

## **Surgical Management of Chronic Rheumatic Mitral Valve Disease in Children: Single-Center Experience**

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**INTRODUCTION** The lack of consistency in approaches to surgical care of pediatric patients with chronic rheumatic mitral valve disease is of significant concern. International reports are based on small numbers of children with mixed morphology, different age at surgical correction, patients with or without previous heart surgery and various operative techniques and materials. The purpose of this study was to assess the immediate (short-term) outcome of this subgroup at one tertiary center. The primary outcome was in-hospital mortality. Secondary outcomes included need for mitral valve reoperation (secondary repair or replacement) during the same admission, utilization of postoperative mechanical circulatory support, duration of postoperative mechanical ventilation period and length of intensive care unit stay.

**METHODS** Prospectively collected data on preoperative, operative and postoperative outcomes of pediatric patients undergoing surgical repair of their rheumatic valve(s) between 2007 and 2012 was retrospectively analyzed.

**RESULTS** Forty-four mainly African patients, screened by international medical teams, were referred for mitral valve surgery, of who 41 underwent consecutive primary rheumatic mitral valve repair. No patient had prior surgery. Only two patients (4.9%) were scheduled for primary mitral valve replacement. However, two patients needed mitral valve replacement at initial surgery. Sixteen patients underwent concurrent tricuspid valve repair and another five aortic valve repair at the primary mitral valve operation. Early death occurred in two patients with mitral valve replacement after failure to wean from heart lung bypass despite immediate use of Extra Corporal Membrane Oxygenator. Secondary outcomes included four patients who needed mitral valve reoperation (repair n=1, replacement n=3) during the same admission. Only one patient underwent aortic valve replacement at the same time as the mitral valve re-operation. The median postoperative mechanical ventilation period and intensive care stay was one day (range 1-10) and 3.5 days (range 2-25), respectively. No other death occurred before the patients returned to their referring countries.

**CONCLUSIONS** In young patients with severe rheumatic heart disease of the mitral valve, valve repair is the preferred approach. The present short term results regarding mortality and morbidity are encouraging.