

adequate science of its own but base on the background of CABG science. Therefore concern about inadequate revascularization was a reality from the beginning.

**Material & Methods:** Our efforts which helped to overcome the above concerns led to the discovery that inspection of the beating heart is an accurate way to diagnose possible local ischemia associated with coronary occlusion, positioning and stabilization during OPCAB. Visible changes in color and contractility were tested & proved to be accurate tools in predicting the need for cardio pulmonary bypass before global mal function and severe hemodynamic deterioration occurs.

**Results:** Practicing such a training protocol resulted in 1: avoidance of "crash conversion". 2: created a safe and stress free environment and resulted in a overall mortality <1%. In addition accurate observation of the heart has given new insight into the anatomy and physiology of coronary circulations namely corrugated anatomy and capacitances vessel physiology.

**Conclusion:** Training in visual diagnosis of cardiac changes during OPCAB provides the ability to predict the course of the operation & timely information about the need for cardio pulmonary bypass. The intra operative complication are avoided & presence of safe and stress free environment provides for complete revascularizations. Therefore we recommend this practice to everybody.

#### **Surgical AF ablation THC experince in 216 case and demo of technique**

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**Objectie:** Treatment of permanent AF in cases which are candidate of open heart surgery is a mandatory step in care. Diffrent ways for this topic are available.

**Material & Method:** since 2009 216 case of valve surgery concomitanly treated by radiofrequenc LT. ATRIAL OR BIATRIAL AF ablation short term and 6 month results are presented.

**Results:** 100% procedural success 85% in hospital conversion to NSR 64% 6 month sinus rhythm. No procedure related complication at the end presentation of video of surgical procedure.

#### **Transapical Closure of Paravalvular Leakage, overview and THC experince**

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**objective:** early and late paravalve leakage is a major complication of valve surgery most of the time conventioal reoperation is a major risk transapical closure by device is a viable and low risk option material and method: an overview of current practice in world and presentation of first 6 cases in IRAN results: quick easy and surgically oriented procedure 100% procedural success no operative and mid term mortality. only one case of minor morbidity. Complete resolving of leak in 5 cases and significant decrease in 1 improved FC and no hemolysis

#### **Should Anterior Translocation of Right Pulmonary Artery be considered in the Repair of All Aortic Coarctation from the Midline ?**

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Dilated pulmonary artery can increase the postoperative airway complications after the simultaneous repair of aortic arch anomalies and cardiovascular lesions with large left to right shunt. It is claimed that anterior translocation of pulmonary artery would reduce airway compression. We report 3 cases, including an 11 months old infant with ventricular septal defect (VSD) and coarctation, a 2 months old infant with interrupted aortic arch (IAA) and VSD and a neonate with aortopulmonary window (APW) and coarctation that all had a one stage repair of their lesions. Translocation of the right pulmonary artery (RPA) was performed in two patients, however with different postoperative courses that merit pondering over their fate.

#### **Valve sparing aortic root replacement surgery**

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Until recently valve replacement has been the only surgical option for AI. However, none of the current valve substitute is ideal options, until the mechanical valves are requiring life-long anticoagulation & bioprosthetic valve, present the risk of re-operation. Over the past 20 years valve preserving aortic root replacement has evolved into an increasing accepted alternative to composite replacement of aorta & valve. Preservation of the native valve has the obvious advantage of obviating the need for anticoagulation & its related complications. Two basic different principle of valve preserving aortic replacement are currently used, & minor modifications have been proposed for both. The aortic valve sparing reimplantation technique, first described by David et al, in 1992, was originally developed as an aortic valve sparing operation for patients with aortic valve incompetence and aneurysm for ascending aorta. Remodeling of the root was originally designed by Yacoub, & it has been demonstrated to restore root geometry and improve aortic valve competence.

At Razavi Hospital (Mashhad), valve sparing aortic root replacement is the operation of choice for any suitable patient presenting with an aneurysm of the ascending aorta, dissection of the aorta type A, Bicuspid or Marfan syndrome & aortic valve insufficiency. In our experience, valve sparing either of the Yacoub or David type can be performed safely in acute and elective