year of life. 25% of the patients expire in the first week of life. Various modifications of surgical procedure first described by Norwood have been reported.
**METHODS:** A 3-month-old boy (4 kg) was referred to our clinic with cyanosis and respiratory distress and diagnosed as HLHS. A modified Norwood procedure was performed.
**RESULTS:** Following median sternotomy, cardiopulmonary bypass with antegrade perfusion through a PTFE graft anastomosed to brachiocaphalic trunk was used. Intraoperatively, diagnosis of hypoplastic left ventricle was confirmed (RV/LV: 5/1). Ascending aorta was 6 mm in diameter. Main pulmonary artery proximal to bifurcation was divided and anastomosed to distal ascending aorta and the aortic arch. A 5 mm PTFE graft was used for creation of a BT shunt. Patient recieved long-term mechanical respiratory support postoperatively. He is now followed in the ward on day 102.
**CONCLUSIONS:** Surgical results in HLHS patients after 14 to 30 days are not satisfactory and result in high mortality. Surviving patients require long-term mechanical ventilation and intensive care unit support.
**REF0624**

## P119 - UNDERGOING ACBG OPERATION, ASD AND CONGENITAL DIAPHRAGMATIC HERNIA REPAIR SIMULTANEOUSLY IN A PATIENT WITH CONGENITAL DIAPHRAGM HERNIA, PERICARDIAL AND MEDIASTINAL PLEURA AGENESIS

Tuygun Abdullah Kemal, Balci Ahmet Yavuz, Alkan Pinar, Kayacioglu Ilyas, Tuygun Aybanu, Yildirim Mehmet, Imamoglu Oya, Sensoz Yavuz, Vural Unsal, Keser Mustafa, Ozdomanic Ibrahim, Yekeler Ibrahim

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**INTRODUCTION:** Congenital diaphragmatic hernia and accidentally founded peroperatively ASD repaired and performed ACBG operation in a step. We analyzed it in the light of findings from literature.
**PATIEND AND METHOD:** 68 years-old, male, patient with complaints of dyspnea and chest pain applied to our hospital and hospitalized with acute coronary syndrome. Critical stenosis was founded in LAD and Cx arteries in coronary angiography and founded diaphragm hernia in thorax CT. We planned to repair congenital diaphragm hernia and perform ACBG at the same session. In the operation, we discovered that intra abdominal organs were covered with peritoneum at the anterior mediastinium and the heart's apex rotated to the posterior mediastinium of left hemithorax, left lung has collapsed and there was no left pericardium and mediastinal pleura. Vancomycin and cephaperosone- sulbactam were given antibio-prophilaxy. Firstly, adhesions of diaphragmatic surface of heart and posterior diaphragmatic border leased to realize the defect border. We used cell-saver for bleeding control. Diaphragmatic defect was repaired with pyrolene mesh graft. Standard aorta-caval canulation has been done and cardiopulmonary by-pass started. Because of the heart's apex over-rotation through the posterior of left hemi thorax, we couldn't use LIMA graft in situ and anastomosed Cx saphen vein graft. We noticed light venous line blood and decided to explore right atrium due to suspicion of ASD. ASD was found and repaired.
Until the 5th postoperative day, he couldn't wean from respirator, because of the low PaO2 level and respiratory failure. He was discharged from hospital at the 14th day and had no complains six months later.Congenital diaphragmatic hernias prevalence is 1/2100-5000 of births. Neurological and major cardiac anomalies occurs 20-30% of the patients.
**CONCLUSION:** Congenital diaphragmatic hernia and isolated ASD were only mentioned as sporadically.
Left pericardial defects including agenesis occurs 57% of all pericardial defects and pericardial agenesis is mostly seen in left side. Generally, it is asymptomatic, but pherenic nerve localization may be change on this kind of defects and especially you have to be careful with harvesting LIMA graft. LIMA graft can not be used in situ due to herniation and rotation of the heart. Long standing compression atalectasis causes the patient to have respiratory failure on postoperative course **REF0620**

## P120 -COMPLEX PULMONARY ATRESIA: SINGLE-STAGE UNIFOCALIZATION

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**OBJECTIVES:** There is contradicting data regarding surgical options for ventricular septal defect and pulmonary atresia in the presence of major aortopulmonary collateral arteries (MAPCA). Recently, complete unifocalization procedures through median sternotomy have been suggested instead of multi-staged approaches through lateral throcatomies. There are contradicting reports regarding simultanous closure of ventricular septal defect. Pulmonary artery (PA) size less tha 2 mm in diameter has been reported to be a predictor of adverse outcome following unifocalization and that an aortopulmonary window creation is important for native pulmonary artery development. In some studies, however, MAPCA were reported not to have a potential for development in size.
**METHODS:** 30 patients that underwent unifocalization for complex pulmonary atresia in our clinic between 1997-2006 were reviewed. Median sternotomy was used in 13 patients and a clam-shell incision was used in 3 patients.
**RESULTS:** 5 of 18 patients that underwent single-stage unifocalization did not have native pulmonary arteries. 5 patients had intrapericardial pulmonary arteries of 2 mm or less in diameter. In 6 patients, pulmonary arteries were between 2 and 3 mm in size. Cardiopulmonary bypass was used in 5 patients. MAPCA were anastomosed to a pericardial roll in the absence of native intrapericardial pulmonary arteries. In patients with native PA between 2-5 mm in size, MAPCA were directly anastomosed to native PA. MAPCA anatomosis was achieved following creation of an aortopulmonary window between pulmonary trunk and aorta in patients with hypoplastic native PA (2 mm or less in diameter. In patients with clam-shell approach, aortic segment where MAPCA arose was removed and replaced and this segment was anastomosed to native PA. MAPCA per patient was 3.1. MAPCA anastomosis per patient was 3.4. 5 patients expired early in the postoperative period due to sepsis in 2 patients, neurological complications in 2 and low cardiac output state in 1 patient.
**CONCLUSIONS:** Various strategies have been suggested for surgical approach to complex pulmonary atresia. There are contradicting results regarding early results of single-stage unifocalization in patients with hypoplastic PA's.**REF0615**

## P122 -LEFT MAIN CORONARY ARTERY COMPRESSION DUE TO PULMONARY HYPERTENSION SECONDARY TO ATRIAL SEPTAL DEFECT: A PEDIATRIC CASE REPORT

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**BACKGROUND:** Both pulmonary hypertension and consequent left main coronary artery compression at an early age is a rare occurrence among ASD patients
**CASE:** We are presenting a 12 year old female patient with ASD and left persistent superior vena cava who also has pulmonary artery dilatation due to pulmonary hypertension. This dilatation resulted in left main coronary artery compression. Surgical correction was successful. Qp/Qs ratio was 2,2 and pulmonary artery pressures were 100-75-58 mmHg. Selective coronary angiography and intravascular ultrasound studies demonstrated a dynamic narrowing of the first 0,95 cm segment of left main coronary artery.
During the operation pulmonary artery was freed from the aorta and plicated from its superior aspect. Fibrotic bands around the left main coronary artery were also divided and compression was totally relieved. ASD was repaired with a pericardial patch. Postoperative both TEE and CT angiography control showed no residual compression on left main coronary artery. Patient was than discharged on 5th postoperative day without any complication.
**RESULT:** Left main coronary artery compression due to pulmonary hypertension is a rare condition and this pathology can be treated with pulmonary artery plication along with other corrective procedures for relieving the pulmonary hypertension. **REF0548**

## P560 -GIANT CORONARY ARTERY ANEURYSM

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**OBJECTIVES:** Coronary artery aneurysm is an uncommon disease. It is defined as a coronary artery dilatation, which can be saccular or fusiform, and exceeds the diameter of the normal adjacent segment or the diameter of the patient's largest coronary vessel by 1.5-2 times.
The natural history and prognosis of this disease remain obscure, and management continues to be a therapeutic dilemma, as most of the published recommendations are based on anecdotal experience.
**CASE:** We report a case of coronary artery aneurysm which is the left main coronary artery aneurysm extending to the left anterior descending artery. The patient was a 52-year-old male, previous AMI, having anterior chest pain on exertion. The coronary angiogram of the patient revealed left anterior descending coronary artery proximal segment aneurysm of 15 mm in diameter with 30% stenosis distal to the aneurysm and 75% stenosis in the right coronary artery at the distally to the posterior descending artery, radionuclid scintagraphy revealed anterior ischemia.
We decided to operate by the reason of not only significant coronary artery stenosis but risks of myocardial infarction due to embolization into distal coronary arteries and rupture of the aneurysm. We performed coronary artery bypass graftings and ligature of the coronary arteries running into and out the aneurysm under cardiopulmonary bypass.
**CONCLUSIONS:** We recommend that ligation of the coronary arteries connecting to the aneurysm or resection of the aneurysm followed by coronary artery bypass grafting should be performed before developing myocardial infarction or rupture of aneurysm. **REF0560**

Figure 1

Left anterior descending coronary artery proximal segment aneurysm

## P124 -THE EFFECT OF SURGICAL TREATMENT FOR SECUNDUM ATRIAL SEPTAL DEFECT IN PATIENTS ≥ 30 YEARS OLD

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**OBJECTIVE:** We prospectively examined whether surgical treatment of secundum atrial septal defects in patient's ≥30 years old improve their early- mid-term clinical outcome. To assess the importance of management in elderly patients with atrial septal defect our clinical experience is reviewed.
**METHODS:** We made analysis of 31 patients who underwent surgical correction of a secundum atrial septal defect in above 30 ages. To evaluate the effects of surgical treatment, we compared functional capacity, diuretic taking, rhythm status (as normal sinusal rythym or atrial fibrillation), and echocardiographic parameters (right atrial and right ventricular dimensions, pulmonary artery blood pressure, ejection fractions) of all the patients before and after operation.
**RESULTS:** The median follow-up period was 4.2 years. There were no operative deaths. Functional classes in most of the patients were improved after operation. Two patient reverted normal sinus rhytm after operation. There was one new atrial fibrilation among patients in postoperative term. Right atrial and right ventricular diamentions, pulmonary artery pressures were significantly decreased, and ejection fractions were significantly increased after operation. The need for diuretic treatment were significantly decreased after surgical repair. No residual intracardiac shunts were identified during follow up. There were no cerebrovascular thromboembolic accidents in the early postoperative period.
**CONCLUSIONS:** Surgical closure of atrial septal defects in patients over 30 years old can improve their clinical status and prevent right ventricular dilatation and insuficiency. The operation must be performed as soon as possible, even if the symptoms or the hemodynamic impact seems to be minimal. **REF0443**

## P125 -A CASE REPORT OF NOONAN SYNDROME WITH VSD, SUBPULMONARY AND SUBAORTIC STENOSIS

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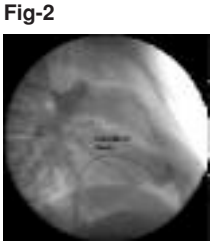
**INTRODUCTION:** Noonan syndrome is a common genetic disorder characterized by facial anomalies, congenital heart defect, short stature, webbed neck, chest deformities and undescended testes. Cardiac malformations are also heterogeneous. Pulmonary stenosis, with or without dysplastic pulmonary valve and hypertrophic cardiomyopathy, are the "classic" cardiac defects reported in Noonan syndrome.
**CASE REPORT:** We report the case of an 13-years-old male with VSD, Subpulmonary stenosis, Subaortic stenosis and Noonan Syndrome. He was referred pediatric cardiologist for the assesment of heart murmur. On physical examination he showed short stature and webbed neck (Fig-1).A systolic murmur was heard on the left 2nd intercostal area. The echocardiography revealed situs solitus, and atrioventricular concordance, normal pulmonary venous drainage,and a VSD with a diameter of 20 mm., 75 mmHg gradient was measured at the pulmonary infundibuler area.The Angiography showed VSD and pulmonary infundibuler stenosis(Fig-2).
During the operation the pulmonary valve was normal and pulmonary infundibular stenosis was repaired by resecting the muscle bands and VSD was closed with a dacron patch. Then an aortotomy was made and the left ventricular outflow tract hypertrophy was treated by myectomy. The post-operative course was unevetful,and the patient was in NYHA Class 1 in 6 months follow-up.
**CONCLUSION:** Pulmonary stenosis and hypertrophic cardiomyopathy are generally the most common congenital heart defects found in Noonan syndrome. Pulmonary stenosis is often associated with a thickened and dysplastic valve but in our patient the pulmonary valve was found to be normal.Our case was a unique one,because of having both the subpulmonary and subaortic stenosis. **REF0524**

**Fig-1**

*Picture-1: webbed neck and chest deformities in noonan syndrome*

**Fig-2**



*Picture-2: The angigraphy showed infundibuler stenosis*

## P126 - EBSTEIN ANOMALY WITH SECUNDUM ASD

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**INTRODUCTION:** Ebstein anomaly described by Wilhelm Ebstein in 1864. Ebstein anomaly accounting for 1/1000 of all cases of congenital heart disease. Pulmoner stenosis or atresia is most common accompaying defect.Others include ASD,VSD,TOF,PDA. Three primary pathophisiologic features predominate in patients with anomaly:
-Right ventricle abnormalities
-Tricuspidal valve abnormalities
-Accessory conduction pathways(WPW syndrome)
Medical treatment will consist of the treatment of the congestive heart failure,arrhytmias and prevention of bacterial endocarditis.
Surgical treatments: -Mechanical or bioprothesis valve replacement (Anterior leaflet composition;to be very thick,cribriform construct,right ventriculer wall located)
-Valve plastic reconstruction,
-Reconstruction with replacement
**CASE:** A 16 years old girl presented with palpitations,dyspnea and exertional dyspnea.The symptoms occured 1 year ago.An electrocardiogram revealed normal sinus rhythm and right bundle block.Transthoracic echocardiography demonstrated the presence of Ebstein anomaly of the tricuspid valve with atrial septal defect.The anterior tricuspid valve leaflet was elongated and cribriform construct wherease septal leaflet rudimentary.Operations of the median sternotomy and external cardiac anatomy is confirmed.Cannulation is accomplished by using the ascending aorta for arterial inflow and separate caval cannulas inserted through the right atrial appendage for venous outflow to the pump.The atrial septal defect was repair primary stured.And than tricuspid valve is treated by bioprosthetic replacement.In control echocardiography interatrial septum was intact and replace bioprothesis valve was dynamapatic.There was no complication at postoperative periot,The patient is regularly following up within our clinic last three mounts. **REF0268**

**İntraoperative Ebstein anomaly**

**İntraoperative Ebstein anomaly**

## P127 -OPTIONS IN SURGICAL TREATMENT OF THE VENTRICULAR SEPTAL DEFECT-AORTIC INSUFFICIENCY COMPLEX

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**OBJECTIVE:** Ventricular septal defects associated with aortic insufficiency are relatively rare: they represent 2 to 12% of all VSD's. Modern trends toward VSD closure and aortic valve (AV) repair are observed in the last decades. Our purpose was to evaluate efficacy of surgical treatment for this lesion.
**METHODS:** Forty patients with VSD-AI complex were operated on at the clinic. The patients' age ranged from 3.5 to 42 years (mean 16.36 +/- 8.12). Twenty-four patients were males, 11 were females (2.3: 1 ratio). According to the type of surgical treatment, patients were divided into 3 groups: 1) VSD closure and AV repair (23 pts), 2) VSD closure and AV replacement (9 pts), 3) isolated VSD closure (8 pts). Isolated closure of VSD was performed in 8 patients with aortic regurgitation of the 1st grade. Aortic valve repair included commissures plication (6 pts), plasty by Trusler (5 pts), Hisatomi (3 pts), Spencer (2 pts), sinus of Valsalva's aneurism suturing (2 pts) and their combination (5 pts). AV repair was indicated in cases of AI of the 2nd-3rd grade. The patients with AV incompetence of severe grade (3rd-4th) were considered as candidates to AV replacement (9 pts).
**RESULTS:** General mortality in our series was 7.5% (3 pts). In the early postoperative period, patients after AV repair demonstrated significant decrease in end-diastolic volume index of the left ventricle (EDVI LV) and myocardial mass index (LVMI) from 176.66+/- 66.32 ml/m2 to 112.02+/- 54.38 ml/m2 and from 250.27+/- 128.21 g/m2 to 206.26+/- 123.01 g/m2 respectively ($p<0,05$). Patients in AV replacement group demonstrated reduction of EDVI LV and LVMI from 205.92+/- 63.36 ml/m2 to 121.11+/- 46.54 ml/m2 and from 322.76+/- 130.86 g/m2 to 251.36+/- 126.24 g/m2 respectively ($p<0,05$). Aortic regurgitation after AV repair in the 1st group of patients was minimal or of the 1st -2nd grade. Two of them (8,6%) underwent AV mechanical replacement because of failure after initial AV repair. Gradient of systolic pressure at the prostheses ranged from 19 to 39 mm Hg. Isolated VSD closure yielded trivial or no insufficiency at the AV level.
**CONCLUSIONS:** Isolated VSD plasty can be used in children without severe changes in the AV (insufficiency of the 1st grade). AV repair as commissural plication, repair by Trusler and Hisatomi provide excellent results for AI of the 2nd-3rd grade with minimal residual aortic regurgitation. AV replacement remains a firm option for patients with 3rd-4th grade of AI, with large eccentric LV. **REF0173**

