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P459

Topic: Poster session 2

### **ALCAPA syndrome associated with dilatative cardiomyopathy: a case report**

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**Purpose:** To show the value of 64-MDCT coronary angiography in diagnosis of development anomalies of the coronary arteries associated with dilatative cardiomyopathy.

**Methods:** A 54-year-old male patient with a dilatative cardiomyopathy, slight chest pain (CCS 3) left ventricular failure (NYHA III), moderate mitral regurgitation, EF 35% (Simson method) underwent radiographic chest examination, selective coronary angiography and 64 MSDT coronary angiography.

**Results:** Radiographic chest examination showed enlarged cardiac silhouette. Selective coronary angiography showed aneurismatic dilated RCA with rich anastomosis net with LMA, with left-right shunt. LMA could not be cannulated from the aortic side. The development of ECG gated MDCT coronary angiography enables accurate non-invasive imaging and direct visualization of coronary development anomalies. Performed 64 MDCT coronary angiography showed anomalous origin of the left coronary artery arising from the pulmonary artery – ALCAPA Syndrome.

**Conclusion:** We can conclude that 64 MSCT coronary angiography has advantage for the detection of coronary development anomalies such as ALCAPA Syndrome.

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P1080

Topic: Poster session 4

### Cardiac surgery in patients under chronic hemodialysis

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**Background:** Open-heart surgery carries a high risk for hemodialysis patients. This study focuses on the short and long-term outcomes of hemodialysis patients undergoing heart surgery.

**Material:** A total of 56 chronic renal failure patients on hemodialysis therapy underwent some kind of cardiovascular surgery between May 2008 and December 2011. One had a valve abnormality, and the remaining nine had coronary artery disease. All of them were hemodialyzed the day before surgery and 24–48 h after the operation, with Prismaflex CVVHD.

**Results:** 52 recovered well after surgery, four died of septic shock: one was in terminal congestive heart failure. All operative deaths occurred in the patients who underwent non-elective surgery or were preoperatively in New Heart Association (NYHA) class IV. The factors having an impact on morbidity and mortality seem to be more related to the previous clinical situation and to the urgency of the operation than to the status of chronic renal failure.

**Conclusion:** An early and adequate assessment of the candidates, when possible avoiding emergency surgery and acute left ventricular dysfunction, as well as careful management during cardiopulmonary bypass procedures (CPB) and the immediate post-surgical period will certainly improve the result of cardiac surgery in these patients, making it similar to those who are not in chronic renal failure.

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Topic: Poster session 4

### Direct circular repair for left ventricle aneurysm

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**Background:** Most patients with large left ventricular aneurysm undergo either linear resection of the dyskinetic area or endoventricular patch repair. Both techniques have numerous beneficial effects, but also several adverse ones. In order to avoid these imperfections, direct circular repair (DCR) was created.

**Methods:** After median sternotomy total revascularization was performed. With inspection the aneurysm localization was marked and the incision was started at the apex of the aneurysm, forwarded toward the border zone with a vital myocardium. For geometric reconstruction, a prolene purse string suture was placed within fibrous sewing ring and pulled to reduce the new created orifice to 1cm. Next, a prolene suture was used over two pericardial stripes to bring the circular cuff together. In case of aneurysmal septal involvement, incision is extended toward the posterior wall, followed by a profound circular suture; so dyskinetic septum is completely excluded. The final continuous over-and-over suture was applied over pericardial strips for definite hemostasis. Including criteria for our prospective study were: severe CAD, large LV aneurysm diagnosed by transthoracic and transoesophageal ultrasound.

**Results:** From 03/00-12/11, 354 pts with anterior or aneteroapical aneurysm have been operated. Evident haemodynamic improvements were noted: decrease of EDV from 316.5 on 182 ml, ESV from 250 on 102 ml, increase of EF from 20.5% on 37.2%, and CI from 1.8 on 3.2. Valvular reconstructions were performed when indicated. 264pts had been operated under total warm cardioplegia. Mean intubation time was 9±2.3h, mean dosage of catecholamines was 0.03µg/kg/min, average inhospital stay 10±4.6 days. Early mortality rate was 6.7% (23pts).

