Bilateral PDA dependent pulmonary circulation with right and left pulmonary artery discontinuity is very rare. Limited data available for bilateral PDA stenting. Bilateral PDA stenting in nonconfluent pulmonary arteries is challenging procedure but can be considered as an option in the management of complex conditions like this. 12 days old Preterm (36 weeks gestation) male baby with birth weight of 2.6 kg developed respiratory distress with severe cyanosis and desaturation up to 50%. Baby was intubated and started on Prostaglandin 0.05 mic/kg/m2. His saturation improved to 80%. Echocardiogram showed complex cyanotic heart disease, Situs ambiguous, dextrocardia, complete unbalanced AV septal defect, pulmonary atresia, nonconfluent small branch pulmonary arteries supplied by the bilateral patent ductus arteriosus (PDA) from right aortic arch and all four pulmonary veins form a confluence and drain into superior vena cava (SVC) through vertical vein with no obstruction. Baby was taken up for PDA stenting, descending aortogram showed right aortic arch with vertical tortuous duct to right pulmonary artery (RPA) and another short duct with acute angle from left subclavian artery to left pulmonary artery (LPA). Both ducts stented with coronary stents. Vertical vein angiogram showed both lungs drain to a confluence and then to SVC via ascending vertical vein with no obstruction. After stenting lung perfusion improved and the baby was stable and maintained 80% saturation on room air. Bilateral PDA dependent pulmonary circulation with right and left pulmonary artery discontinuity is very rare. Our case is unique with Heterotaxy, TAPVC, Dextrocardia and double ducti. Eventhough bilateral ductal stenting is technically challenging it is successful through femoral artery approach.

http://dx.doi:10.1016/j.jsha.2016.04.054

54. Radiofrequency perforation of pulmonary valve and PDA stenting in a preterm neonate

D. Khaymafa, K. Al Dhahrib, V. Arulselvamb
a Saud Al-Babtain Cardiac Centre, Dammam, Saudi Arabia; b Saud Al-Babtain Cardiac Centre, Pediatric Cardiology, Dammam, Saudi Arabia

Transcatheter radiofrequency perforation of the pulmonary valve and PDA stenting is considered as a modality for pulmonary atresia and intact ventricular septum with mildly hypoplastic tripartate right ventricle. We present a preterm neonate who has undergone this procedure. We assume that transcatheter radiofrequency perforation of pulmonary valve and PDA stenting is a safer approach for pulmonary atresia with intact ventricular septum in preterm newborns, than surgical approach. We present 5 days old, preterm (36 weeks gestation) baby girl, with 2.2 kg. She was referred to our centre with the diagnosis of pulmonary atresia with intact ventricular septum, mildly hypoplastic tripartate right ventricle. Right ventricle angiography showed tripartate right ventricle with no sinusoids. She underwent successful radiofrequency perforation of pulmonary valve followed by balloon dilatation. At the same time prograde PDA stenting was done. Repeat right ventricle angiography showed good right ventricular outflow tract forward flow, and descending aorta angiography showed good PDA flow supplying both pulmonary arteries. The baby was extubated on same day, and prosoglandin E1 was discontinued immediately after the procedure. The baby maintained saturation more than 80% on room air. The baby was discharged after 2 days. Our case is peculiar because to our knowledge this is the lowest weight for which radiofrequency perforation and PDA stenting is done as well as being preterm.

http://dx.doi:10.1016/j.jsha.2016.04.055

55. Coronary artery bypass graft for cardiogenic shock post STEMI patients

K. Alkhameesa, K. Eskanderb, F. Oueidad, A. attia, S. alnosiryd
a Saud Al-Babtain Cardiac Centre, Dammam, Saudi Arabia; b Saud Al-Babtain Cardiac Centre, Cardiac Surgery, Dammam, Saudi Arabia; c Saud Al-Babtain Cardiac Centre, Cardiac Surgery, Dammam, Saudi Arabia; d Saud Al-Babtain Cardiac Centre, Anaesthesia, Dammam, Saudi Arabia

Cardiogenic shock (CS) complicating AMI continues to have a high mortality of 60–80% despite early revascularization and adjunctive therapies. AMI-CS complicates 5–7% of cases of STEMI and is a leading cause of hospital death AMI. We studied the outcome of CABG for AMI-CS patients. From 10-2013 to 9-2015, 24 patients with post STEMI cardiogenic shock were admitted and underwent emergency CABG. Mean pre-operative ejection fraction (EF) was 29.7 ± 8.4%. 8 patients were on IABP preoperatively. Operative mortality rate was 21%. Survival rate was 79% and mean follow-up of 10.21 ± 4.8 months. CABG should be considered for patients with AMI complicated by cardiogenic shock when PCI can not be done.

http://dx.doi:10.1016/j.jsha.2016.04.056

56. Endoscopic vein graft harvest for coronary artery bypass surgery: Single center experience in Saudi Arabia

M. Algdheeeb, I. Abu Awwab, A.F. Alzyoud, I. Abu Alfirb, H. Alhabib, F. Alghofailic
a King Salman Heart Centre, Riyadh, Saudi Arabia; b King Salman Heart Centre, Riyadh, Saudi Arabia; c King Salman Heart Centre, Cardiac Surgery, Riyadh, Saudi Arabia

