Physician - Pediatric Cardiac and Vascular Surgery/Adult Congenital Heart Diseases

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Hypertrophic Obstructive Cardiomyopathy Management in the Pediatric Population: The Dilemma of Mitral Valve Replacement

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Objective: This study aimed to share our surgical experience with 10 pediatric patients with hypertrophic cardiomyopathy (HOCM).

Methods: This study included 10 HOCM patients, aged between 8 months and 18 years, who underwent surgery due to conditions such as aortic insufficiency, mitral insufficiency, significant narrowing of the left ventricular cavity, and left ventricular outflow tract (LVOT) obstruction.

Results: Two patients underwent isolated myectomy, while the remaining eight underwent myectomy combined with mitral valve replacement (MVR). Myectomy was performed via aortotomy, left atriotomy, and apical ventriculotomy. All patients had preoperative signs of systolic anterior motion (SAM) and a gradient in the LVOT. In the two patients who underwent isolated myectomy, SAM signs persisted postoperatively. Additionally, the gradient in the LVOT was measured to be higher in isolated myectomy cases compared to cases in which MVR was performed. Despite being in the pediatric age group with narrow annuli, all patients tolerated the MVR procedure with low-profile valves.

Conclusion: According to our experience, simultaneous MVR in pediatric HOCM cases requiring surgery is more effective in enlarging the left ventricular cavity and reducing the gradient in the LVOT, as it allows both the removal of the mitral valvular apparatus and the prevention of SAM. It provides a greater cavity volume gain compared to the alternative manipulation of the mitral valve apparatus. In our clinic, MVR surgery combined with myectomy is safely performed in pediatric HOCM cases.

Keywords: Hypertrophic obstructive cardiomyopathy, mitral valve replacement.

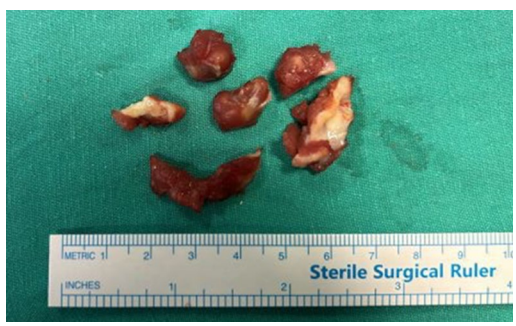

Figure 1. Image of miyocardial tissue from a patient with HOCM.

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