## P129 -THERAPEUTIC VALUE OF SOMATOTROPIN IN TREATMENT OF POSTOPERATIVE RECURRENT SEROUS / CHYLOUS DRAINAGE IN PATIENTS WITH FONTAN CIRCULATION

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Chylothorax is a very rare complication in patients who have undergone cardiac surgery for complex congenital heart disease. Systemic venous hypertension (>17-20 mmHg) causes increased capillary permeability, leading to interstitial oedema, pleural and pericardial effusions, and ascites. This condition is also reflected onto ductus thoracicus, causing multiple lymphatic drainage sites, resulting in chylothorax. In our study, somatotropin (3 mcrgr/kg/h for 3 days) was used for treatment of five patients who underwent Fontan modifications for complex pathologies with functional single ventricles (three with postoperative chylothorax, and two with recurrent serous drainage resistant to conventional medical therapy). All five patients were completely cured. One case had late (postoperative third month) pericardial effusion and underwent surgical drainage. The functional capacities of all the patients are in NYHA class I-II. Mean follow-up period 4±5.2 months. We think that somatotropin is a good therapeutic modality for treatment of postoperative recurrent serous/chylous drainage in Fontan patients resistant to conventional medical treatment. **REF0169**

## P130 - PERIOPERATIVE PULMONARY ARTERY CATHETERIZATION IN CARDIAC SURGERY FOR REPAIR OF CONGENITAL HEART DISEASES

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Monitoring of pulmonary artery pressure is a useful tool for postoperative follow up of cardiac surgery patients in the ICU. Catheters developed for percutaneous insertion are widely used in adult cases since years. But standard percutaneous catheters are not available for infants and their insertion is not always possible especially in children under 5 kg of body weight. Perioperative placement of a so called “pulmonary artery catheter” through the right ventricular outflow tract is the method of choice in many centers. We also use this technique in newborns and infants since years.
Pulmonary artery catheters developed for this purpose are seldom used devices, which may not be available in every operating room every time. Their expense is another disadvantage. We have replaced epidural catheters designed for regional anesthesia (Epidural Minipack System 1, 18 G, Portex Ltd, UK) with those devices, which are in equal size and diameter. They are cheap and available in every operating room. The catheter may be simply inserted into the main pulmonary artery through the right ventricular outflow tract and secured with 4/0 pledgetted polypropylene sutures. Online monitoring of the pulmonary artery pressure can be monitored postoperatively in the ICU and removing of the catheter is very easy without any complications. This cheap and widely available epidural catheter offers safe postoperative follow up of pediatric cases. **REF0423**

## P131 - CORONARY ARTERY BYPASS GRAFTING IN A RARELY PRESENTED CARDIAC MALPOSITION

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**INTRODUCTION:** Here we present a patient with situs inversus totalis with dextrocardia which is rare in the eight decade of life, who underwent coronary angiography and subsequently coronary bypass surgery for the same time. He was admitted to our hospital with angina at rest. Heart sounds were heard better on the right side.The use of ECG tracings with right-left reversal of all leads and abnormal location of heart on chest X-ray allowed the recognition of dextrocardia. CT scan showed inverted positioned liver, spleen and stomach indicated that patient had situs inversus totalis. Coronary angiography was successfully performed without any technical difficulty and revealed critical coronary lesions. Following coronary angiography the patient proceeded to elective coronary artery bypass grafting. RCA PDA was grafted with radial artery and a saphaneous vein was grafted to CX OM1. Then, the left internal mammary artery was grafted to LAD. It was not prefered to anastomose right internal mammary artery to LAD different than earlier reports because the perefered anastomosis site on LAD was close to midline. The procedure was facilitated by the surgeon standing on the right side on the contrary to previous reports where surgeons prefered to stand on the left side and we did not encounter any technical difficulty. This is one of the few cases of a patient with dextrocardia and situs inversus totalis who reached the eighth decade of life who needed coronary revascularization.
**CONCLUSION:** Neither surgically, nor non-surgically this anatomy poses any unusual technical challenge in myocardial revascularization. **REF0564**

## P132 -SURGICAL CORRECTION TO THE CASES OF COMBINATION OF AORTICOPULMONARY WINDOW AND INTERRUPTED AORTIC ARCH IN SINGLE SESSION IN NEONATAL PERIOD AND OUR RESULTS

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**INTRODUCTION:** Aorticopulmonary window, a congenital abnormality, is a rarely seen case and its accompaniment with Interrupted Aortic Arch is even more rarely encountered. Early diagnosis and surgical intervention is life-saving in such cases.
**MATERIAL-METHOD:** In our clinic, 5 patients with the signs of cardiac failure mainly, one of which is 15 days old (2.3 kg) and others 1-1.5 months old and weight range was 2.3-4 kg. They were taken to the surgery emergently by echocardiographic diagnosis. In all of cases, complete correction was successfully achieved in a single session under conditions of median sternotomy, cardiopulmonary bypass and total circulatory arrest (18oC).
**DISCUSSION:** According to our clinical experience, surgical intervention to aortic arch obstructions and accompanied intracardiac pathologies in a single session by median sternotomy can be performed with an acceptable risk potential. Particularly, IAA, VSD and LVOTO cases require aggressive approaches concerning neonatal root repair. The most important factor in postoperative monitoring is the presence LVOTO and its severity. Echocardiographic and angiographic control, if necessary, should be made upon this aspect.
**RESULT:** Both early and late postoperative periods of our cases were uneventful in the 4-16 monthly follow-up. We concluded that surgical correction in a single session can be possible and safely applied in neonatal period in such combined arch pathologies. **REF0164**

## P133 - LEFT ATRIAL MASS AFTER ARTERIAL SWITCH OPERATION WITH VENTRICULAR SEPTAL DEFECT CLOSURE

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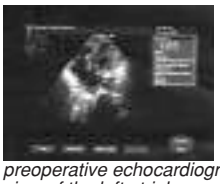
**INTRODUCTION:** Arterial switch operations is the anatomic correction of transposition of great arteries. In this case report we presented an unexpected left atrial mass after switch operation with VSD closure leading intermittent hemodynamic alterations.
**PATIENT AND METHOD:** Two month-old infant underwent arterial switch operation with VSD closure, during postoperative period in ICU, intermittent hemodynamic deteriorations were detected. Echocardiographic examination showed mobile left atrial mass obstructing left ventricule inflow. (fig.1) After one day long anticoagulant therapy, it was seen that the size of the mass didn't changed. The patient underwent second operation, during left atrial inspection through transseptal approach, invagination of left atrial appendage obstructing mitral valve was diagnosed. (fig.2) Left atrial appendage was everted, and fixed to the posterior pericardium. After the operation, the patient had uneventful period, and discharged 7 days after the second operation.
**CONCLUSION:** It was concluded that either left atrial manipulation during the operation or left atrial catheter insertion for pressure monitoring may invaginate left atrial appendage, causing deterioration of hemodynamic parameters. **REF0257**

**Figure 1.**



*preoperative echocardiographic view of the left atrial mass*

**Figure 2.**

*intraoperative view of left atrial appendage.*

## P135 - PULMONARY AND SYSTEMIC EMBOLISM DUE TO THE DEEP VENOUS THROMBUS ENTRAPPED IN THE PATENT FORAMEN OVALE

Tiryakioglu Osman[1], Eris Cuneyt[1], Tiryakioglu Selma Kenar[2], Ozkan Hakan[2], Demirtas Sinan[1], Ozyazicioglu Ahmet Fatih[1], Bozat Tahsin[2]

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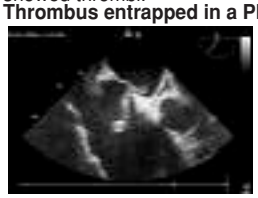
**INTRODUCTION:** A 71 year-old woman was admitted to our hospital because of sudden -onset severe dispnea and angina like chest pain.In history, she was immobilized due to previous traffic accident. Left basilar pulmonary rales were found in auscultation.Her left leg was cold and popliteal arterial pulse was absent.The electrocardiogram revealed sinus tacyhcardia with RBBB morphology. Arterial blood gas analysis demonstrated a PaO2 of 21mmHg and PaCO2 of 40 mmHg, with respiratory alkalosis.Acute pulmonary embolism was suspected and bedside transthoracic (TTE) and transesophageal (TEE) echocardiographic studies immediately performed.TTE and TEE showed a 1x10 cm large tubular thrombus entrapped in a patent foramen ovale (PFO). Thrombus was extended from the right atrium to the left atrium(Figure 1).In left pulmonary artery tract revealed significant echogenity. Significant tricuspid regurgitation was observed and estimated pulmonary artery systolic pressure to be 120 mmHg. Emergency surgery was performed due to the patient's acute hemodynamic deterioration. Operation was performed under heart-lung pump.Intraoperatively, we found a 1x12 cm thrombus entrapped in the PFO with free parts both in the right and left atrium.However, the bigger part of the thrombus was floating in the right atrium when compared with the remaining part in the left side. We excised the thrombus over the PFO.In addition, we performed pulmonary embolectomy with transverse arteriotomy.Tricuspit annuloplasty was performed and PFO was closed with direct suture. Arteriotomy and atriotomy was closed without any complication.Left femoral artery was explored and embolectomy was performed.Thrombus was removed at the popliteal level. All specimens were evaluated histologically.This examination showed thrombi. **REF0391**

**Thrombus entrapped in a PFO.**



## P136 - AORTIC COARCTATION: A 10 YEAR AUDIT

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Aortic coarctation constitutes 4.6 % of all congenital heart defects. Symptoms arise particularly in early infancy and 3 rd decade. Detoriation in symptoms goes beyond following childhood but mortality occurs in 3 rd and 4 th decade. Most of patients die before 50's. Surgery is still accepted the best treatment choice despite balloon angioplasty interventions. Recoarctation is the most experienced complication in all types of surgery. It was reported within range of %7 and 60 with regard to surgical technique, weight, coarctation morphology and age at operation. Our aim is to summarize the outcomes of 31 patients and recoarctation rates matched with operative technique.
**MATERIALS AND FINDINGS:** From 1995 through 2006, 31 patients with aortic coarctation included in this analysis 8 of 31 patients were female ( % 26). Ages ranged from 22 days to 12 years. Isolated coarctation was observed in 17 patients ( % 54.8 ) whereas PDA in 10 ( 29 ), ASD, VSD and PDA in 3 ( % 9.6 ) patients and bicuspid aortic valve ( 3.2 ) in 1 patient accompanied aortic coarctation.
Subclavian flap aortoplasty in 18 ( % 58 ) patients, patch aortoplasty in 9 patients ( % 29 ), resection and end to end anastomosis in 4 patients were accomplished as operative technique. Mortality was not observed in early follow up but a patient died in the second operation which was performed for recoarctation. 2 patient developed recoarctation in midterm follow-up results ( % 6.45 ). Recoarctation etiologies were found to be as associeted cardiac defect ( $p < 0.001$) in multivariate analysis.
**CONCLUSION:** Developing surgical and ınterventional procedures did not succeed to prevent recoarctation and residual hypertension, however surgery still remains the best treatment method. Surgical correction has more valuable results compared to interventional procedures. Although subclavian patchplasty was detected as the most etiologic factor of recoarctation, this technique seemed to have acceptable mortality and morbidity rates. **REF0358**

## P137 - SUCCESSFULL COMBINATION THERAPHY OF A SECONDARY PULMONARY HYPERTENSION IN A PATIENT PREVIOUSLY OPERATED DUE TO PATENT DUCTUS ARTERIOSUS

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**INTRODUCTION:** Although there is a distinctive progression in the treatment of pulmonary arterial hypertension over the past years, there is still no definitive cure for this devastating disease. In the last years, a number of agents are being used as a part of combination therapy such as prostacyclin analogues, endothelin-receptor antagonists or phosphodiesterase inhibitors.
**PATIENT AND METHOD:** A thirty-years-old male, who was admitted to our cardiology department due to dyspnea, chest pain. Calcific patent ductus arteriosus was diagnosed, which is further ligated in our clinic by on-pump sternotomy technique. After the operation the patient got worsened and angiographically a 75 mm Hg mean systolic pulmonary arterial pressure was detected. Although using treatment modalities including oxygen, diuretics, digoxin, calcium channel blockers, statins, sildenafil, IV infusion of iloprost and ultrafiltration of blood, the patient's status got worsened. Finally he had to be entubated due to acidosis and hypoxemia, detected. After 6 days of entubation, he was extubated and aerosolized iloprost with bosentan were added his treatment in combination with sildenafil, calcium channel blockers and diuretics. After about one month of treatment, he was discharged with combination therapy of aerosolized iloprost, bosentan, sildenafil, nifedipine and diuretics. After one week of discharge, systolic pulmonary arterial pressure was measured to be 50 mm Hg.
**CONCLUSION:** We believe that, in patients who have severe PH, early and aggressive usage of new combination therapy modalities may even reverse the clinical ongoing of the disease and may provide enough time interval for patients who need urgent heart and lung transplantation. **REF0353**

## P139 - CLOSURE OF ADULT PATENT DUCTUS ARTERIOSUS UNDER CARDIOPULMONARY BYPASS BY USING FOLEY BALLOON CATHETER

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**OBJECTIVE:** Here we present a 43-year old female patient who underwent successful ductal closure operation under cardiopulmonary bypass via a transpulmonary route.
**METHODS:** A 43-year old female patient was referred to our clinic with chest pain and shortness of breath. Transthoracic echocardiography revealed a PDA and subsequent angiography confirmed the initial diagnosis. The procedure was performed with a beating heart on normothermic cardiopulmonary bypass with standard aortic and two-stage venous cannulations. Following the arteriotomy performed on the main pulmonary artery, digital pressure was applied on the ductal orifice and an 18 F Foley balloon catheter was inserted into the aorta through the ductus to prevent aortic backflow (Figure 1). The ductal orifice was carefully closed with two pledgeted sutures of 4-0 polypropylene (Figure 2).
**RESULTS:** Weaning from CPB was uneventful and intraoperative TEE demonstrated successful closure of ductus. The patient was discharged from the hospital at the 4th postoperative day and she is now symptom-free with no recurrency.
**CONCLUSIONS:** After infancy, the annual death rate of patients with PDA increases dramatically and about 90 % of patients with untreated PDA will have died by 60 years of age. In adult patients, the ligation or division of the ductus which may be shorter, larger, fragile and calcified via left thoracotomy should be dangerous. Using foley balloon catheter occlusion technique, transpulmonary closure of the PDA under normothermic cardiopulmonary bypass is a safe method and should be considered in adult patients. **REF0214**

**Figure 1.** Insertion of Foley catheter thorough orifice of PDA.

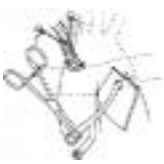

**Figure 2.** Closure of PDA using Foley ballon occlusion technique.

## P141 - TETRALOGY OF FALLOT AND TOTAL SURGICAL CORRECTION: EARLY AND LATE RESULTS

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**AIM:** There is still no consensus on the age and surgical method to be preferred for total correction in Fallot Tetralogy. In this study, we aimed to evaluate the results of patients who underwent total correction surgery at a relatively early age with classic transventricular method.
**MATERIAL AND METHOD:** Following the diagnosis of Fallot Tetralogy, surgery was conducted on 54 patients from January 1984 to June 1994 and on 59 patients from July 1994 to September 2003 in the Cardiovascular Surgery Clinic. A total of 113 patients were retrospectively reviewed for the evaluation of surgical methods, age distribution and post-operative clinic outlooks.
**RESULTS:** Hospital mortality was 8.84% (10 patients) among 113 patients on whom total correction had been conducted. The follow-up procedures conducted in the late post-operative period (3-12 years) revealed that, of the 113 patients, 81 patients (78.64%) had NYHA Class I, 16 patients (15.53%) had Class II and 6 patients (5.83%) had NYHA Class III functional cpacity. Late period mortality was 2.91% (3 patients).
**Discussion:** The age of total correction for patients of Fallot Tetralogy has been decreasing recently. Today, in many clinics, total correction surgery, instead of palliative shunt operation, is being conducted in order to prevent exposure of the organism to persistent hypoxemia in the early period. As we emphasize in this study, patients can have an almost normal life expectancy thanks to the transventricular method and transannular patch (if required) both of which have been routinely conducted in our clinic. **REF0057**

## P142 - INTERMITENT DECLAMPING FOR THE CREATION OF BIDIRECTIONAL CAVO-PULMONARY ANASTOMOSIS

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**BACKGROUND:** Currently, the bidirectional Glenn procedure is performed with or without the support of cardiopulmonary bypass (CPB) in a number of clinics. In this paper, we describe the different method for bidirectional Glenn shunt under CPB using an intermitent declamping the superior vena cava (SVC) for prevent the complications due to caval cannulation.
**METHODS:** 14 patients with cyanotic congenital heart disease underwent a bidirectional Glenn shunt. There were 9 male and 5 female. The mean age was 47.7±1.6 months (Range: 8,5 months to 6 years), and the mean weight was 14±5.3 kg (range: 9,5 kg to 20,7 kg). The mean transcutaneous oxygen saturation was 68.3%±5.7% before the operation. In all cases, the Glenn shunt was performed using intermittent superior caval clamping underwent CPB without the use of superior vena cannulation. During the procedures central venous pressure was measured by the anaesthesiologist.
**RESULTS:** Mean superior vena cava clamping time was 18.3±5.7 minutes, and mean vena cava pressure was 15.9±3.5 mmHg during the clamping. There were no postoperative neurologic complications. The follow-up echocardiography and the digital substraction angiography showed functioning Glenn shunts without any obstruction at the anastomosis.
**CONCLUSIONS:** We believe that adverse effects of superior cava cannulation in the peroperative period or after the operations such as vena cava obstruction, thrombosis or vessel damage due to the cannula, vena cava narrowing at the area of purse-string suture could be eliminated in this method. The other advantegeous of this technique is cost effective because it is no need a purse-string suture material and the SVC cannula. **REF0143**

