

Perspective of PA-RV Connection: Past, Present, Future

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ABSTRACT

BACKGROUND: However, the evolution of different right ventricle to pulmonary artery reconstructive techniques and conduits, the best possible surgical strategy is yet to be developed.

Despite Valved conduits was trying to imitating the native ventricular outflow RVOT, they failed grow and the trend of reoperation is inevitable. [1]

However, the valve less options PA-RV connection had a very high risk especially in the presence of elevated pulmonary artery pressures, several studies have shown the long durability and freedom of reoperation of PA-RV conduit (homgraft – conegra) especially in neonate, infant and childhood. [2&3]

Because of limited availability of the homografts in our country due to religious, socioeconomic and absence of law regulating organ donation the alternative heterograft especially in the small sizes had a big chance for using. Congrega was introduced commercially now and become available [4].

AIM OF THE WORK: Our study was done to assess these techniques for PA-RV connection and recent updates of their surgical alternatives Conduit focusing on their suitability for variable age as well as different pathology.

PATIENTS & METHODS: After the approval of the ethical committee in our institute Ain Shams university hospital and obtaining an informed consent from the patient's family relatives (father & mother), a total number of 11 patients of both sexes undergoing PA-RV conduit surgery using conegra (nonstented & stented) had an either variety of RV - PA pathological Discontinuity or a high risk physiological limiting factor in the duration from March 2014 to June 2016. 2 infant Fallot absent pulmonary valve (18%), 4 infant TOF – multiple MAPCAs with good sized pulmonary arteries (43%), - 3 infant TGA – VSD – PS (21%), 1 infant MGVD – VSD – POSTbanding (9%), 1 adult had severe PR post Fallot repair (9%). Postoperative we had only 1 case mortality (9%). 2 case (18%) prolonged mechanical ventilation due to acquired nosocomial pneumonia. All our patients had significant reduce the postoperative period of ventilation as well as the need of inotropic support.

CONCLUSION: The right ventricular outflow tract abnormality represented the main pathological core issue in a respected proportion of congenital heart defects. The surgical strategy RVOT reconstruction vary by age group. However, in neonates and 1 infant the use of RV-to-PA conduits is the ideal option, Congrega is the most widely used conduits to restore PA-RV connection.

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