Endoscopic vein graft harvest for coronary artery bypass surgery is a safe and effective technique for reconstruction of coronary arteries. This procedure provides a less invasive alternative to direct surgical harvest of saphenous vein, which is the preferred conduit for coronary bypass surgery. The technique is performed through an upper midline incision with or without laparoscopic assistance. The patient is placed in a supine position with the upper body elevated to 90 degrees. The left internal mammary artery is harvested through a minithoracotomy in the fourth intercostal space. The saphenous vein is then harvested via endoscopic technique through a 5 cm incision in the right thigh. The endoscopic equipment is then passed through the vein graft and tunneled subcutaneously to the thoracic incision. The graft is then anastomosed to the coronary artery using a coronary anastomotic device. This technique has been shown to be safe and effective with excellent long-term results. It is particularly useful in patients with a small or non-compliant saphenous vein, or in patients with limited access to the upper extremity. It also provides an alternative for patients who are not candidates for surgical harvest due to previous surgery or obesity. However, further research is needed to determine the long-term outcomes and potential complications of this technique.
Open saphenous vein technique is the standard of care in patients undergoing coronary artery surgery (CABG) worldwide and in Saudi Arabia. Endoscopic vein harvest (EVH) is an innovative technique that have been recommended by the international society of minimally invasive surgery. Our aim in the current study is to review our preliminary data about endoscopic vein harvest. Would endoscopic vein harvest decrease the incidence of leg wound infections? This is a retrospective study of a single tertiary care center of 94 consecutive patients who underwent CABG with EVH. Preoperative associated risk factors were assessed. Postoperative follow up includes leg wound infection and patient satisfaction with EVH by using a telephone and/or a paper questionnaire. We had 94 consecutive patients who underwent CABG with EVH between October 2014 and October 2015, mean age was 56.7 (33–77) years, 91.5% were male, mean euro score II was 2.47%. The most common presentation was NSTEMI (39.4%) followed by STEMI (26.6%), unstable angina (11.7%) and stable angina (5.3%). Our cohort had the following characteristics: 85.1% were diabetic, 84% were hypertensive, 46.8% had dyslipidemia, 2.1% had CVA, 7.4% had Carotid artery disease, 2.1% had Congestive heart failure, 4.3% had any renal disease and 4.3% had previous PCI. Most of our patients received 3 grafts (44.7%) followed by 4 grafts (42.6%) of which only one leg was used for EVH (94.1%). Leg wound infection occurred in one patient only and in this case EVH was converted to open technique. A written and/or telephone questionnaire resulted in a high patient-satisfaction with the cosmetic outcome of EVH as well as very low grade of leg wound pain. EVH is a very promising innovative technique in patient undergoing CABG. Our patients were highly satisfied with their leg wound cosmetic outcome. In this single center experience, in Saudi Arabia, EVH is a promising innovative technique for saphenous vein harvest. It is highly recommended that cardiac centers in Saudi Arabia embrace such less invasive technology.

http://dx.doi:10.1016/j.jsha.2016.04.057

SUGICAL THERAPY FOR VALVULAR HEART DISEASE

57. Aortic valve replacement with sutureless valve and mitral valve repair in patient with infected aortic homograft

A. attia a, F. Oueida b, K. Alkhamees b, K. Eskander b, M. Alrefaei c

a Saud Al-Babtain Cardiac Center, Dammam, Saudi Arabia; b Saud Al-Babtain Cardiac Center, Cardiac Surgery, Dammam, Saudi Arabia; c Saudi Al-Babtain Cardiac Center, Cardiology, Dammam, Saudi Arabia

The approach of implanting aortic sutureless valve inside the calcific homograft is suitable in redo surgery especially if associated with mitral valve surgery. Aortic valve replacement in patients who have undergone previous aortic root replacement with an aortic homograft remains a technical challenge because of homograft degeneration and the need for a redo Bentall operation. We report a case of redo aortic valve replacement (valve in valve) with a sutureless valve and mitral valve repair by miniband annuloplasty in a female patient aged 64 years old who underwent aortic valve replacement with homograft 14 years ago and presented by severe aortic valve regurgite and severe mitral valve regurgite because of infective endocarditis. This technique allows rapid aortic valve replacement in a heavily calcified aortic root. It also avoids aortic valve size affection after mitral valve repair by ordinary methods especially in patients with small aortic annulus. This technique is particularly suitable in redo procedures for homograft degeneration, it avoids performing a redo Bentall operation with its known problems as well as to avoid patient prosthesis mismatch.

http://dx.doi:10.1016/j.jsha.2016.04.058

58. Predictors for the outcome of aortic regurgitation after cardiac surgery in patients with ventricular septal defect and aortic cusp prolapse in Saudi patients

H. Salih a, b, S. Ismail c, M. Kabbani c, R. Abu Sulaiman d

a KACC, KAMC, NGHA, Riyadh, Saudi Arabia; b KAMC, Riyadh 11426, Saudi Arabia; c KAMC, Pediatric Cardiology, Riyadh 11426, Saudi Arabia; d KACC, KAMC, NGHA, Pediatric Cardiology, Riyadh, Saudi Arabia

Aortic valve (AV) prolapse and subsequent aortic regurgitation (AR) are two complications of ventricular septal defects (VSD) that are located close to or in direct contact with the AV. This finding is one of the indications for surgical VSD closure even in absence of symptoms in order to protect the AV integrity. Goal of our study was to assess the outcome, and to identify the predictors for improvement or progression of AR after surgical repair. A retrospective study of all children with VSD and AV prolapse who underwent cardiac surgery at King Abdulaziz Cardiac Center in Riyadh between July 1999 till August 2013. A total of 41 consecutive patients, operated for VSD with prolapsed AV, with or without AR, were reviewed. The incidence of AV prolapse in the study population was 6.8% out of 655 patients with VSD. Thirty-six (88%) patients had a perimembranous VSD and 4 had doubly committed VSD. Only one patient had an outlet muscular VSD. Right coronary cusp prolapse was found in 38 (92.7%) patients. Preoperative AR was absent in 5 patients, mild or less in 25 patients, moderate in 7 and severe in 4 patients. Twenty six patients showed improvement in the degree of AR after surgery (Group A), 14 patients showed no change in