# CONGENITAL HEART DISEASE AND SURGICAL TREATMENT

## P143 - A GAUZE SPONGE NEXT TO RIGHT ATRIUM RECOGNIZED AT RE-OPERATION FOR HEART VALVE DISEASE

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**INTRODUCTION:** In spite of the policy of even the most careful intraoperative precautions and attentive sponge counts mistakes can occur. The occurence of leaving sponges, instruments etc. in the operation field has been reported to vary between 1/1000 and 1/10000 procedures.
**PATIENT AND METHOD:** A 42-year old female patient was referred to our clinic with severe tricuspid valve insufficiency. She previously underwent mitral valve replacement with carbomedics in an other health center seven years ago. Echocardiographic findings were right atrial enlargement and severe tricuspid regurgitation.After approval of consultative council she was planned to undergo tricuspid valve replacement.After median sternotomy dissection was performed to remove connective tissue. A 5 x 3 x 2 cm mass next to the right atrium was recognized. Because of granulomatose tissue first it was not possible to deminish whether the mass is inside the atrium or outside.The mass was identified to be outside the atrium. The mass was removed and cut. The mass was a gauze sponge surrounded with granulomatose tissue without any sign of infection or purulan tissue. No radiocontast string detectable inside the gauze sponge.The operation was completed by implantating a St.Jude bileaflet prosthetic valve size number 31.In this case, the important thing is severe tricuspid regurgitation caused by spangioma.
**CONCLUSION:** In our opinion, like shumway tecnique in heart transplantation, changes in shape of right atrium may cause deformation of the tricuspid valve. The diagnosis of a retained foreign body should be kept in mind during the investigation of intrapericardial masses with a history of previous cardiac surgery. **REF0318**

## P145 - DOUBLE VALVE REPLACEMENT WITH AORTIC ANULUS ENLARGEMENT IN PEDIATRIC AGE: CASE REPORT

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**BACKGROUND:** Surgical options for patients in pediatric age, with small aortic annulus and associated with mitral valve disease are not standart. We aimed to describe the surgical management of a 9 years old child with aortic and mitral valve incompetence and small aortic annulus by performing double valve replacement with Manouguian procedure.
**CASE:** Nine year old male patient with 3.rd degree and 3.rd degree aortic and mitral valve incompetence had undergone double valve replacement with Manouguian procedure. In preoperative echocardiographic assesment, mitral anulus diameter was 30 mm and aortic annulus was 19.8 mm.. Left atrial diameter was 25.2 mm and left ventricle end diastolic diameter was 54.3 mm and the interventricular wall thickness was 9.3 mm. Left ventricular ejection fraction was % 30.1. The postoperative was uneventful and he was discharged in the seventh postoperative day. Follow up period lasted for 4 years. In the echocardiographic evaluation, there was no left ventricular outflow tract obstruction and valve functions were normal. There was a 20 mm Hg aortic gradient. The level of effort capacity was class 1 according to NYHA.
**CONCLUSION:** Double valve replacemet with Manouguian procedure is an appropriate surgical option to improve patient-prosthesis mismatch, and also helpful in preventing the need for subsequent prosthetic valve replacements in children by maintaining the replacement of the appropriate mechanical valve. **REF0346**

## P146 - TRANSVENTRICULAR MITRAL VALVE REPLACEMENT: A CASE REPORT

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**BACKGROUND:** Left ventricular inferolateral aneurysm and mitral regurgitation are important risk factors for coronary bypass operation. If ventriculotomy has already been done and mitral valve replacement is inevitable, mitral valve could be replaced via ventriculotomy easily.
**MATERIAL-METHOD:** Three vessel disease, advanced left ventricular dilatation, severe anterolateral hypokinesia, apical and inferior akinesia were recognized in the coronary angiography of a 55 year old woman. Echocardiography revealed moderate to severe mitral regurgitation and 6x6.5 cm aneurysm at the inferolateral region including thrombus. Ejection fraction was 25%.During operation ventriculotomy was carried out and the thrombus removed. Aneurysm was including inferolateral region and posterior papillary muscle. 29 mm ATS valve prosthesis was replaced through the left ventricular cavity. This is followed by circular patch plasty by using autologous pericardium and closure of ventriculotomy in a classical manner. Ao-RCA and LIMA-LAD anastomoses were made. Small OM branch was ignored. She was weaned from bypass without any complication. During routine follow-up at 24th month she was clinically stable.
**CONCLUSION:** Moderate degree mitral regurgitation usually becomes less or disappears after
endoventricular circular patch plasty by preserving left ventricular geometry. In that case patch plasty was planned to preserve left ventricular geometry, but exploration revealed that plasty procedure would compromise the posterior papillary muscle function. For this reason replacement of the mitral valve was decided. Transventricular approach for valve replacement provides good exposure of subvalvular structures and decrease the pump time. Therefore it is a good alternative in such cases. **REF0440**

## P147 - NEURAMINIDASE DECREASES IN VITRO ADHERENCE OF SLIME-FORMING COAGULASE-NEGATIVE STAPHYLOCOCCI TO BIOSYNTHETIC OVINE COLLAGEN VASCULAR GRAFT

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**OBJECTIVES:** Vascular prosthetic graft infection is a major complication of vascular surgery and the infection starts with the adhesion of the microorganism to the graft. Since slime forming microorganisms are the major causative agents of graft infections, we aimed to investigate bacterial adherence of slime-forming and non-slime-forming coagulase-negative staphylococci (CNS) and to determine the role of neuraminidase (NANase) on adherence to the biosynthetic ovin collagen graft in this study.
**METHODS:** Human plasma was instilled and incubated at 37 0C to perform fibrin deposition of grafts. After 48 h incubation grafts were drained and inoculated with slime forming and non-slime forming cogulase negative staphylococcus (CNS) in triptic soy broth with the presence and absence of Neuraminidase. Following 24 h incubation at 36 0C, grafts were vortexed and cultured for colony count. Bacterial counts were expressed as total colony-forming units per longitudinal centimeter of grafts.
**RESULTS:** Slime-forming CNS had greater affinity to the collagen graft compared with non-slime-forming CNS ($p<0.05$). Adherence of slime-forming CNS was impaired with NANase treatment ($p<0.001$). NANase treatment of non-slime-forming CNS did not change the adherence to the graft ($p>0.05$).
**CONCLUSIONS:** These results represent that slime plays an important role in the pathogenesis of the vascular graft infection. Adherence of slime-forming coagulase-negative CNS can be decreased with NANase treatment. This may have implications for development of neuraminidase-embedded vascular grafts to diminish biomaterial-related infections.
**REF0261**

## P149 - SURGICAL REPAIR OF A RARE TYPE OF DOUBLE OUTLET RIGHT VENTRICLE

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**CASE:** A 13-years-old girl with DORV and extremely rare anatomical features, such as anterior and left-sided aorta and subaortic VSD was referred to our hospital with the complaint of exertional dyspnea. The echocardiography revealed situs solitus, and atrioventricular concordance with normal pulmonary venous drainage,and also an ostium secundum type ASD with a diameter of approximately 17 mm., and a subaortic VSD of approximately 15 mm. in diameter. 75 mmHg gradient was measured in pulmonary outflow tract. The MR Angiography showed that the aorta and the pulmonary trunk were origined from the right ventricle,and the aorta is on the anterior and left side of the pulmonary artery (Fig-1-2).During the operation the VSD was closed directly with a dacron patch. There were justra position of the atrial appendages (Fig-3). Due to the position of the aorta and the pulmonary artery no tunnel type VSD clousure was needed.The pulmonary stenosis was removed by muscle resection.
**DISCUSSION:** In most cases of DORV aorta is located on the right side of the pulmonary artery,so the VSD was usually corrected by constructing an intraventricular tunnel between the left ventricle and the aorta,which forces the surgeon to implant a conduit for removing the pulmonary outflow obstruction due to the tunnel type intraventricular VSD patch.But in our case,the VSD was subaortic and the aorta was located at the left side and anterior of the pulmonary artery,the VSD can be closed with a patch.No pulmonary outflow tract obstruction occurs,so there is no need for conduit implantation. **REF0509**

## P149 -

**Fig-1**

*Image-1: The MR angiography showed Subaortic VSD*

**Fig-2**

*Image-2: L-transposition of great arteries*

**Fig-3**

*Image-3: Right juxtaposition of atrial appendages*

## P150 - BEATING HEART MITRAL VALVE REPAIR IN A PATIENT WITH PREVIOUSLY PERFORMED CABG

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Previously CABG performed seventythree-year-old woman presented with severe mitral insufficiency. Ejection fraction was 35%. Coronary angiography revealed that both LIMA to LAD and aorta to D1 anastomosis were patent.
The patient was operated on the beating heart without cross-clamping the aorta. Arterial cannulation was performed using the common femoral artery. Venting was performed through both aortic root and right upper pulmonary vein. LIMA was not dissected. Perfusion was maintained to reach at least a mean systemic arterial pressure of 70 mmHg. With this pressure the opening of the aortic valve was prevented. Aorta was not cross-clamped and the patient was maintained normothermic; measures that prevented ventricular fibrillation. Mitral Kay annuloplasty and ring annuloplasty using a 27 no St. Jude medical ring were performed. The repair was evaluated to be sufficient. After deairing the heart the operation was terminated as usual.
The main problems in patients with previously CABG are the possibility of damage the LIMA and the difficulty in myocardial preservation. Using this method LIMA is not dissected and the myocardial preservation is maintained naturally. The mitral valve is better evaluated both before repair and after repair on the beating heart. The competance of the aortic valve is especially important because the left atrial visualization is directly correlated with it. The most important problem is the deairing of the heart. Special maneuvers and the filling of the heart with CO2 are important with the guidance of TEE.

**REF0705**

## P151 - A CASE OF AORTO-RIGHT ATRIAL FISTULA DUE TO INFECTIVE ENDOCARDITIS WHICH MIMICS TRICUSPID VALVE INSUFFICIENCY

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**PURPOSE:** A case of aorto-right atrial fistula, in which flow from the tract of fistula mimics tricuspid insufficiency, will be discussed in this case presentati
**METODS:** Aorto-cardiac fistula was detected in the detailed intraoperative TEE and during operation in a patient urgently operated for severe heart failure. A tract of the fistula originating from the right coronary sinus and opening into the right atrium medial to the septal leaflet of tricuspid valve was revealed. on.
**DISCUSSION:** Aorto-Cardiac fistulas, seldom observed in infective endocarditis, are pathologies with high morbidity and mortality rates. Today, these pathologies can easily be diagnosed with transesophageal echocardiography. **REF0182**
**Figure. 1**

*The vegetation opening from aorta into the septal leaflet region of right atrium, and the fistula flow within this are shown with TEE.*

## P152 -RESULTS OF VALVE REPLACEMENTS WITH ULTRACOR PROSHESES

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**OBJECTIVES:** Prosthetic valve replacement is necessary in patients with valvular heart disease in whom invasive cardiologic intervention and reconstructive surgery is not possible. In this study, 70 patients who had undergone a valve replacement operation with AorTech Ultracor prosthesis were reviewed retrospectively.
**METHOD:** Between January 1, 1994 and June 30, 1998, 92 Ultracor mechanic valves were implanted in 70 patients. Follow-up data were obtained the interval between January 1, 1994 and December 31, 2005. The mean follow-up was 8.67 years (range: 7-11 years) with a total of 540 patient-years. Mitral valve replacement was performed in 32 patients, aortic valve replacement in 16, aortic and mitral valve replacement in 22. Additional cardiac interventions were made in 13 cases.
**RESULTS:** Hospital mortality is 6.2% for mitral valve replacement, 0% for aortic valve replacement, and 9% for aortic and mitral valve replacement. Late mortality was 7.5 %. Postoperative complications were thromboembolism (4 patients), prosthetic valve thrombosis (3 patients), paravalvular leak (1 patient), hemolysis (1 patient), bleeding due to anticoagulant treatment (6 patients).
**CONCLUSION:** It is confirmed that AorTech Ultracor valve replacement has low complication rates, good hemodynamic features, excellent durability and remarkable functional benefit for the patients. **REF0434**

## P153 - RESULTS OF VALVE REPLACEMENTS WITH ST JUDE PROSTESES

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**OBJECTIVES:** Prosthetic valve replacement is necessary in patients with valvular heart disease in whom invasive cardiologic intervention and reconstructive surgery is not possible. In this study, 71 patients who had undergone a valve replacement operation with St Jude mechanic prosthesis were reviewed retrospectively.
**METHOD:** Between January 1999 and December 2005, 82 St Jude mechanic valves were implanted in 71 patients. Mitral valve replacement was performed in 28 patients, aortic valve replacement in 32, aortic and mitral valve replacement in 11. Additional cardiac interventions were made in 28 cases.
**RESULTS:** The mean follow-up was 3.2 years (range: 10 weeks-74 months) with a total of 74.3 patient-years. Four patients died £ 30 days post implantation: thus the operative mortality rate was 6.6%. Six patients died during the late postoperative period (>30 days post implantation). Late mortality was 8.7%. Postoperative complications were thromboembolism (1 patient), prosthetic valve thrombosis (1 patient), prosthetic valve endocarditis (1 patient), paravalvular leak (1 patient), major bleeding (3 patients) and minor bleeding (7 patients) due to anticoagulant treatment, and myocardial infarction (1 patient).
**CONCLUSION:** The overall prevalence of valve-related complications is low. Also the quality of life and expectation for survival are excellent. Our results with this valve have been favorable. **REF0432**

## P154 -RESULTS OF VALVE REPLACEMENT WITH SORIN BICARBON PROSTHESIS IN 271 PATIENTS

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**OBJECTIVES:** Prosthetic valve replacement is necessary in patients with valvular heart disease in whom invasive cardiologic intervention and reconstructive surgery is not possible. In this study, 271 patients who had undergone a valve replacement operation with Sorin Bicarbon prosthesis were reviewed retrospectively.
**METHOD:** Between January, 1994 and January, 2005, 343 Sorin Bicarbon mechanic valves were implanted in 271 patients. Mitral valve replacement was performed in 137 patients, aortic valve replacement in 66, aortic and mitral valve replacement in 64, and triple valve replacement in 4. Additional cardiac interventions were made in 69cases.
**RESULTS:** The mean follow-up was 5.4 years (range: 4 weeks-133 months) with a total of 774.3 patient-years. Seventeen patients died £ 30 days post implantation: thus the operative mortality rate was 6.27%. Twelve patients died during the late postoperative period (>30 days post implantation). Late mortality was 4.72%. Postoperative complications were thromboembolism (3 patients), prosthetic valve thrombosis (3 patients), prosthetic valve endocarditis (2 patients), paravalvular leak (2 patient), bleeding due to anticoagulant treatment (3 patients) and hemolysis (1 patient).
**CONCLUSION:** It is confirmed that Sorin Bicarbon valve replacement has low complication rates, good hemodynamic features, excellent durability and remarkable functional benefit for the patients. **REF0429**

## P156 - TRICUSPID ANNULAR STENOSIS COMPLICATING THREE VALVE REPLACEMENT IN RHEUMATIC PATIENT

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**BACKGROUND:** Rheumatic tricuspid stenosis (TS) usually necessitates prosthetic valve replacement. If stenosis is associated with small annulus and small size prosthesis is implanted, it causes gradient and increases right atrial pressure. Instead of valve insertion, bidirectional Glenn shunt may contribute to lessen the diastolic load on the tricuspid valve just as in one and a half ventricle repair.
**MATERIAL-METHOD:** 41 years old woman applied to emergently with supraventricular tachycardia. Right atrial (RA) dilatation (95x60 mm), grade 3 mitral and aortic regurgitation and severe tricuspid stenosis were detected. Tricuspid valve area was 1.4 cm2 and annulus diameter was 23 mm. Pressures in RA, RV, and PA were 11, 30/5-10, and 27/17 mmHg respectively.She was taken to open heart surgery and mitral and aortic valve replacements were performed. Tricuspid leaflet movements were normal, but annulus was narrow and only 21 size prosthesis would barely fit into the annulus and increase the RA pressure. It was decided to perform Glenn shunt. After CPB, mean RA pressure was 12, and PA pressure 13/8/11 mmHg under anesthesia. Her postoperative outcome was uneventful. She is on diuretic therapy on her 4th year follow-up.
**CONCLUSION:** Replacement of three valves in rheumatic valvular disease carries high risk. Besides, small size tricuspid valve prosthesis have major impact on morbidity and should be avoided. Bidirectional Glenn shunt is a feasible alternative in such cases and should be considered in whom pulmonary hypertension is reversible and mean pulmonary arterial pressure is less than 20 mmHg. **REF0452**

