Conclusions: TAVI has provided good results in the initial 27 patients. However, the use of transcatheter aortic valve implantation should be restricted to the inoperable high-risk patients.

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Downs syndrome and cardiac surgery, a dilemma, should we operate or not?

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Background: Incidence of congenital heart disease in patients with Down syndrome (DS) is 40%. In the past some have advocated that the cardiac defects in DS should not be repaired, reports have shown outcome comparable to individuals without DS. The aim of the study is to analyze the outcome of cardiac surgery in DS.

Methodology: We conducted a retrospective study in the last 2 years at our institution. Patients involved were DS less than 13 years who had cardiac surgery. DS with chronic lung disease or unreactive pulmonary hypertension were excluded. We analyzed their demographic data, cardiac lesion, type of surgery, ICU stay, morbidities and mortality.

Results: 23 patients with DS (11 Females, 13 Males), with median age of 7 months, mean age of 32 months. AVSD were (n = 15) 65%, VSD were (n = 5) 21%. Postoperatively, 21% were extubated on the same day. 27% had intubation more than 9 days. Almost 30% had a hospital stay of >15 days. Complications were respiratory problems in 45%, arrhythmias in 8% and residual AV valve regurgitation in 8%. Hospital mortality was (n = 2/23) 8%.

Conclusion: Whether to operate Down syndrome patients or not remains unclear. Our study showed, significant postoperative complications, lengthy hospital stay and relatively high mortality. Despite of this we feel they should be given the chance of surgery to improve their life quality.

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Utilization of prophylactic drug therapy after acute myocardial infarction in Abu Dhabi and Sweden

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Purpose: Pharmaceutical treatments to decrease blood pressure and lipids, inhibit platelet aggregation, and control diabetes are cornerstones of secondary prevention after acute myocardial infarction (AMI). This study compares the drug use during a oneyear period post-AMI in Abu Dhabi and Sweden.

Methods: In Abu Dhabi, information on medications dispensed during one year following a hospitalized AMI during January 2010 to June 2011 (n = 1,326) was retrieved from the Health Authority of Abu Dhabi’s administrative claims database. Rates of at least one prescription within selected classes were quantified immediately following the event (months 0–3), 4–6 months, and 10–12 months after the event. Similar data was collected for hospitalized AMI patients in Sweden during 2009 (n = 19,312), by linkage of the Swedish Myocardial Infarction register and Prescribed Drug Register. All proportions were age-standardized.

Results: During the first three months post-AMI, the proportion of patients in Abu Dhabi with at least one prescription of an anti-hypertensive drug was 76%, statin 72%, platelet aggregator inhibitor 76%, beta-blocker 64%, and drugs affecting the renin-angiotensin system only 56%. These proportions declined to 36%, 34%, 34%, 28% and 28%, respectively, during month 10-12. Reductions among UAE citizens were somewhat lower than among expatriates. In Sweden, the corresponding proportions were 90%, 82%, 89%, 83% and 68%, respectively, 10–12 months post-AMI.

Conclusion: Abu Dhabi’s health data systems offer a valuable tool for monitoring adherence to drug use. It appears that the outcomes of AMI patients in Abu Dhabi could be substantially improved by promoting adherence to evidence-based guidelines for secondary prevention.

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Systemic lupus erythrematosus; its implication in cardiac surgery: Institutional case report

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Introduction: Systemic lupus erythematous (SLE) is an autoimmune disease that primarily affects young women. According to the literature, the prevalence of cardiovascular involvement in patients with systemic lupus erythematous (SLE) has been estimated to be more than 50%.

Valvular involvement is the most frequent cardiac manifestation in SLE. Functionally, valvular regurgitation has been reported to occur in up to 74% of patients. Meanwhile, valvular endocarditis is a frequent manifestation of SLE, and the mitral valve is most frequently affected. However, any valve or multivalvular affection may occur.

Valvular lesions resulting from lupus can cause severe mitral regurgitation (MR). The most classic cardiac valvular abnormality in patients with SLE is known as Libman–Sacks endocarditis, which consists of noninfective, verrucous vegetations (marantic endocarditis). They occur most frequently on the mitral valve. Most
of the valves that have vegetations are usually associated with diffuse thickening or regurgitation.

However, although cardiac involvement in patients with SLE has been recognized since the early 20th, but cardiac surgery was infrequently performed in patients with SLE, and its clinical outcome was reported only in small series. Also the impact of SLE on provision of anesthesia has never been investigated, and the lack of evidence combined with the heterogeneity of disease manifestations makes it difficult to establish definitive management protocols.