**Conclusions:** Direct circular repair ensures geometric reconstruction of the LV, without use of foreign body after maximal resection and exclusion of the non-viable myocardium. In combination with total myocardial revascularization and valvular reconstruction improves patients condition with a good clinical benefit.

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Topic: Poster session 5

### Preoperative antra-aortic balloon pump in patients undergoing coronary bypass surgery

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**Background:** To assess the effectiveness of preoperative intra-aortic balloon pump (IABP) placement in high-risk patients undergoing coronary bypass surgery (CABG). The primary outcome was hospital mortality and secondary outcomes were IABP-related complications (bleeding, leg ischemia, aortic dissection).

**Methods:** 5019pts with CABG surgery had been treated from 2000-2010. 252(5,2%) got IABP pre-operatively due to haemodynamic instability as well as positive high -risk evaluation. All patients got pre-operatively echo, invasive haemodynamic monitoring ( CVP,MAP, SvCO<sub>2</sub>,CO,CI and SV).

**Results:** A total of 252 patients received preoperative IABP and 4767 did not receive preoperative IABP. Within 10 min after implanting of IABP mean arterial pressure (MAP) increased from 45,5+/-9 to 76,8+/-12 mm Hg. CI initially fell from 2.0 ? 0.5 to 1.7 ? 0.4 L/min/m<sup>2</sup>; however, after discontinuation it rose to 1.85 ? 0.4 L/min/m<sup>2</sup>. Urine output (UO) increased by 100%. The positive changes in MAP and UO persisted after 24 h. The pooled odds ratio (OR) for hospital mortality in patients treated with preoperative IABP was 0.41 (95% CI, 0.21-0.82, p = 0.01). Only 1 patient who received preoperative IABP developed limb ischemia and she was treated with thrombednatherectomy and patch plasty of the left femoral artery ( where was balloon implanted) 47patients(most of them were under Clopidogrel ) got haematoma at the IABP insertion site, and most of these complications improved after discontinuation of IABP.

**Conclusion:** Evidence from this analysis support the use of preoperative IABP in high-risk patients to reduce hospital mortality.



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Topic: Poster session 5

### Aortic root reconstructive surgery- new created technique

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**Background:** the native aortic valve can be explained with rules of the equal side triangle, and as a part of the aortic root it is wedged between the heart and the ascending aorta. Beside different types of aortic valve replacements, reconstructive techniques are increasingly performed to restore normal aortic valve function. Reconstructive techniques themselves can be divided into isolated reconstruction of aortic valve/root structures and the isolated replacement of one or more structures. With this study we evaluated clinical results of reconstructive surgery of the aortic root with 3 leaflets pericardial patch.

**Methods:** We created this reconstructive technique using bovine/equine pericardium, replacing valve cusps on aortic fibrous ring of patient. The leaflets are made from same pericardium from which other biologic valve prosthesis are done. The ring of patient's aorta was used as guide for sizing this valve. Leaflets are implanted separately, using continuous sutures with 2 supported stitches at newly created commissurae, without a stent or sowing ring. Patients with aortic valvular stenosis have been included. Excluding criteria was aortic anuly ring dilatation. Intraoperative and postoperative TEE was performed for every created valve.

**Results:** 115pts with aortic valvular disease had been included in study. 94 of them got bovine and 21 equine pericardium created leaflets. Middle aorta cross clamping time was 71.94min, and bypass time 112.33min. 4 patients got aortocoronary bypass in combination ( 2.3grafts per pts) 1 patient developed middle aortic regitation. Mortality rate was 9.5% (4pts). Follow up period 1-108 months.

**Conclusions:** Aortic root reconstructive surgery ensures haemodynamic improvement with a small transvalvular gradient in pts. It can be implanted even in patients with small root or with bicuspid valve, with good clinical outcome.