## P157 - OUR MID-TERM RESULTS OF DE VEGA TRICUSPID ANNULOPLASTY OPERATIONS

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**OBJECTIVE:** Clinically, tricuspid valve dysfunction, developing secondary to mitral valve disease, is functional in general and the preferred treatment is surgical correction of the tricuspid valve. Aim of the present study was to review the mid-term results of De Vega tricuspid annuloplasty operations in our clinic in last five years.
**METHODS:** In total 39 patients who underwent De Vega annuloplasty operation in our clinic between March 2000 and September 2005 were reviewed. There were four male and 35 female and the mean age of the patients was 48.8 ± 13.6. All De Vega annuloplasty procedures were done with double armed 2-0 Ti-Cron suture material. One patient underwent only De Vega tricuspid annuloplasty. Additional surgical procedures were mitral valve replacement in 29, mitral and aortic valve replacement in six, mitral valve replacement and coronary artery bypass surgery in one, mitral commissurotomy and atrial septal defect repair in one and mitral valvuloplasty in one patient, respectively.
**RESULTS:** For all patients, echocardiographically, the mean grades of tricuspid regurgitation in the preoperative period and in the postoperative period were 3.1 ± 0.5 and 2.4 ± 0.9, respectively, and there was statistically significant difference ($p < 0.05$). In the patients who had tricuspid regurgitation preoperatively in three, three-four and four degree, the mean grades of tricuspid regurgitation significantly decreased postoperatively ($p \leq 0.05$).
**CONCLUSION:** We think that De Vega tricuspid annuloplasty is an effective surgical method which can be performed safely in functional tricuspid regurgitation that developed secondary to left-sided valvular disease. **REF0108**

## P158 -COMPARISON OF SURGICAL APPROACH FOR ISCHEMIC AND NON-ISCHEMIC MITRAL REGURGITATION: REPAIR VERSUS REPLACEMENT

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**BACKGROUND:** Ischemic mitral regurgitation (IMR) is an independent factor predisposing to unfavorable long term outcome. In this study we aimed to compare the mortality and morbidity rates of surgical approaches of repair versus replacement in patients with IMR.
**METHODS:** We included 74 patients with IMR who underwent open mitral valve surgery in our clinic between January 1993 and December 2005 in our study. During the same period we operated 384 patients for non ischemic mitral regurgitation (NIMR). Student t –test and chi-square test are used for statistical analysis.
**RESULTS:** Mitral valve replacement was significantly preferred more frequently in patients with NIMR compared with IMR (96.1 % vs 59.5 %; $p < 0.05$). Perioperative mortality rates were low and showed no statistically significant difference between two groups (1.35 % vs 1.05 %). Demographic features of patients with IMR and NIMR are given in table 1.

| | IMR (n = 74) | NIMR (n = 380) | p value |
|---|---|---|---|
| Age (yrs) | 59.1±12.3 | 39.3±9.4 | NS |
| Gender (Women) | 10.8 % | 32.4 % | NS |
| Preop AF incidence | 17.6 % | 42.4 % | NS |

Table 1. Demographic features of patients with IMR and NIMR

**CONCLUSION:** Since anatomy of the mitral apparatus is preserved in IMR, valve repair was significantly preferred as a surgical approach for this condition. Although operative mortality for both conditions are similiarly low, patients who underwent mitral valve repair may have a lower morbidity rate and better functional status. **REF0165**

## P159 - MITRAL VALVE STENOSIS FREQUENCY IN FEMORAL EMBOLECTOMY CASES

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**PURPOSE:** The most frequent etiologic agent in acute lower extremity arterial obstruction is arterial embolus originating from heart.Particulary mitral valve stenosis(MS) and atrial fibrillation(AF)combination can be seen in 25% of the cases.In this study we aimed to determine the MS rate during postoperative early period of 57 cases,who were treated with acute femoral embolectomy,by using transthoracic echocardiography.
**METHOD:** Of 57 cases,6 were went under bilateral femoral embolectomy.Our cases were evaluated due to age,gender,cardiac rythyms during admission and acute or chronic survey of the embolic event.Emergent transthoracic echocardiography was performed in postoperative 6 to 24 hours,in all cases.
**RESULTS:** Of the 6 cases with bilateral femoral embolectomy,2 had (33%) severe mitral stenosis and pulmonary hypertension.Both had AF rhythym and the younger one (36 years old) had 3.˚aort valve insufficiency in addition. Unilateral femoral embolectomy was performed 51 cases and 4 of them(8%) showed severe MS an done had a 1.5x1 cm hyperechogenic mass in la,correlated with thrombus.In 5 cases of this group (10%)we found maladie mitrale in which different degrees of mitral insufficiency was accompanying to MS.9 cases of this group had AF rhythym. In this series with 57 cases,we couldn't determine MS in 8 cases whom were over 80 years.Our MS rate was 23.5% with 12 casers and it was correlated with literature.
**CONCLUSION:** We believe that,for the early source detection and prevention of recurrence of thromboembolism,TTE must be performed in early postop period and additional severe intracardiac pathologies must be corrected. **REF0390**

## P162 - THE REQUIREMENT OF PACEMAKER IMPLANTATION IN AORTIC VALVE REPLACEMENT

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**OBJECTIVE:** Permenant pacemaker implantation (PMI) may be needed after AVR in cases operated for various aortic valvular pathology. We aimed to investigate the need of PMI in cases of AVR operated for various etiologies.
**METHOD:** 68 patients having aortic valve replacement are included. Mean patient age was 36 with a male to female ratio 2: 1. The etiology was native valve endocarditis in 3, prosthetic valve endocarditis in 2 case. Aortic insufficiency(AI) in association with aortic root and ascending aorta dilatation was present in 6 patient. In 5 case the etiology was senile degenerative aortic disease. Rheumatic etiology was the underlying cause for AVR in 52 patient. Bentall-procedure with free-style bioprosthesis was performed in 5 cases having endocarditis. In 6 patients having AI in association with dilated root and ascending aorta mechanical aortic valved conduit was used in peforming Bentall-procedure. Modified Manouguian technique was used in 4 patients having small aortic root. Three bioprosthetic valve replacement was made in patients with senile degenerative disease. The remaining patients 50 in number had isolated mechanical prosthetic valve replacement.
**RESULTS:** Total AV block was observed in 5(%7.3) patient. In two of patients with AV block the indication for operation was endocarditis, whereas in one AI with dilatation of root and the ascending aorta was present. One cases had small aortic root and the other one was operated for rheumatic disease.
**CONCLUSION:** İn our series it was observed that the cases operated for endocarditis required more frequent PMI relative to the cases operated on for other etiologies after AVR. **REF0316**

## P163 - RHEUMATIC MITRAL VALVE REPLACEMENT AND GIANT LEFT ATRIAL THROMBUS REMOVAL WITH LEFT ATRIAL RECONSTRUCTION AND TRICUSPID ANNULOPLASTY: A CASE REPORT

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**INTRODUCTION:** İn rheumatic mitral valve disease mitral stenosis is usually associated with mitral insufficiency and left atrial enlargement throughout the course of the disease if remain untreated or mistreated. The complicated pattern of this involvement includes formation of right atrial thrombus which is associated with increased risk of embolic events and requires anticoagulation.
**CASE:** The 67 year-old lady with history of mitral valve disease starting at age 32 had a history of mitral valve commissurotomy at age 36 and had two baby births. She presented to the clinic with difficulty breathing lying flat, physical exam revealed diastolic murmur at the apex. Patient was on warfarin and digoxin preoperatively.Echocardiography showed a large, immobile, non-homogenous irregularly surfaced mass of 6 X 8 cm in the dilated right atrium, and prolapse of the anterior mitral leaflet resulting in massive mitral regurgitation. There was tricuspid valve insufficiency and pulmonary artery pressure were 45-50 mmHg. Removal of the left atrial thrombus with atrial reconstruction was performed along with mitral valve replacement and tricuspid annuloplasty under cardiopulmonary bypass. Successful outcome was achieved without embolic attack in the postoperative period. The anticoagulation was discontinued two days prior to surgery and was restarted postoperatively in 24 hours.
**DISCUSSION AND CONCLUSION:** The severe mitral valve disease with multiple dreadful consequences to the heart have been reevaluated in this case. Several techniques for left atrial reconstriction needs an up-to-date discussion. The successful outcome in these cases are still crucial for patient long-term morbidity and mortality. **REF0583**

## P164 - AN INFECTIVE ENDOCARDITIS CASE PRESENTING WITH SUDDEN UNILATERAL LOSS OF VISION WHICH IS THE FIRST AND SINGLE SYMPTOM

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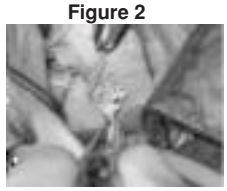
**CASE REPORT:** A 20-year-old female, our subject was referred to the ophthalmology unit of our faculty by an ophthalmologist she applied to with the complaint of painless, sudden and complete loss of vision in her left eye occurring four days ago. Cardiologic consultation was asked for the patient diagnosed with left central retinal artery occlusion during her ophthalmologic investigation to search for the source of emboli. As a mass image suggesting that there was vegetation on the posterior leaflet of the mitral valve and serious mitral insufficiency was detected by echocardiography. Vegetation in size of 0.7x1.0 cm on the posterior leaflet of the mitral valve was detected on transesophageal echocardiography (TEE) (Figure 1). Moreover, mitral posterior valve was seen to be flail depending upon its chordae rupture. The patient whose homodynamic situation was stable was given one-month medical treatment, and then a mechanic mitral valve was implanted in her surgery. Definite vegetation on the posterior leaflet of the mitral valve and ruptured chordae were demonstrated during operation (Figure 2).
**CONCLUSION:** This case is thought to be important in respect to indicating that infective endocarditis can be present unexpectedly and that unless there are any other reasons, every patient applying to hospital for an embolic phenomenon should be assessed by taking infective endocarditis into consideration.

**Figure 1**

The view of the vegetation (V) on the posterior leaflet of the mitral valve on TEE,LA; leftl atrium, LV; left ventricle

**Figure 2**



The intraoperative view of ruptured chordae and vegetation.

**REF0045**

# DIABETES AND DIABETIC HEART DISESASE

**P183 - CORONARY ARTERY BYPASS GRAFTING IN TYPE II DIABETIC PATIENTS: A COMPARISON BETWEEN INSULIN-DEPENDENT AND NON-INSULIN-DEPENDENT PATIENTS AT SHORT- AND MID-TERM FOLLOW-UP**

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**OBJECTIVES:** Diabetes is a well-established risk factor for coronary artery disease, and it is associated with an increased rate of early and late adverse events after myocardial revascularization by coronary artery bypass grafting.
**METHODS:** This retrospective study was done to evaluate the short-term and mid-term outcomes of type II diabetic patients who had coronary artery bypass grafting at our clinic between 2001 and January 2006. A total of 237 patients, 53 insulin-dependent diabetic patients (group I) and 184 non-insulin-dependent diabetic patients (group II), met the inclusion criteria of the study and were included in the clinical follow-up study.
**RESULTS:** Peripheral vascular disease, previous MI, prior PTCA, carotid stenosis were more prevalent among insulin-dependent patients than Group 2 (all p≤0,05). Mean distal anastomosis number was similar between two groups (3,08±0,9 versus 2,99±1,1). On average, insulin-dependent patients were similar to have internal mammary grafting (96,2% versus 97,8%) and less likely to have radial artery grafting. Complete arterial revascularization rate in Group 1 was 26,4% versus 41,6% (p0,03). The cumulative number of complications was 6(11,5%) in group I and 17(9,2%) in group II..The early mortality rate in insulin-dependent patients was 3,8% versus 2,2%
**CONCLUSION:** We did not observed any important differences between two groups related to hospital mortality and postoperative complications. Hospital mortality and morbidity in patients undergoing coronary surgery are partially related to the severity of coronary atherosclerosis and comorbid conditions. Diabetic patients on insulin treatment should be considered high-risk candidates for coronary artery bypass grafting and require intense perioperative and long-term monitoring. **REF0494**

**P187 - THE EFFECT OF DIABETES MELLITUS ON SHORT-TERM MORBIDITY AND MORTALITY AFTER CORONARY ARTERY BYPASS SURGERY**

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**OBJECTIVE:** Currently, 15 % to 30 % of the patients that undergo coronary artery bypass grafting (CABG) are diabetics. However, the effect of diabetes mellitus (DM) on short-term morbidity and mortality after CABG is controversial. The aim of this retrospective study was to investigate whether DM increases short-term morbidity and mortality after CABG or not.
**METHODS:** Two-hundred-fourty-eight patients (mean age 59.8 ± 9.75, 187 males) who underwent CABG in our clinic between June 2003 and September 2005 were included into the study. Seventy-nine patients (% 32.1) were diabetic (DM group) and 167 patients (% 67.8) were nondiabetic (control group). The groups were compared for morbidity data and mortality rates in the postoperative short-term.
**RESULTS:** The incidence of superficial wound infection were significantly higher in the patients with insulin-treated DM than both in the patients with oral antidiabetic-treated DM and in the nondiabetic patients ($p < 0.05$). When the groups were compared for the incidence of intraaortic balloon pumping, acute renal failure, multi-organ-failure, cerebrovascular complications, superficial wound infection, sternal dehiscence and mediastinitis, there were no statisticaly significant difference ($p > 0.05$). Mortality rates in the DM group and control group were % 3.7 and % 4.7, respectively but there were no statisticaly significant difference ($p > 0.05$).
**CONCLUSIONS:** Our results show that DM does not significantly increase short-term morbidity and mortality in the patients undergoing CABG. Provided that strict measures are taken against infections, CABG can be performed in diabetic patients as safely as it is being performed in nondiabetic patients. **REF0075**

# CORONARY ARTERY DISEASE AND CORONARY SURGERY

## P207 - DOUBLE LOOP STERNAL WIRING: A NEW TECHNIQUE OF STERNUM CLOSURE

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**OBJECTIVE:** Sternal wound infections and sternal dehiscence are devastating complications of median sternotomy incisions and cause high mortality and morbidity. The aim of the present study was compare the short-term results of two different sternal wiring techniques, transsternal vs double-loop.
**METHODS:** In total 172 patients who underwent open-heart operations in our clinic were included into the study. Eighty-seven and 85 patients underwent double-loop and transsternal wiring technique, respectively. Double-loop wiring, a new technique of sternum closure, consists of placing two steel threads above the manibrium by simple and four steel threads below the manibrium by double-looping. The technique resembles the closure of median sternotomy with transsternal figure-of-eight wires, but in this technique we use the same intercostal space when doubling the loop. Transsternal wiring, the standard closure of the sternum, utilizes five or six sutures of monofilament surgical steel passed through the sternum approximately 1 cm on each side and then twisted.
**RESULTS:** The incidence of superficial sternal infection (4.59 % vs 7.05 %), deep sternal infection (3.44 % vs 3.52 %), mediastinitis (1.14 % vs 2.35 %) and sternal dehiscence (3.44 % vs 7.05 %) was lower in the double-loop group than in the transsternal group but there were no statistically significant difference ($p > 0.05$).
**CONCLUSIONS:** The results indicate that the incidence of sternal wound infections or sternal dehiscence in the short-term after double-loop sternal wiring is similar to this incidence after transternal wiring. Thus, double loop sternal wiring is easy and as safe as transsternal wiring technique. **REF0229**

## P208 - A NOVEL TECHNIQUE FOR REPAIR OF POST-MI VENTRICULAR SEPTAL RUPTURE THROUGH RIGHT VENTRICLE

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Post-MI VSD is a devastating mechanical complication of a heart attack. Closure of septal rupture continues to be the sole way of treatment. However, the fragile infarcted muscle of interventricular septum challenges the cardiac surgeon in securing the patch to the septum. We presented a 57 years old male patient that we have used a novel technique for mid-septal anterior located post-MI septal rupture in which the patch stays on the left side of interventricular septum through the right ventriculotomy. Technique A circular patch was trimmed from Teflon felt larger than the rupture size and was hold with a clamp. The monofilament polypropylene sutures, double armed, were placed as horizontal mattress. Then, the patch was placed in the left ventricular space and all free ends of the sutures with needles were passed through the septum from the left ventricular site to the right ventricular site of the septum. The sutures located anteriorly were tied over pledgets on the free wall at the epicardial surface of the heart.The sutures that ended within the right ventricular cavity were secured to the end of the rupture over pieces of pledgets. The right ventriculotomy was closed by using a patch trimmed from a Dacron tubuler greft. LAD and RCA were bypassed with two saphenous vein grafts. Postoperative course of the patient was complicated with low cardiac output, renal insufficiency necessitating hemodialysis and prolonged respiratory care. He was discharged home on day 113. At one-year follow-up, the patient was on diuretic therapy and symptom-free. **REF0323**

**Figure 1**

*Intraoperative view of septal rupture*

**Figure 2**

*Preparation of septal patch*

## P210 - THE EFFECT OF STEROID ADMINISTRATION FOR THE PREVENTION OF POSTOPERATIVE HEPARIN INDUCED THROMBOCYTOPENIA AFTER CORONARY ARTERY BYPASS GRAFTING