That’s why, We herein describe a 22 years old female patient with SLE, with end stage renal disease requiring peritoneal dialysis. Presented to our hospital (Al-Demerdash, Ain Shams University Hospital), with signs of congestive heart failure such as dyspnea on exertion and orthopnea, paroxysmal nocturnal dyspnea, and fatigue, refractory to medical management. Her therapy for SLE required long-term prednisolone and hydroxychloroquine.

Physical examination revealed no facial malar rash or generalized discoid rashes. The breath sounds were diminished at the lower lung zones. Cardiac auscultation showed regular heart beat with a heart rate of 102 beats/min, a grade III/VI systolic murmur at the left lower sternal border and the apex, and a pericardial friction rub. Palpation of the abdomen showed hepatomegaly. The extremities were notable for mild pitting edema. There was no clubbing, cyanosis or deformity of joints.

Preoperative data: Complete blood count revealed Hg 9.9 g/dl, WBC 11.100/ul, Platelet 247,000/ul. Bleeding Profile showed PT 16.4 sec, INR 1.45, PTT 44 sec. Biochemistry showed glucose 75 mg/dl, Creat 2.9 mg/dl with hemodialysis session, ALT 15U/l, AST 20U/l.

Preoperative transesophageal Echocardiography showed: A large mass is attached to the atrial surface of the anterior mitral leaflet measuring 6 x 7 mm. The mass perforates the leaflet causing severe mitral regurgitation. And, another large mass measuring 6 x 9 mm attached to the non-coronary aortic valve cusp with 2 small masses attached to each of the other two leaflets causing severe aortic regurgitation. EF 60%, RVSP 50 mmHg.

So the patient was scheduled for double valve replacement. Although valve repair and bioprosthetic valve replacement are not the best solution, since accelerated native valve and bioprosthetic valve calcification tend to occur because of the high calcium turnover. Also Porcine valves have been affected by valvulitis with perforation of valve cusps.

But, our cardiac surgical team decided to replace mitral and aortic valve with bioprosthetic valve, as they believe that Anticoagulation may present higher risks in our young patient who require prolonged steroid use and who have end stage renal failure, the resultant dependence on dialysis. Also previous reports described patients with SLE who underwent mitral valve replacement, had a number of complications, and died secondary to anticoagulation. Also, because of successful placement of the porcine Carpentier-Edwards bioprosthesis in patients with SLE has been reported before.

Finally weaning from cardiopulmonary bypass was uneventful (adrenaline 50 n/kg/min). The patient’s recovery from surgery was uncomplicated, and she was discharged on the 6th postoperative day.

In conclusion, although the postoperative complication is common, cardiac operation could be performed in patients with SLE.

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Direct aortic transcatheter aortic valve implantation, a promising new approach

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Objective: The transcatheter aortic valve implantation (TAVI) is an established therapy option for high risk patients with severe aortic valve stenosis. The peripheral arterial (Femoral or Subclavian) and the minimal invasive surgical access via Apex are the standard access routes. Outcome and prognosis of TAVI is determined by the peripheral vessel complications, strokes, paravalvular leak and apical cardiac infarction. The direct aortic (DA) approaches is a new alternative for the minimal invasive surgical TAVI access. We report our experience and discuss the different aspects this technique.

Methods: Between September 2011 and August 2012 we performed in 50 patients DA-TAVI via partial upper sternotomy with the self expanding Medtronic CorValve bioprosthesis. From the tenth patient DA was the primary access route for TAVI. The procedure is done in general anesthesia and performed by an interventional heart team in the operating room (OR). The fast-track anesthesia with immediate extubation after the procedure in the OR was established after the tenth patient.

Results: The mean patients age was 78 ± 5.2 years and 52% were male. The mean logistic EuroSCORE were 20.3 ± 10.8. Coronary artery disease were documented in 30 (60%) patients, including eight re-do procedures. In 15 (30%) cases were severe peripheral vasculopathy the main indication for DA access. Procedural success was 100%. Mean aortic gradient dropped immediately under 5 mm Hg, end diastolic left ventricle pressure improved on average by 30% in all patients and there was no vascular complications. Stroke occurred in one patient. 5 patients had, during the first days after the procedure, a psycho-organic syndrome, where a stroke was excluded. The post-operative echocardiogram demonstrated in 45 (90%) patients non to trace, in 4 (8%) patients mild and in 1(2%) patient moderate aortic regurgitation.

Conclusion: Direct aortic access for TAVI is a surgical simple, flexible and safe approach to treat high risk patients with symptomatic aortic stenosis and might enrich the surgical TAVI access with a new promising approach.

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