

Efficient and Safe Technique for Repair of Adult Re-Coarctation with Cardiovascular Pathologies

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Abstract

Introduction: Undiagnosed aortic coarctation discovered in the adults represents surgical challenge due to more extensive pathological changes and collateralized circulation. Although a considerable number of cases can be relieved through catheter intervention, still some cases are not suitable for this approach. Five to 30% of patients with previous coarctation repair have re-coarctation and require re-intervention and some cases are associated with concomitant cardiac pathology. Ascending to descending aortic bypass graft via the posterior pericardium allows simultaneous intracardiac repair or an alternative approach for these groups of patients.

Patients and methods: We reviewed the data of 7 patients that underwent extra-anatomic ascending to descending aortic bypass grafting through median sternotomy between February 2011 to December 2014. Concomitant procedures performed in 5 patients included the following; ventricular septal defect closure (VSD), coronary artery bypass grafting (CABG), mitral valve replacement (MVR), aortic valve replacement (AVR), and resection of a subaortic membrane. They were 5 males and 2 females with mean age 37 years ranging from 18 to 45 years old.

Results: All patients survived the operation and were alive with patent CoA bypass graft at a mean follow up of 21.6 ± 10.0 months. No graft-related complications occurred. Systolic blood pressure decreased after surgery by an average of 46 mmHg.

Conclusion: Ascending to descending aortic bypass through a median sternotomy and posterior pericardiotomy is safe technique when patients present in adulthood with re-coarctation and concomitant cardiac lesions.

Keywords: Aortic coarctation • Recoarctation • Extra-anatomical bypass • Posterior pericardiotomy

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