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**BACKGROUND:** We sought to identify the effect of steroid administration on heparin induced thrombocytopenia (HIT) by checking antiheparin-PF4-antibody levels in patients undergoing CABG surgery.
**MATERIAL-METHODS:** 20 patients were enrolled in the study.To investigate whether prevention from HIT was possible,1mgr/per kg steroid was administrated in the priming solution in group I cases (n=10). In the second group of cases steroid was not added. In all cases, platelet number and functions were screened before surgical procedures for the presence of antiheparin-PF4 antibodies and clinical signs of HIT were checked up.Blood samples were obtained preoperatively, after the weaning of CPB, on the postoperative second and fifth days.
**RESULTS:** There was no postoperative mortality or morbidity in either groups.There was no significant difference when postoperative mediastinal bleeding and extubation times were compared and there was no sign of any electrocardiographic changes in each group. In the second group, PF4 antibody levels were positive in six cases. In the steroid group, postoperative anti-PF4 antibody was negative except for one case.
**CONCLUSION:** Patients undergoing on-pump CABG procedures need heparin and in some cases heparin needs to be continued after some CABG operation. Although the incidence of HIT and the levels of antiheparin-PF4 antibodies in patients undergoing CABG is low, in some patients this clinical state may be life threatining due to acute arterial occlusion including bypass grafts. We noted a high rate of anti-PF4 antibody in our second group postoperatively. We suggest that antiheparin-PF4 antibody may be decreased using the steroid therapy and the complications due to the HIT may be eleminated in these particular cases. **REF0683**

## P212 - AN ALTERNATIVE METHOD FOR REDOUNDING SAPHENOUS VEIN GRAFT PATENCY AT INFRAGENICULAR REVASCULARIZATION: PTFE PROTECTED SAPHENOUS VEIN

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Patients with critical limb ischemia, infragenicular revascularization and obtaining patency of the grafts are important for amputation and wound healing. Graft patency is based on its material, surrounding tissues of graft pathway and anastomoses techniques. We analyzed the patency of PTFE covered below knee saphenous graft.
In the last year, 247 patients applied to our hospital with lower limb ischemia and 17 of them were offered below knee by-pass procedures with saphenous vein graft. Only anterior tibial artery (ATA) was by-passed in 2 patients, posterior tibial artery in 13 patients, both of them were by-passed in 2 patients by using separate saphenous vein grafts through the intresseous membrane. Ringed PTFE graft was used to protect saphenous vein graft from possible compressive effects of surrounding anatomical structures in graft pathway in 4 patients.
Saphenous veins grafts covered with the 8 mm ringed PTFE graft in pathways from popliteal fossa to the distal anastomotic sites. Another PTFE graft was used if ATA had been by-passed through interosseous membrane in the same session. We cut PTFE graft longitudinally and wrapped over saphenous vein and sutured with each other in a few areas then sutured to the neighboring facia so that the graft couldn't move with muscles actions.: In 11 of 17 patients including PTFE covered saphenous vein, by-passed ones were asymptomatic at the 6th month follow-up. In patients with PTFE covered saphenous vein graft, 3 of 5 saphenous veins found patent in CT angiography. Superiority of saphenous vein graft patency is known in blow knee by-pass procedures. Especially for distal arteries of tibia and below 4 mm size arteries, we prefer saphenous graft. Nature of saphenous vein graft can be affected when patients walk due to movements of tendons and muscles around it. Traction of these structures in their movements makes compress to the graft and this chronic trauma leads endothelial injury and finally stasis early graft occlusion. So, we can use PTFE graft to prevent this side effect. Although we have small number of patients, the results are satisfactory. However, we need to keep in mind that pressure effects of the anatomical structures are not the only factor for obtaining distal by-pass surgery with saphenous veins. **REF0638**

## P214 - CORONARY ARTERY BYPASS SURGERY IN THE ELDERLY

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**AIM:** This study was designed to determine some characteristics of the elderly people who had coronary artery bypass surgery at a hospital in Ankara, Turkey.
**MATERIAL&METHODS:** During November 2003-August 2005 a total of 397 patients of which 206 of them were above 65 years of age were operated at the City Hospital in Ankara, Turkey.
**RESULTS:** 73.17 % of them were males and the mean age was 69.95 years. 13.37 % had one, 32.20 % had two and 55.61 % had three-vessel disease where as 15.61 % had left main coronary artery involvement. 67.80 % had right coronary artery involvement also.22.44 % suffered from myocardial infarction also. According to the risk factors 40.98 % were smokers, 34.64 % had diabetes mellitus, 51.71 % had hypertension and 41.95 % had hyperlipidemia. 14.15 % of operations were performed in an emergency state due to acute evolving MI or refractory unstable angina pectoris. Only 15.61 % of patients had a family history of coronary artery disease. The mean cardiopulmonary bypass time was 60.13,and aortic cross clamp time was 30.94 minutes. The re-exploration rate was 3.41 % and the cerebrovascular accident was 1.46 %. Mortality rate was 4.39 % and the use of intra-aortic ballon counterpulsation rate was 5.86 %.
**CONCLUSIONS:** The in-hospital mortality and morbidity rates were similar with the patients under 65 years old age, which indicates that age, isn't an unique parameter in patient selection. A good anesthetic and surgical management, an intensive postoperative care and early mobilization decrease the mortality and morbidity rate with an improvement in quality of life **REF0613**

## P215 - CORONARY BYPASS SURGERY İN THE PATIENTS 65 YEARS OLD AND OVER

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**METHOD:** Between January 1, 1994 and December 31, 2005 two hundred and seventy three patients aged 65 years and over underwent coronary artery bypass operations were examined retrospectively.
**RESULTS:** There were 201 men and 72 women. The patients' preoperative conditions were characterized by hypertension (37.4%), smoking (68.1%), obesity (23.4%), recent myocardial infarction (35.5%), diabetes mellitus (32.9%) and family history (44.3%). 17.2% of the patients had single vessel disease, 37.4% had double vessel and 45.4% had three vessel diseases. Among them, 223 patients had isolated coronary artery bypass grafting; 12 had mitral valve replacement, 4 had aortic valve replacement, 1 had mitral and aortic valve replacement, 1 had aortic valve replacement and mitral annuloplasty, 1 had mitral annuloplasty, 1 had VSD repair, 1 had aneurysmectomy and mitral annuloplasty, 3 aneurysmectomy and VSD repair, 9 had ventricular aneurysm plication, 15 had endarterectomy and 1 had permanent pace maker implantation combined with coronary artery bypass grafting. Anastomoses were performed on without cardiopulmonary bypass with the beating heart in 14 patients. Overall, 798 distal anastomoses were performed, an average of 2.92 anastomoses per patient. The hospital mortality was 6.6% (9 low cardiac output, 2 neurologic complications, 2 ventricular fibrillation, 2 mediastinit, 1 sepsis and 2 renal failure).
**CONCLUSION:** In old patients adequate myocardial protection must be achieved, complete revascularization and meticulous hemostasis must be done. Mortality and morbidity improve, when a careful postoperative intensive care is carried out **REF0544**

## P216 - SYMPTOMATIC BILATERAL CAROTID ARTERY STENOSIS AFTER CORONARY ARTERY BYPASS SURGERY IN A YOUNG PATIENT WITH FAMILIAL HYPERCHOLESTEROLEMIA SYNDROME: CASE REPORT

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**INTRODUCTION:** Homozygous cases of familial hypercholesterolemia (FH) present at early age with high cholesterol levels and accelerated atherosclerosis leading to premature coronary artery disease. We represent a case of FH who was operated for coronary artery disease at the age of 15 and then developed symptomatic carotid artery disease seven years after the coronary revascularisation procedure. Both internal carotid arteries were stented and the patient was discharged without any complication.
**CASE PRESENTATION:** 22 years old male patient being followed up for homozygous familial hypercholesterolemia admitted to hospital with symptomatic exertional angina 7 years ago. Coronary artery bypass surgery (CABG) for three vessel disease was performed at 1998. The patient was followed up with combined hypolipidemic, antiaggregant theraphy and intermittant plasmaphresis. At 2005, the patient admitted to our clinic with complaint of dizziness and lightheadedness. Digital subtraction angiography (DSA) was performed and revealed 80% stenotic lesion extending from left common artery to left internal carotid artery. On the right side, there was a 90% stenotic lesion in the internal carotid artery. The left and right internal carotid arteries were stented with seperate interventions (Protege ®). Clopidogrel 1x75mgr/day was added to his medication after the procedure.
**DISCUSSION:** FH is a genetic disorder in which premature coronary artery disease in the early decades of life is the eventual result. The symptomatic carotid artery involvement may appear long time after the initial intervention for coronary artery disease. Routine follow up of the carotid arteries based on doppler ultrasonography is essential in these patients. **REF0576**

## P218- MULTIDISCIPLINARY TREATED DEEP STERNAL INFECTION CAUSED BY METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS AND ESCHERICHIA COLI

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**OBJECTIVES:** Mediastinitis and sternal wound dehiscence are life-threatening complications of cardiac surgery. We report a successfully treated mediastinitis case which has an interesting and rough clinical course.
**CASE:** Our patient is a 54-years-old diabetic, obese woman who underwent a successful emergent off-pump coronary bypass grafting operation. Post-operative course was uneventful. She was discharged from hospital on fifth post-operative day. After two weeks of discharge, she admitted to our hospital with sternal wound infection and dehiscence. Wound culture revealed Methicillin-resistant staphylococcus aureus and Escherichia coli. Antibiotic susceptibility of cultured organisms was tested and suitable antibiotherapy was given. Parasternal sternoplasty and closed drainage was performed. Two weeks later fever, sternal and wound dehiscence occurred. Clinical progress was rapidly worsened. Leucopenia and neutropenia were detected in laboratory tests. The patient was followed with open drainage. Resection of sternum and debridement of all necrotic tissues were done in two following operations. After formation of granulation tissue bi-pectoral muscle flaps coverage was performed. Clinical course was good and she was discharged on the 90th day of second admission. The patient was well at six month follow-up.
**CONCLUSION:** Sternal infection and mediastinitis are unwanted complications of open heart surgery. Treatment period may be long and troublesome. The team has to be patient and insistent. We conclude that aggressive surgical treatment by resection and extensive debridement with the use of musculocutaneous flap is a therapeutic option for high-risk patients, providing an effective control of the infection. **REF0542**

Figure 1

*State after formation of granulation tissue before bi-pectoral muscle flaps coverage*

Figure 2

*State at third month*

## P219- CORONARY BYPASS SURGERY İN THE PATIENTS 45 YEARS OLD AND LESS

Emirogullari Omer Naci, Kahraman Cemal, Arsan Reha, Serhatlioglu Faruk, Oguz Sonay, Ozbek Ali

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**METHOD:** Between January 1,1994 and December 31, 2005 one hundred and fourteen patients aged 45 years and less underwent coronary artery bypass operations were examined retrospectively.
RESULTS: There were 100 men and 14 women. Average age was 41.4 (30-45) years. Risk factors were essentially cigarette smoking (82.5%), family history (46.5%), diabetes mellitus (16.6%) and obesity (23.7%). Fourty seven patients (41.2%) had a history of previous myocardial infarction. Thirty three patients (28.9%) had single-vessel disease, 53 had (46.5%) double-vessel and 28 had (24.6%) three- vessel diseases. One case had left main coronary artery lesion. Among them, 96 patients had isolated coronary artery bypass grafting; 8 had ventricular aneurysm plication, 1 had ASD repair, 1 had mitral valve replacement and DeVega annuloplasty, 8 had endarterectomy combined with coronary artery bypass grafting. Anastomoses were performed on without cardiopulmonary bypass with the beating heart in 7 (6.1%) patients. Overall, 285 distal anastomoses were performed, an average of 2.5 anastomoses per patient. The hospital mortality was 1.7% (1 ventricular tachicardia, 1 mediastinit).
**CONCLUSION:** Coronary revascularization can be performed at a reduced risk of operative mortality and complications. **REF0541**

## P220-A CASE REPORT: İNTRACORONARY EMBEDDED TERATOMA

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**INTRODUCTION:** Teratomas are benign tumors, embryologic in origin and usually present in the testis or ovaries in late teens. In literature there has been report of presentation in various locations.
**CASE:** The 23 years-old lady has presented to the emergency with chest pain, dyspnea on exertion and the diagnostic exams including chest x-ray revealed calcified lesions in hilar region near pulmonary artery and vein distribution. Echocardiography showed a 2X3 cm calcified mass in the neighbourhood of pulmonary artery. The apex and anterior wall are hypokinetic in contractility. Coronary angiography showed total occlusion in proximal region of left anterior descending artery (LAD). The hypokinetic region is at the anterolateral region. The perfusion of the left anterior descending artery is from the right coronary artery at TIMI 2. During cardiopulmonary bypass, the calcified mass of 2X2 cm has cystic fluid and was excized completely without rupture. The cyst was located at the proximal and embedded inside of LAD. The anastomosis of left internal mammary artery was done to the LAD. Pathologic evaluation revealed teratoma in origin. Postoperatively patient was discharged without complications in seven days time.
**DISCUSSION AND CONCLUSION:** This is a presentation of very rare coronary artery involvement of a cyst. The risk of rupture of the cyst has potential for dramatic complications including spread of the cyst content to the coronary arteries. **REF0531**

## P222 - PREOPERATIVE LOW LEVEL OF FIBRINOGEN: IS A PREDICTOR FOR POSTOPERATIVE BLEEDING AFTER CORONARY ARTERY SURGERY?

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**BACKGROUND:** Open heart surgery still involves major bleeding, and haemorrhage continues to be a major challenge after cardiac surgery and is also a significant cause of morbidity and mortality. The relationship between inflammatory response, hemostasis and bleeding after cardiac surgery is not fully understood. Most hemostatic factors are intercorrelated with inflammatory markers and fibrinogen seems the most fundamental hemostatic risk factor for open heart surgery.
**METHODS:** The study included 97 patients who underwent elective coronary artery surgery (78 males and 19 females aged between 40-80 years). Plasma level of fibrinogen was measured before surgery. Patients were excluded when body weight was greater than 100 kg or less than 60 kg, age under 40 or over 80 years or in cases of severe liver dysfunction, history of haemorrhagic events, venous or systemic thromboembolism, myocardial infarction, stroke or acute coronary syndrome, infection or inflammatory disease surgery, malignancy and renal impairment.
**RESULTS:** There were 97 patients (78 males (80.4%), mean age: 59.7±10.2 and 19 females (19.6%) mean age: 60.8±10.6 aged ( median: 60, between 40-80 years). There were 3 postoperative death. Low level of preoperative fibrinogen was associated with increased postoperative bleeding.
**CONCLUSIONS:** In conclusion the results of this study demonstrate that low preoperative fibrinogen level appears to be a useful diagnostic molecular marker to assess the activity of the coagulation system, and that its preoperative level may serve as a potential risk factor for postoperative bleeding and also cardiac events after coronary artery bypass surgery. **REF0525**

## P223 -EVALUATION OF GRAFT PATENCY BY USING TTFM IN CABG

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**OBJECTIVE:** To assess flow of grafts after myocardial revascularization which may allow early detection of low flow situations, and lead to immediate correction of technical problems on-pump coronary artery bypass grafting by using transit time flow measurement (TTFM).
**METHODS:** Using the VeriQ-1111 System (F030091, Oslo, Norway) TTFM was prospectively evaluated in 25 patients undergoing CABG with a total of 71 distal anastomoses. They were 7 women and 18 men, with a mean age of 59.7±6.0 years. The mean ejection fraction of the patients was 42%±11. The patients had more than 2 disease vessels. In these patients, 22 internal thoracic arteries and 47 saphenous vein grafts were tested with TTFM. The endarterectomy to RCA was made in 1 patient. After having completed and performed flow measurements, the mean flow, the diastolic filling percentage (DF) and the pulsatility index (PI) are the three main parameters that may be helpful when deciding if a graft is patent or not.
**RESULTS:** One graft (4%) was surgically revised based on unsatisfactory flow curves, of PI>5 and DF<%50. The revised graft was found to have a conduit kinking. After revision, all flow values and flow patterns improved. In other cases, the mean flow was 18-195 (41±13) ml/min, the flow curves are repetitive, PI<5 and DF>50%. There were no major complications, myocardial infarctions and deaths.
**CONCLUSION:** We believe that TTFM seems to be a crucial tool for deciding if a graft is patent or not, and it allows to improvement of graft failure during on pump. **REF0491**

## P227 - A YOUNG WOMEN WITH CHEST PAIN: SPONTANEOUS LEFT MAIN CORONARY ARTERY DISSECTION

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Spontaneous coronary artery dissection is a rare cause of ischemic heart disease and sudden death with a mortality exceeding 80%. Risk factors for atherosclerosis are usually absent. Most of the known cases have been diagnosed at autopsy; few cases documanted by angiography and successful operative cases have been raported.
**CASE:** A previously healthy 22 year old women admitted with unstable chest pain who was found at coronary angiography to have aneurism and dissection of the left main stem which extended to the left anterior descending and circumflex coronary arteries. She had no known risk factors for coronary artery disease. Emergency coronary artery bypass grafting was performed (vein grafts to the left anterior descending and circumflex arteries). The postoperative period was uneventfull.
**DISCUSSION:** Early diagnosis is imperative for survival. Coronary artery bypass grafting is a safe and reliable method for spontaneous dissections of coronary arteries which present with myocardial ischemia. **REF0466**

## P233 - A FISTULA BETWEEN LEFT CIRCUMFLEX ARTERY AND THE CORONARY SINUS MIMICS CORONARY ARTERY DISEASE

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**BACKGROUND:** Coronary arteriovenous fistula is a direct communication between a coronary artery and the lumen of any of the cardiac chambers, the coronary sinus, the pulmonary artery or the superior vena cava. It is a rare congenital anomaly that is seen in 0.1% to 0.2% of angiograms. Aneurismal formation in the fistula is even rarer. The right coronary artery is the most commonly involved. More than half of patients with coronary fistulas are symptomatic at the time the diagnosis is made. Surgical correction is strongly recommended to prevent the development the development of angina, subacute bacterial endocarditis, myocardial infarction, pulmonary hypertension, and congestive heart failure.
**CASE:** We report a case of congenital circumflex arteriovenous fistula with aneurismal formation just near its termination in the coronary sinus. A 40-year-old man was admitted with history of chest pain from 2 years ago, no history of MI and CCU admition. Transesophageal echocardiography demonstrated a huge and tortouse LCX with detectable flow pattern. It is obvious that there is an abnormal LCX drainage to the coronary sinus. Coronary angiography and C.T. angiography revealed a markedly dilated and tortouse circumflex coronary artery connected to the coronary sinus through a fistula. The patient underwent operative closure of the fistula and was discharged home without symptoms. A left circumflex artery with a fistulous connection to the coronary sinus is extremely rare. **REF0131**

## P234 - EFFECTS OF ISOFLURANE AND SODIUMNITROPRUSSIDE ON REWARMING DURING ON PUMP CORONARY BYPASS SURGERY

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**INTRODUCTION:** Body cooling is essential for cardiopulmonary bypass to achieve optimal perfusion of end organs with a static flow. Rewarming of the patient at the completion of cardiopulmonary bypass is also en important issue to minimize the cardiac and non-cardiac side effects of body cooling.
**MATERIAL AND METHODS:** There are several methods to rewarm the body including simply heating the operating theater, using warm blankets, delivery of warmed inhaled gases of perfusion solutions. Vasodilating agents are widely used to distribute the heat homogenously from the core of the body to the peripheral organs. Sodium nitroprusside (SN) is the mostly used agent for this purpose in today's cardiac surgery. Recooling of the body due to inadequate peripheral perfusion during early postoperative period in the ICU is an important problem. A decrease of the body temperature 1 to 3 ˚C may be observed especially in cases with a short rewarming period, in other words with a quick rewarming. Peripheral rewarming has to be achieved at the end of cardiopulmonary bypass to prevent from those heterogeneous fluctuations of body temperature. Isoflurane is another vasodilating agent. We use both in daily practice and have compared their effects. Three groups of randomly selected patients were included in study. Each patient underwent CABG without any additional procedure and comorbidity. Demographic patterns were similar. Total cardiopulmonary bypass, aortic cross clamp, rewarming durations were recorded. Deepest temperature on pump and postoperative skin temperatures were also collected.
**CONCLUSION:** Combination of SN and isoflurane is the best method of rewarming regarding to our results. **REF0425**

## P235 - CORONARY ARTERY BYPASS SURGERY IN SHEEHAN SYNDROME

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**INTRODUCTION:** A 71-year-old, obese, female patient was admitted to our hospital with disabling angina at rest. After she delivered her forth child, she had postpartum hemorrhage and hypotension. Diagnosis of Sheehan syndrome was made only 2 years ago retrospectively and cranial MRI helped to confirm the diagnosis. Coronary angiography revealed critical coronary artery diseease and CABG was performed safely for 3 vessels.
**MATERIAL AND METHODS:** Patients with hypopituitarism are prone to perioperative complications resulting from adrenal insufficiency or hypothyroidism. We managed the patient perioperatively with prednisolon, 75 mg i.v. preoperatively and then tapered the dose to 25 mg every 12 hours for the first day, 10 mg every 12 hours for the second postoperative day, 5 mg twice a day and finally within 72 hours, the patient was switched back to her regular hormonal replacement according to the preoperative regimen. Routine doses of thyroxin were given by orally or by nasogastric tube when the patient was still ventilated. Since she has hypercholesterolemia, statin therapy was started. We chose the above-mentioned hormone replacement regime, which provided adequate metabolic and endocrine stability and is quite simple. The patient's postoperative course was uncomplicated. She remains angina free for a year.
**CONCLUSION:** Hypercholestrolemia due to the growth hormone deficiency was thought to be the major contributing factor in higher cardiovascular related mortality in these patients.CABG can be safely performed in these patients. Although the number is small and precludes any firm conclusions, early and medium term results seems satisfactory. **REF0502**

## P243 -AIR EMBOLIZATION IN POSTCARDIOTOMY PATIENTS FOLLOWING CARDIOPULMONARY BYPASS

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**INTRODUCTION:** Although de-airing techniques are routinely applied during weaning from CPB residual air particules remaining in left ventricle and ascending aorta may cause massive air embolization leading to death or neurological sequela. We investigated the effect of decanulation methods in cardiotomy patients over neurological outcomes.
**MATERIAL AND METHODS:** Ninety-five patients operated for aortic or mitral valve diseases are studied. Standart right superior pulmonary vein venting and deairing via aortic root and punction of left ventricle is performed in all patients. In group-I (n=50), after weaning from CPB decanulation is performed without awaiting. Whereas in group-II (n=45), 39 patient received fluid replacement through aortic cannule. In remaining 6 patient CPB was onset again before decannulation. Patients were evaluated in the early postoperative period for symptoms of stroke, delirium, amorosis fugax. Neurocognitive functions were screened (by mini-mental-status test).
**RESULTS:** No statistical significant difference between groups regarding neurologic functions is found. Two patients in group-I and 6 patients in group-II were found to have cognitive dysfunction. In group-II one patient had stroke and 2 developed amorosis fugax.
**CONCLUSION:** Due to effect of turbulent flow after cessation of CPB bubble particules in left ventricule settle near the orifice of the aortic cannule. Thus after finishing CPB, fluid replacement via aortic cannule or reestablishment of pump perfusion may increase the risk of air embolization. De-airing by means of aortic cannule and after decannulation allowing bleeding from ascending aorta to some extent would be particularly helpful in improving postoperative neurological outcome. **REF0135**

## P246 - A RARE COMPLICATION AFTER CARDIAC SURGERY: CHYLOPERICARDIUM

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**OBJECTIVE:** We present here a case of chylopericardium complicating double-valve replacement procedure and discuss the etiology of this rare complication in the light of current literature.
**METHODS:** A 24-year old female patient underwent a double-valve replacement procedure at our institution and the postoperative course was uneventful. However, a chylous drainage started at the postoperative day 2 and his amount ranged from 350 ml to 700 ml. Despite conservative treatment with low fat diet and total parenteral nutrition, the drainage did not stop and the patient had to be taken to revision. At the operation, a chylous collection has been observed around thymus and the thymic tissue has been obliterated with 4-0 polyprolene material. The drainage has stopped after the second operation and the patient has been discharged at the end of first week. At 3 months postoperation she was doing well and echocardiography did not reveal any signs of recurrence.
**RESULTS:** Biochemical analysis of effusion documented a triglyceride level of 789mg/dl and a protein level of 4.3 g/dl. At the microscopic evaluation, there was lymphocytic predominance. Computed tomography revealed hypodense collection at the thymic region (Figure 1).
**CONCLUSIONS:** Chylopericardium is a rare entity with obscure etiology which may complicate the postoperative course after cardiac surgery [1-3]. The possible underlying cause of this complication is usually the injury of thoracic duct and/or its branches. Although it is a rare entity, it may cause malnutrition during the postoperative period and increase the hospitalization period and cost. **REF0220**
**Figure 1.** Accumulation of chylos is seen on thymic region in thorax CT.

## P250 - THE ADVANTAGES OF EXTRAANATOMIC BY-PASS (EAB) APPLICATIONS

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**OBJECTIVE:** EAB is the method used for patients prone to develop lesions or complications during by-pass surgery in the anatomic location. This study aims to demonstrate the advantages of EAB applications with PTFE material in these patients.
**METHODS:** 40 patients who underwent EAB in our clinics between September 2001 and december 2005 were analysed, retrospectively. 36 (90%) were male and 4(10%) were female patients. EAB was applied to the upper extremity in 4 patient (10%), and to the lower extremity in 36 (90%) patients.12 patients (30%) received general anaesthesia, while spinal/epidural anaesthesia was applied to 28 patients (70%). PTFE graft material was used in all patients. Axillobifemoral by-pass was applied to 20patients (50%), femorofemoral by-pass to 10 patients (25%), right femoro-left popliteal by-pass to 6 patients (15%), and subclavian-subclavian by-pass to 4 patients (10%). Postoperatively, the patients were followed up for 2 hours in the intensive care unit, and were usually mobilized 36-48 hours after the surgery. Anti-aggregating and antithrombotic agents were administered routinely.
**RESULTS:** Postoperatively, surgery-related morbidity was detected in 2 patients (5%). In one 65-year-old patient with axillobifemoral by-pass, thrombectomy was applied to the graft on the third day. In another 42-year-old patient with axillobifemoral by-pass, thrombectomy was required on the left leg of the graft due to delayed thrombosis.
**CONCLUSION:** I believe that EAB procedures are beneficial both for the patient load as well as economically, as the postoperative mobilization of these patients is faster because no abdominal invasive procedures are required, and less time is spent in the intensive care unit rather than the cost of the material used. **REF0086**

## P251 - DIFFERENT RESULTS OF PROXIMAL CORONARY ENDARTERECTOMY VIA CONVENTIONAL PULL-OUT METHOD

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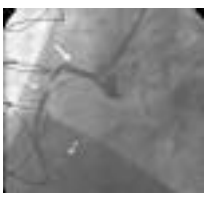
In these cases we overview two different results of coronary endarterectomy via conventional pull-out method. Performing the technique appropriately and avoidance of proximal aggressive CE by pull-out method, would come along with better results. **REF0060**

**Figure 1**

*Postoperative volume computed tomography (CAT scan), RAO view. Right coronary artery is diffusely occluded.*

**Figure 2**



*Postoperative coronary angiography, Right coronary artery LAO view. Occluded saphenous vein graft (small arrows), coronary artery ostial dissection (large arrow).*

## P260 - USE OF HYPERBARIC OXYGEN TREATMET IN CEREBRAL PERFUSION DISORDERS FOLLOWING CORONARY ARTERY BYPASS GRAFT OPERATION: TWO CASES

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**INTRODUCTION:** Hyperbarıc oxygen treatment (HBOT) is known to be effective in acute stroke and postoperative sternal infection. We investigated the efficiacy of HBOT two cases had neurologic deficit. Material and Methods Two patients who had coronary artery bypass grafting (CABG) one having focal neurologic deficit and the other not being awaken were treated with HBOT. The cases were evaluated by neurologic examination and cranial CT. HBOT was initiated and continued until the sympytoms were resolved. In the first case motor function loss in the right upper and lower extremity was present. Cranial CT showed focal cortical ischemic regions. HBOT was planned and performed within 6 hours after the begining of the initial symptomps. 10 seance of the HBOT was performed until the symptoms completely disappaeared. Control cranial CT was completely normal and the patient was outpatiened in the 12th postoperative day without any neurologic sequela. The second case was not being awaken following CABG. Cranial CT revealed diffuse cerebral edema. Medical anti-edema therapy was initiated and in the postoperative second day HBOT was added. After 12 seance of HBOT, control cranial CT was in normal limits. Neurologic status was improved and the patient was discharged in the postoperative 16th day without sequela.
**CONCLUSION:** In both cases clinical and cranial CT findings improved after HBOT. HBOT by improving cerebral perfusion and decreasing cerebral edema can be useful in treatment of neurological disfunction developing after coronary bypass surgery. **REF0191**

## P261 - CYTOKINE TUMOR NECROSIS FACTOR ALPHA RESPONSES TO CORONARY SURGERY WITH AND WITHOUT CPB AND LEFT-VENTRICULAR REMODELING

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**BACKGROUND:** We undertook a study to assess the relationships between the levels of circulating cytokine tumor necrosis factor alpha (TNF-$\alpha$) at 48 h and 3 mo after coronary artery bypass grafting (CABG) and the changes in index of the myocardium's mass of the left ventriculum (iMMLV) at one year after CABG with and without cardiopulmonary bypass (CPB) in patients with stable angina.
**METHODS:** 8 men aged 53.1±2.1 years were underwent CABG with CPB (the number of grafts was 2.6±0.2) and 14 men aged 56.2±2.2 years-on the beating heart without CPB (the number of grafts was 4.0±0.3). Data are presented as mean±S.E.
**RESULTS:** Preoperative serum levels of TNF-$\alpha$ were 38.2±5.1 pg/ml in group 1 vs. 29.2±4.4 pg/ml in group 2, p=0.209, at 48 h after CABG-168.1±63.6 pg/ml in group 1 vs. 31.8±3.6 pg/ml in group 2, p=0,016 and at 3 mo after CABG-181.6±36.6 pg/ml in group 1 vs. 34.4±4.3 pg/ml in the off-pump group, p=0.000. There was no difference in preoperative iMMLV between groups (117.9±8.6 g/m2 in group 1 and 119.6±7.6 g/m2 in group 2). At one year iMMLV increased only in group 1 (147.5±10.6 g/m2, p=0.012) and it was without change in the off-pump group (120.7±9.2 g/m2, p=0.845).
**CONCLUSIONS:** Off-pump coronary bypass graft operation on a beating heart significantly suppresses the inflammatory reaction associated with the use of CPB and reduces remodeling of the left ventriculum.
**REF0030**

## P263 -COMPARISON OF SUPRAGENUAR AND INFRAGENUAR INCISIONS IN SAPHENOUS VEIN HARVESTING FOR CORONARY BYPASS SURGERY

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Complications associated with harvesting of saphenous vein grafts (SVG) effects patient's comfort negatively following coronary artery bypass grafting (CABG). Local complications such as edema and pain in the leg is not seldom. Paresthesia may be observed owing to saphenous vein injury especially during infragenuar dissections. We aimed to compare the results of infragenuar and supragenuar saphenous vein harvesting methods from the point of postoperative local complications.
**METHODS:** 87 patients undergoing CABG by the use of SVG operated on between March 2005 and March 2006 in GATA Haydarpasa Training Hospital were included in the study. Patients were randomized into two groups. Group A consisted of 45 patients of which 14 were (31,1%) diabetic, while 12 (28.5%) of 42 patients were diabetic in group B. None of the diabetic patients were insulline dependent in either group. In group A saphenous vein harvesting was made by supragenuar incision whereas in group B, infragenuar incision was performed. Postoperative Wound healing, infection, leg edema, pain and parestesia was evaluated.
**FINDINGS:** In group A, 1 patient had ankle edema, 3 (6.6%) had infection and 5(11%) had hematoma in the thigh. None of the patients in group A suffered of paresthesia. In group B, 10(23%) patients had ankle edema and rates of infection and paresthesia around ankle were both 9.4%. Hematoma was observed in 1 patient in group B.
**RESULT:** In this study, supragenuar SVG harvesting method is found to be superior from the aspects of leg edema, infection and paresthesia thus resulting in better patient comfort. **REF0187**

## P265 - CORONARY ARTERY BYPASS WITH SAPHENOUS VEIN GRAFT IN A MIDDLE AGED PATIENT WITH POLYARTERITIS NODOSA: CASE REPORT

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**INTRODUCTION:** Polyarteritis nodosa (PAN) is a multisystemic disease with necrotising vasculitis of the middle and large sized arteries. In the usual clinical course, renal and visceral vascular involvement is typical with spared pulmonary arteries. Arterial occlusive lesions are also a feature, but their frequency is not reported. Especially in young patients without any cardiovascular risk factors, premature coronary artery disease may be associated with an underlying vasculitis syndrome.
**PATIENT:** A 36-years-old male patient had been followed with the diagnosis of PAN for seven years with no prior cardiac symptoms. Electrocardiography (ECG) revealed acute myocardial ischemic changes. Echocardiography revealed normal ventricular wall motion and mild mitral regurgitation. The left ventricular end-diastolic dimension was 46 mm and end systolic dimention was 29 mm the fractional shortening was 36%. And ejection fraction of patient was 66%.
Coronary angiography was performed and angiogram showed 90% stenosis in proksimal LAD, RCA was totally occluded (Figure 1 and 2). and atherosclerotic plaques in Cx artery was demonstrated. The patient underwent coronary artery bypass grafting.
**CONCLUSION:** In English literature, experience about the appropriate graft selection and the long term results of patency are reported for vasculitis syndromes such as Kawasaki disease, Behçet's disease and Takayasu arteritis but there were no data for PAN. In this patient, venous graft was preferred for coronary artery revascularisation in a young patient with the diagnosis of PAN due to susceptibility for inflammatory reaction to arterial graft. Any complication including renal failure was not encountered in the postoperative course. **REF0014**

## P266 - OFF-PUMP CORONARY BYPASS FOR PATIENTS WITH CONCOMITANT MALIGNANCY

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**BACKGROUND:** The effectiveness and advantages of off-pump coronary by-pass for patients with concomitant malignant neoplastic disorders were analyzed.
**PATIENTS AND METHODS:** 368 patients underwent off-pump coronary artery bypass operation. Eighteen of these had concomitant malignant neoplastic disease. Fourteen patients had solitary malignant disease while remaining four patients diagnosed low-grade lymphocytic malignancies. Age ranged from 49 to 72 years (mean 61). There were 13 men and 5 women. Six patients had history of previous myocardial infarction. Mean LVEF 46.4% (range 35%-60%).
**RESULTS:** Mean number of grafts was 2.4+0.9. LIMA was used in 12 patients (75%). Mean blood loss was 420+ 64 cc. Average requirement for blood transfusion was 1.1+0.2 units. No infection was documented during postoperative course. There was no in-hospital mortality. The mean length of hospital stay was 6.4+1.3 days. Mid-term follow-up was completed (100%). Mean follow-up period was 22.6+4.1 months. All patients with a solitary malignancy underwent subsequent non-cardiac surgery with a mean interval of 16.4+3.3 days. Mid-term survival was 83.4 %. Freedom from late cardiac events (angina, MI, PTCA) that required hospital admission was 92.3 %.
**CONCLUSION:** These results support the effectiveness of off-pump coronary bypass mostly as a bridge to a safe non-cardiac surgery that can be crucial for long-term survival in those patients. **REF0005**

## P267 - DOES LOW-DOSE APROTININ REDUCE BLEEDING AND BLOOD PRODUCT USE IN PATIENTS TREATED WITH CLOPIDOGREL BEFORE OFF-PUMP CORONARY ARTERY BYPASS GRAFTING

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**OBJECTIVE:** The objective of our study was to verify the hypothesis whether low-dose aprotinin reduces blood loss and blood product usage in patients with clopidogrel exposure within five days before OPCAB.
**METHODS:** 51 consecutive patients with clopidogrel exposure within 5 days before OPCAB were randomized in a double blind fashion to receive the low-dose aprotinin (Group A: 25 patients), or plecebo (Group P: 26 patients). Total chest tube drainage during the first 24 h, the incidence of re-exploration, the exposure to blood products and the early outcome were assessed.
**RESULTS:** The baseline characteristics of the patients in each group were comparable (age, gender, body surface area, LVEF, Euroscore. hematocrit, platelet counts, aPTT value and bleeding time). The number of distal anastomosis was comparable between 2 groups [Group A, 3.1+1.0; Group P, 3.2+1.0; P=0.81]. Elapsed times between the last dose of clopidogrel and start of the operation were similar between the 2 groups [Group A, 39 + 23 hour; Group P, 42+27 hour; P=0.36], as were mean LVEF [Group A, 43.8% + 6.2%; Group P, 42.3% + 5.3%; P=0.52]. Total chest tube drainage was significantly higher in Group P [Group L, 423 + 178 cc; Group P, 748 + 212 cc]. Blood products usage and reoperation rate were significantly increased in Group P.
**CONCLUSION:** In patients with unstable angina and recent clopidogrel exposure, OPCAB surgery and intraoperative administration of low-dose aprotinin should be preferred to reduce blood lost and transfusion requirement **REF0003**

# ATHEROSCLEROSIS: FROM BENCH TO BEDSIDE

## P283 - SERUM LEPTIN LEVELS ARE POSITIVELY ASSOCIATED WITH CAROTID INTIMA/MEDIA THICKNESS IN PATIENTS UNDERGOING CORONARY ARTERY BYPASS SURGERY

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**OBJECTIVE:** Leptin, a hormone produced by white adipose tissue, is primarily involved in the regulation of food intake and energy expenditure. Leptin have been implicated in the pathogenesis of atherosclerosis but the relation between leptin and early atherosclerosis in carotid arteries has not been fully determined yet. To determine this relation, we measured carotid intima-media thickness (IMT) and serum concentrations of leptin in the patients with coronary artery disease (CAD) who underwent coronary artery bypass grafting (CABG).
**METHODS:** Eighty-eight patients (72 male, mean age 60.93 ± 10.7) with CAD who underwent CABG were included into the study. Serum concentrations of leptin were measured by RIA method (IRMA Kit®, Diagnostic Systems Laboratories, Texas, USA). Carotid artery IMT of far wall was measured at the distal common carotid artery (CCA) and the carotid bulb on both sides with a high-resolution ultrasound unit (Apio80®, Toshiba, Tokyo, Japan).
**RESULTS:** Serum leptin concentrations significantly and positively correlated with IMT of the carotid bulb ($r = 0.249$, $p < 0.05$). The mean serum leptin concentration was 10.57 ± 11.16 µg/ml. The mean IMT of the CCA and the bulb were 0.97 ± 0.13 and 1.01 ± 0.14 mm, respectively. There were no significant correlation between serum leptin concentrations and IMT of the CCA.
**CONCLUSIONS:** Our results indicate an positive association between leptin and early atherosclerosis in carotid arteries in the patients with CAD. Serum leptin levels would be of predictive value to identify patients at high risk to develop concomitant atherosclerotic disease in carotid arteries. **REF0071**

# MISCELLANEOUS

## P291 -BRUCELLA ENDOCARDITIS IN CHILDHOOD AND SURGICAL TREATMENT WITH MANUGHIAN PROCEDURE

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**OBJECTIVE:** Brucella endocarditis is a rare complication of Brucella infection, but is responsible for the majority of deaths from this disease. When treated by antibiotics alone, this complication is usually fatal. A combination of medical and surgical therapy is necessary for the successful treatment for Brucella infective endocarditis.
**METHOD:** A 5-year-old boy with diagnosis of Brucella aortic valve endocarditis was operated on due to 3º aortic regurgitation and persisting vegetations following a 6 week period of medical therapy. The aortic valve was replaced with a No. 17 St Jude prosthesis after aortic root enlargement with Manughian procedure.
**RESULT:** Hospital course remained uneventful. The patient was discharged with anticoagulant and antibiotic (trimethoprim-sulfamethoxazole and rifampicin) therapy. Antibiotics were terminated 2 months later. There were no postoperative complications related heart valve during 8 years of postoperative period.
**CONCLUSION:** Valve replacement is necessary and a life saving intervention in Brucella endocarditis. **REF0427**

## P293 -PREVENTION OF METHICILLIN-RESISTANT STAPHYLOCOCCAL PROSTHETIC GRAFT INFECTION USING RIFAMPIN-SOAKED GRAFTS AND PARENTERAL ANTIBIOTICS: AN EXPERIMENTAL STUDY

Sacar Mustafa[1], Saçar Suzan[2], Kaleli Ilknur[3], Onem Gokhan[1], Turgut Huseyin[2], Goksin Ibrahim[1], Ozcan Ali Vefa[1], Adali Fahri[1], Verdi Dervis[1], Duver Harun[4], Baltalarli Ahmet[1]

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**OBJECTIVE:** Increasing resistance of Gram-positive pathogens to traditional antibiotics has lead to intense interest in alternative drugs to prevent and control infection. The objective of this study was also to determine the effects of the interaction of linezolid when it was combined with rifampicin and tested against strains of MRSA and MRSE.
**METHODS:** Graft infections were established in the subcutaneous tissue of 130 male Wistar rats by topical inoculation with 2x107 CFUs of clinical isolates of MRSA and MRSE. Each of the staphylococcal strain series included a control group, an inoculated group that did not receive any antibiotic prophylaxis, two inoculated groups that received intraperitoneal prophylaxis with teicoplanin or linezolid alone, an inoculated group that received rifampicin-soaked grafts and two inoculated groups that received a combination prophylaxis consisted of intraperitoneal teicoplanin or linezolid and rifampicin-soaked grafts.
**RESULTS:** There were significant differences in the results from the quantitative bacterial graft cultures when the data obtained from all the prophylaxis groups were compared with those obtained from the inoculated control groups ($p<0.05$). Although there were negative culture results in linezolid plus rifampicin and teicoplanin plus rifampicin groups, there was not a statistically signifficant difference when compared with the other prophylaxis groups ($p>0.05$).
**CONCLUSSION:** We found no evidence to suggest that linezolid differs from teicoplanin, alone or in combination with rifampicin, in effectiveness in the prevention of prosthetic vascular graft infection due to 2x107 CFUs/ml MRSA and MRSE. We also demonstrated that linezolid-rifampicin combination against MRSA and MRSE did not show antagonism. **REF0435**

## P294 - NEURAMINIDASE PRODUCES A DECREASE OF SLIME PRODUCTION AND ADHERENCE OF SLIME-FORMING S. AUREUS: AN EXPERIMENTAL STUDY

Sacar Mustafa[1], Onem Gokhan[1], Baltalarli Ahmet[1], Sacar Suzan[2], Turgut Huseyin[2], Goksin Ibrahim[1], Ozcan Ali Vefa[1], Sakarya Serhan[3]

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**BACKGROUND:** Staphylococcus aureus associated with implantable medical devices, is often difficult to treat with conventional antimicrobials. Formation of a biofilm is a mechanisms considered important in foreign body infections. Therefore, elimination of these biofilms is an ideal treatment. We aimed to investigate bacterial adherence of slime-forming and non-slime-forming S. aureus and to determine the role of neuraminidase (NANase) on adherence to Dacron prosthetic graft in this study.
**METHODS:** An in vitro model was developed to quantitatively measure bacterial adherence to the surface of Dacron graft material. The grafts were divided into two groups- those colonised with slime-forming S. aureus, and those colonized with non-slime forming S. aureus. The grafts were put into sterile tubes and human plasma was instilled and incubated at 370C to performe fibrin deposition of grafts. After 48h incubation grafts were drained and inoculated with slime forming and non-slime forming S.aureus TSB with the precence and absence of NANase. Following 24h incubation at 360C, grafts were cultured. Bacterial counts were expressed as total CFU.
**RESULTS:** Slime-forming S. aureus had greater affinity to the Dacron graft compared with non-slime-forming S. Aureus ($p<0.05$). Adherence of slime-forming S.aureus was impaired with NANase treatment ($p<0.001$). NANase treatment of non-slime-forming S.aureus did not change the adherence to graft ($p>0.05$).
**CONCLUSION:** These results represent that slime plays an important role in the pathogenesis of the vascular graft infection. Adherence of slime-forming S.aureus can be decreased with NANase treatment. This may have implications for development of neuraminidase-embedded vascular grafts to diminish biomaterial-related infections. **REF0437**

## P297 - LEFT VENTRICULAR APEX IS AN UNUSUAL LOCATION FOR A HYDATIC CYST: A CASE REPORT

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**INTRODUCTION:** The cardiac involvement of hydatic cyst is rare. Usually the lungs or the liver is the location for organ penetration. There is a possibility of systemic circulation of some components of cysts that can penetrate into heart and cause mulfunction.
**CASE:** The 48 year-old lady presented to our clinic with atypical chest pain that have undergone routine physical exam including blood pressure (BP): 130/90 mmHg, heart rate (HR): 98 /min, respiratory rate (RR): 24 /min. Echocardiography was planned for evaluation of possible high blood pressure related findings however, the report showed a septated cystic mass embedded in the left ventricular wall. The thoracic computerized tomography supported this finding. During operation, the 5 X 6 cm cystic mass was resected from left ventricule which was causing difficulty in contraction. She was discharged postoperatively without any complications.
**DISCUSSION AND CONCLUSION:** The incidence of cardiac hydatic cysts are 0.5 to 2 %. The rotine echocardiographic exams are the source of coincidental diagnosis. There is a risk of rupture of hydatic cysts of the heart that has detrimental complications including pulmonary emboli, peripheral arterial emboli, acute myocardial infarct and anaphylatic reactions. The rupture into pericardial sac may result in acute tamponade. Due to these possible risks of rupture, the surgical excision and repair of the excised area are the necessary choice of treatment in these patients. There is a need for routine echocardiographic evaluation of patients who have lived in endemic regions of Turkey including middle and Southeastern Anatolia. **REF0500**

**cyst**

## P298 - LEFT VENTRICULAR APICAL ANEURYSM FORMATION IN A CHILD

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**BACKGROUND:** Aneurysms of the left ventricle are rare in the pediatric age group and characterized by a protrusion or outpouching of the ventricular wall. Congenital left ventricular aneurysm is often located at the apex or subvalvular area of the left ventricle. The natural history of left ventricular aneurysms in the pediatric population, the mechanism of their formation, and the criteria that place an individual at risk for rupture are unknown. We describe a 1year-old female baby with a left ventricular aneurysm, possibly developed iatrogenically after cardiac catheterization, which was discovered incidentally following routine cardiac examination.
**CASE:** The patient was 1 year-old female baby and had mild cyanosis on excertion. She had a previous surgery for aortic coarctation and patent ductus arterious. On admission, physical examination showed 2/6 degree pansystolic murmur and other vital signs were unremarkable. Cardiac magnetic resonance revealed apical left ventricular 32x23 mm aneurysm and thin-walled apical ventricular wall. At operation through median sternotomy, there was a huge left ventricular apical aneurysm. The aneurysm pouch was opened and repaired using pericardial patch. Pathologic investigation showed fibrosis.The patient was discharged without adverse sequalae.
**CONCLUSSIONS:** Although genetic, environmental and iatrogenic pressures possibly influence the development of cardiac ventricular aneurysms, no studies have clearly delineated the exact etiologies. The prognosis in isolated ventricular aneurysm is usually good. The natural history of this rare entity is mostly unknown and treatment needs to be individualized for every case. **REF0566**

## P299 - A DIFFERENT APPROACH TO IATROGENIC SWAN-GANZ CATHETER COMPLICATION

Sezen Mustafa, Goncu Mehmet Tugrul, Toktas Faruk, Eris Cuneyt, Demirtas Sinan, Ozcan Ayhan, Yavuz Senol

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Invasive hemodynamic monitoring including pulmonary artery catheterization has become a part of anesthetic care in the perioperative and postoperative management of cardiac patients undergoing major surgery.
A 36 year old man who had mitral and aortic valve replacement operation suffered from fixing the Swan-Ganz catheter to the right atrium wall with the left atrial closure suture. First external traction was attempted, but catheter was ruptured at the 40th cm. Three days following the first operation, Swan- Ganz catheter's residue was removed by simple surgical intervention without using cardiopulmonary bypass.
We believe that we used a different, simple and considerably less dangerous surgical approach for a rare iatrogenic complication of Swan-Ganz catheter and thus we would like to share this experience with our counterparts. **REF0591**

## P300 - SURGICAL PULMONARY EMBOLECTOMY FOR TREATMENT OF PULMONARY EMBOLISM

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**OBJECTIVE:** Despite advances in diagnosis and therapy, acute pulmonary embolism is still associated with a high mortality rate. Surgical pulmonary embolectomy has usually been reserved for patients with massive pulmonary embolism and severe hemodynamic instability because of its high mortality rate. Our aim was to analyze our experience with early embolectomy as an alternative for the treatment of massive or submassive pulmonary embolism.
**METHOD AND RESULTS:** We report 9 (5 men and 4 women) consecutive patients diagnosed as massive pulmonary embolism and who underwent surgical pulmonary embolectomy in the last four years. Eight patients (89%) survived surgical intervention and there were no evidence of pulmonary hypertension in 6 of the survivors.
**CONCLUSION:** With rapid diagnosis surgical pulmonary embolectomy can be performed in patients with large pulmonary embolism with acceptable mortality and morbidity. Surgical pulmonary embolectomy should be a choice in the therapeutic options of the algorithm of the treatment of major pulmonary tromboembolism

**REF0420**

## P304 - VAC (VACUUM-ASSISTED CLOSURE) APPLICATION FOR STERNAL WOUND INFECTIONS IN OPEN HEART SURGERY

Okutan Huseyin[1], Kiris Ilker[1], Gulmen Senol[1], Aydin Asim[2], Nasir Serdar[2]

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The Vacuum-Assisted Closure (VAC) system is used for chronic wound infections therapy and it has been proved to be effective on the promotion tissue proliferation. In this study, VAC system has been presented for two cases who performed the open heart surgery.
**CASE1:** 63 year old female patient underwent mechanical mitral valve replacement (MVR) and De Vega repair of tricuspid valve. In postoperative 4th day, sternal dehiscence and discharge from distal sternotomy was observed. Culture antibiogram revealed enteroccus and proteus mirabilis. Appropiate antibiotic therapy with wound care was made. In postoperative 6th day, sternal revision and mediastinal irrigation, and in postoperative 17th day extensive sternal debridment and transfer of left unilateral rectus abdominis pediculled skin-muscle flap was performed. In postoperative 20th day, flap revision was performed again (Figure-1). In postoperative 29th day, VAC was applied to remaining defect. In postoperative 80th day, skin defect was repaired with free skin graft and VAC was continued (Figure-2). In postoperatif 86th day VAC was discontinued and dialy wound care was performed with local antibiotic and left to seconder healing. Patient is being followed for one year without any problem.
**CASE-2:** 59 year old male patient underwent 4 vessel CABG and MVR. In postoperative 9th day sternal dehiscence and discharge from distal sternotomy occured and culture antibiogram was positive for coagulase negative staphylococcus.. In postoperative 11th day sternal revision and mediastinal irrigation was made. In postoperative 29th day sternectomy was performed and VAC was initiated. Sternum was completely healed but the patient was lost in 48th day due to multi organ failure. We suggest that VAC system can be used easily and safely in treatment of postoperative deep sternal wound infection. **REF0455**

**Figure-1**

*Sternal Wound Area Before application AC device*

**Figure-2**

*Sternal Wound Area After Application VAC Device*

## P305 - FIRST RESULTS OF CARDIOVASCULAR SURGERY CLINIC OF A NEWLY FORMED UNIVERSITY HOSPITAL

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*Yeditepe University Hospital, Department of Cardiovascular Surgery, Istanbul, Turkey*

The early and midterm results of the cardiac surgery operations that were performed in Yeditepe University Hospital which was founded in 30th of November, 2005 were given and discussed. The mean age was 61.4 ± 11.57 (26-79) years and 18 % of our patients were female. Coronary artery bypass surgery (CABG) was performed to 76 % of the patients. Other operations with frequencies were as follows: valvular heart disease 8 %, combined coronary and valvular heart disease 4 %, congenital heart disease 4 %, vascular disease 5.3 % and other diseases 2.7 %. Donor cardiectomy was performed to 1 patient. The most frequent preoperative risk factor was COPD with 24.3 %, diabetes mellitus with 16.2 %, left ventricular dysfunction with 13.5 %, end stage renal failure with 8 % and obesity with 8 %.
The mean graft number was 2.41 ± 0.78 (1-3) and mean distal anastomozis number was 3.0 ± 1.22 (1-5) per patient who underwent CABG operation. Ninety-six % of the patients were revascularized with an arterial graft to left anterior descending artery. Off-pump procedure was performed to 28 % of the patients. There was no early and midterm mortality. Atrial fibrillation was seen in 3 patients and converted to sinus rhythm by pharmacologic treatment. Three end stage renal failure patients had dialysis in the postoperative period. Intraaortic balloon counter pulsation was used for a patient who had low cardiac output at the early postoperative period and the patient weaned successfully. The mean intensive care unit stay was 26 ± 4,4 (10-78) hours and mean discharge time was 6.17 ± 1.07 (4-10) days.
As a newly formed cardiovascular surgery clinic, we think that our early and midterm results are acceptable with the light of the current literature.
**REF0633**

## P306 - SPONTANEOUS PSEUDOANEURYSM OF THE SUPERFICIAL FEMORAL ARTERY IN BEHCET'S DISEASE: ENDOVASCULAR STENT GRAFT TREATMEN

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*[2]Department of Radiology,Kocaeli University,Kocaeli, Turkey*

We reporte on a case of spontaneous pseudoaneurysm of the superficial femoral artery in Behcet's disease who was treated with endovascular stent-graft following with percutaneous drainage at the same session. We emphasize on percutaneous drainage of the pseudoaneurysm to decrease compression on the stent-graft and native vessel. **REF0634**

**Figure 1**

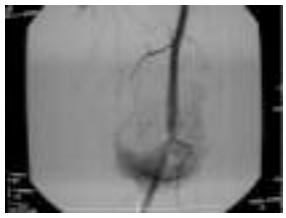


**Figure 2**

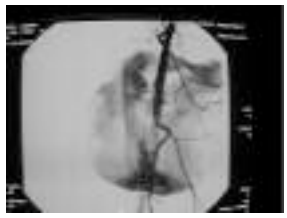
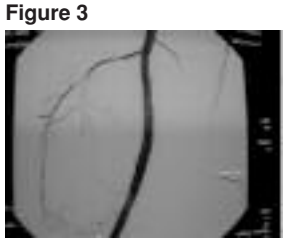


**Figure 3**



## P307 - SUCCESSFULLY OPERATED GIANT CARDIAC PSEUDOANEURYSM

Gunay Rafet, Ozer Hasan Orhan, Ketenci Bulent, Ozay Batuhan, Cimen Serdar, Kayacioglu Ilyas, Sari Sibel, Elibol Ahmet, Demirtas Murat

*Siyami Ersek Thoracic and Cardiovascular Surgery Center, Istanbul, Turkey*

We report a successfully surgical operated case of giant left ventricular pseudoaneurysm in a 61years old man. The patient had silent myocardial infarction two weeks earlier and presented with exertional dyspnea. We admitted patient to the hospital with dispnea. Transthoracic echocardiography and left ventriculography revealed a giant false aneurysm in the inferior wall of the left ventricle with a large orifice and mild to moderate mitral regurgitation. Coronary angiography showed totally occluded the right coronary artery and severe stenosis of the posterolateral circumflex coronary artery. General status of the patient had gradually worsened after the admitance. IABP was inserted and the patient went to operation emergently. Patch closure was carried out under bicaval cardiopulmonary bypass and moderate hypotermia. There was large lateral wall hematoma in pseudoaneurysm sac. Postoperative course was eventful. The patient has discharged on the 11th postoperative day from intensive care unit. Postoperative left ventricul echocardiography revealed disappearance of pseudoaneurysm and mitral regurgitation, but relatively large akinetic area of posterior-inferior wall was left around a patch.

**REF0597**

## P308 - THE PHERESIS PROCESS AT NEUROLOGIC AND HEMATOLOGIC PATIENTS

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**OBJECTIVES:** Pheresis is a process of removing a specific component from blood and returning the remaining components to the donor. We want to share therapeutic pheresis results ( 2 plateletpheresis, 2 plasmapheresis, 2 leukapheresis ) in our apheresis unit between 2005-2006.
**METHODS:** The 65 years-old-woman presented with agitation, loss of consciousness. Because of having fever, neurologic symptoms, fragmented erytrocytes and trombocytopenia; Thorombotic Thorombocytopenic Purpura was considered. After plasmapheresis, the consciousness ameliorated, the platelets were changed from 10x103/µL to 325x103/µL. The other patient, 65 years-old-male, presented with lack of appetite, general joint pains, the paraparesis involving neck muscles, and aspiration pneumonia. After plasmapheresis, he begun to move his neck, legs and hands.16 years-old-female with Acute Lymphoid Leukemia (ALL) had weakness, difficulty in walking and WBC: 675x103/µL, and after leukapheresis WBC: 325x103/µL. Other leukapheresis patient was 28 years-old-female, complaining of weakness, servical lymphadenopathy, diagnosed as ALL. The leucocytes changed from 140x103/µL to 78.9x103/µL after leukapheresis. The 50 years-old-woman, following up as myeloproliferative disease, presented with headache. Her platelets reduced from 3029x103 /µL to 1494x103/µL after plateletpheresis. The other patient was 67 years-old-male, presented with intraabdominal hematoma, hepatic vein thrombosis and splenectomy one week before. He was accepted as myeloproliferative disease and after plateletpheresis, platelets changed from 2396x103/µL to 596x103/µL.
**CONCLUSION:** The central vascular catheters inserted to all patients before the process. Outside of short-time catheter obstructions none of them had severe complications. All of 6 patients had high mortality risk and this risk was eliminated by pheresis in 5 patients. **REF0259**

## P309 - PSYCHOMETRIC MEASURES AFTER CORONARY BYPASS SURGERY IN INFORMED AND NONINFORMED PATIENTS

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**INTRODUCTION:** CABG operations improves patients quality of life, disability, mood state and coping strategies in different area of theirs life. In this study, we assess the patients psychological well being.
**Method:** Forty-eight patients divided two equal group. In the group 2, patients had detailed information about their operations. Group 1 was the control. Both group were assessed pre and postoperatively by psychometric tests (COPE, BDQ, HRQoL, HAD tests).
**Results:** In the noninformed group, there were significant differences between baseline end point scores for disability scale and coping subgroups related to turning to religion, humour and positive reinterpretation.
**Conclusion:** Although the relatively small sample size, the patient who informed preoperatively are more successfull to cope with their illness **REF0651**

## P311 - DOUBLE OXYGENATOR DESIGN OF CARDIOPULMONARY BYPASS CIRCUIT FOR EXTREMELY OBESE PATIENTS: CASE REPORT AND REVIEW

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Constant blood flow and perfusion of the body are main goals of cardiopulmonary bypass during open heart surgery. Basal flow rate of the pump has been defined as 2,2 to 2,6 lt/min/m2, which fulfills the requirements of a human being laid on supine position. Further techniques, such as total body cooling, hemo-dilution also help to achieve adequate end organ perfusion and protection of vital signs throughout the cardiac surgery. Standard equipments have been developed for this purpose and pump lines, venous reservoirs and oxygenators are on market for different types and sizes of patients. In rare cases, commercially available products may not suffice and modifications are necessary.
We have operated a 54 yrs old male with multivessel coronary artery disease. He was extremely obese (175 cm height, 167 kg weight) and diabetic with chronic obstructive pulmonary disease. We have designed a pump circuit with two parallel connected membrane oxygenators. He underwent CABG for 5 vessels and metabolic parameters with pump line pressures have been recorded. Cardiopulmonary bypass was initiated with one oxygenator, where inadequate PO2 and PCO2 levels has led us to use second oxygenator. After initiation of the second oxygenator, all parameters were regular. We conclude that two oxygenators technique is a useful tool for morbidly obese cases. **REF0674**

**Double oxygenators**

## P312 - UNEXPECTED CEREBRAL COMPLICATION AFTER OPEN CARDIAC SURGERY

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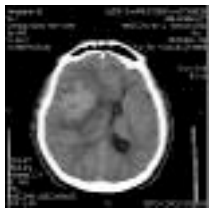
**BACKGROUND:** Neurological complications are one of the most feared complications after cardiac surgery. Presentation may differ from simple TIAs to lethal strokes. Overall incidence of stroke is %4,6 and incidences may vary with the surgical procedure.
**CASE:** Fourty years old male, with a history of ARF submitted to our hospital with severe aortic stenosis. Aortic valve replacement with No.23 mechanical valve was done without any problem peroperatively. Patient was extubated at postoperative 8. hour and discharged from ICU to in-patient clinic at 1. day, neurological examination was normal. Second day left hemiparesis occured, patient was taken back to ICU. Cranial CT scan revealed a mass with hemorrage at the right frontoparietal region and diffuse oedema of serebral tissue. Anticoagulation therapy was interrupted and patient was sent to neurosurgery clinic. At 8. day postoperatively patient was operated through right frotoparietal craniotomy, mass was excised and duroplasty was performed. No neurological disfunction was detected after surgery and anticoagulation therapy was started. Pathological examination revealed Grade III malign meningioma. **DISCUSSION:** Neurological examination after valve surgery is crucial. Because of risk of bleeding due to anticoagulation, any kind of disfunction must be confirmed with CT scan to see whether the lesion is hemorragic or embolic to decide the therapy. Even temporary discontiuation of anticoagulation puts the patient into risk of new tromboembolism. **REF0382**
**Cranial CT**



## P313 -COMPLICATIONS OF APHERESİS PROSEDURES

Ulku Ergene*, Derya Oz*, Esra Irmak Ustun**

*Dr. Celal Bayar University Internal Medicine,Manisa Turkey*
*Dr. Gazi Hospital Internal Medicine, Izmir Turkey*

**INTRODUCTION:** Apheresis is a therapeutic procesure (plasma exchange and reduce the abnormally higher levels of thrombocyts and leukocyts) and it can be used to obtain blood products from donors (erythrocyte,leukocyte,plasma and thrombocyte). In this study we evaluated the results of complication rates in apheresis procedures.
**MATERİAL AND METHODS:** Between October 2004 to April 2006,667 apheresis donors were evaluated.Plasmapheresis procedures was performed in 6 and thrombopheresis (platellet apheresis) was performed in 661.
**RESULTS:** In plasmapheresis procedurs non of the patients had complications which result in discontinuotion of treatment. On the other hand, platellet apheresis procedure was stopped at 33 (4,9%) donors because of the complications. In 19 donors vasculer access problems, in 13 donors symptomatic hypotension and in 1 donor vomiting were determinated.
**CONCLUSION:** Apheresis procedures have a 150 fold higher incidence of advers event requiring hospitalization compared to whole blood donation. Problems of vascular access, reactions to citrate, reactions to replasment fluids and electrolytes and tranfusion reactions are the commonest complications. Platelet apheresis procedures are tought to be generally safe and to have low serious complication rates. In studies, an incidence of 2,18 % (range: 0,32-6,81%) serious advers events was reported. In our study this rate is higher (4,9%). The reason would be lock of experience in laboratory personel and unexpected increasing work-load in our unit. **REF0235**

## P314 - EVALUATION OF THE PATIENTS WITH CHEST / CARDIOVASCULAR INJURY WHO APPLIED TO THE EMERGENCY SERVICE

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**OBJECTIVE:** Trauma associated mortality rates are progressively increasing worldwide. Especially, chest and cardiovascular injuries may result in death if they are not diagnosed and treated accurately. This shows the importance of first aid and emergency intervention. In this study, chest and cardiovascular injury cases selected from the traumatic patients applied to our emergency service were retrospectively evaluated.
**CASE PRESENTATION:** Of the 139270 patients who have applied to our service between January 1st 2005 and April 30th 2006, 5248 were traumatic. The total number of individuals who have chest or cardiovascular injury was 159, of whom 135 were males (84,8 %) and 24 were females (15,2 %). The mean age of the patients was 45,01. Evaluated cases were classified as follows: 41 sharp / incisive tool injury (25,9 %), 2 firearm injury (1,2 %) and 116 (72,9 %) blunt trauma. 66 cases were applied thoracotomy. 11 patients with severe big vascular injury and 7 patients with small vascular damage were treated with immediate surgical operation. 81 patients with superficial injury were treated by local operations, cutaneous and subcutaneous suturation, dressing and medical care. One multitraumatic patient who has undergone intensive care after a road accident died.
**CONCLUSION:** The main mortality causes of the traumatic patients are chest or cardiovascular injuries. Of the 5248 patients who have appealed to our service, 159 (3 %) have a chest or cardiovascular injury. Whereas, in some studies this rate is nearly 25 %. We have determined that vast majority of the traumatic patients are males (84,8 %) and this was in accordance with the current literature knowledge. The rate of firearm injury was very rare (1,2 %) however the mean range was between 6 – 8 % in Turkey. In USA, the rate of firearm injury is 63 %. Of these injury deaths, 19.6 percent were suicides, 10.9 percent were homicides. This may be a result of increased public armament. The rates of public armament are 10 % in Turkey and 48 % in USA. The main part of our patients were blunt traumatic (72,9 %) and this was correlated with the literature (70 %). **REF0349**

## P317 - COMPARISON OF SURGICAL OUTCOME AND PERIOPERATIVE COMPLICATIONS OF HYPOTHYROID PATIENTS UNDERGOING OPEN HEART SURGERY

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**INTRODUCTION:** Hypothyroid patients may have increased risk of perioperative complications and mortality undergoing coronary artery bypass or valve surgeries. Decrease in levels of thyroid hormones have been related to increased risk of heart failure.
**MATERAIL AND METHODS:** 84 patients undergoing either bypass (n= 52) or valve (n= 32) surgery were enrolled in the study. Group 1 ( n= 39) were hypothroid and group 2 (n=45) were euthyroid. Free T3 and T4 and TSH ( thyroid stimulating hormone) levels were collected. Thyroid hormone levels were fT3: 2.32 ± 0.53 pg/ml, fT4: 1.17 ± 1.11 ng/dl, and TSh: 0.69 ±0.59 in the first group and Patients in group 1 have shown mild to moderate blood hypothroid levels. The two groups were compared for postoperative use of inotropic agents including dopamin and dobutamin, postoperative cardiac and pulmonary complications, length of stay in intensive care unit and hospital, perioperative arrythmias.
**RESULTS:** There has been no significant difference in comparison of the evaluated parameters in both groups.
**CONCLUSION:** Hypothyroid patients depending on the level of thyroid function abnormality can undergo cardiac surgery with no significant difference in regarding of perioperative risks comparing to euthyroid patients. **REF0636**

## P318 - ENDOVASCULAR STENT GRAFT TREATMENT OF CHRONIC POST-TRAUMATIC ANEURYSM OF THE DESCENDING THORACIC AORTA

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Chronic post-traumatic aneurysm of the descending thoracic aorta is rare. Endovascular treatment modalities provide a new, less invasive option than conventional surgical repair that cary about 5–18% mortality and a considerable (11–50%) morbidity rate. A 47-year-old woman with chronic post-traumatic aneurysm of the descending thoracic aorta following a blunt trauma was admitted to the cardiovascular surgery department. CT examination and the preprocedural angiograpy through the left brachial artery revealed an aortic aneurysm of 5cm diameter x 7 cm length. There was a 2cm landing zone between the subclavian artery and the aneurysm. A tube shaped self-expandible 36 mm x 36 mmx122 mm Valiant Thoracic Stent Graft with Xcelerant ® was placed successfuly through the right femoral artery without any complication. 3D CAT scans taken at 1st month showed total thrombosis of the false lumen without any sign of endoleak. Stent-grafting in chronic traumatic aneurysm of the thoracic aorta is a less invasive and promising therapeutic approach. **REF0594**

## P319 - IS IT IMPORTANT THAT; THE SITE OF THORACAL TUBE ON DRAINING PLEURAL EFFUSION IN CORONARY ARTERY BYPASS SURGERY?

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**BACKGROUND:** We investigated the effect of thoracal tube site for draining pleural effusion on CABG surgery.
**METHODS:** Consecutive sixty patients undergoing elective CABG were included in the study. We excluded redo and revision cases. Patients were separated 3 groups. Group 1 (n=20) received a left chest tube inserted from 6th intercostal space at the anterior axillary line. Group 2 (n=20) received a left chest tube inserted from subxyphoidal space. Group 3 (n=20) received a left chest beveled tube inserted at the subxyphoidal space. Each tube was connected to underwater seal drainage system and continuous suction was applied to all drains. The chest drains were removed when the hourly drainage was less than 25ml/h for two or more consecutive hours. Thorax CT was performed when the chest drains removed. Thoracal effusion level was measured.
**RESULTS:** There are no differences among three groups for demographic data's such as Sex, COPD, EF, HT, DM, BMI and also no differences for operative, postoperative data's and tomographic evaluation.
**CONCLUSION:** it is appear that the site of thoracal tube insertion for draining pleural effusion is not important. However subxypoid insertion of pleural drains may lead to less subjective pain which depend on impairment of pulmonary function than insertion at the intercostal position. **REF0142**

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