THE INCIDENCE AND NATURAL HISTORY OF MITRAL REGURGITATION FOLLOWING SURGICAL REPAIR OF TOTAL ANOMALOUS PULMONARY VENOUS DRAINAGE

Poster Contributions
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Background: Upon repair of total anomalous pulmonary venous drainage (TAPVD) in children, the left-sided structures face a sudden increase in preload that may alter mitral valve function. We sought to determine the natural history of mitral regurgitation (MR) following TAPVD repair.

Methods: 97 patients who underwent TAPVD repair from 2000 to 2012 were reviewed. TAPVD was supracardiac in 50 (52%), cardiac in 17 (18%), infracardiac in 16 (16%), and mixed in 14 (14%). MR was graded as: 0 - None, 1 - Mild, 2 - Moderate, 3 - Severe.

Results: No patient had moderate/severe MR prior to repair. 6 patients (6%) developed moderate MR, 5 (5%) mild-moderate MR, and 24 (25%) mild MR at intraoperative assessment. The 3-year freedom from moderate/severe MR was 88.9%. Of the 62 (66%) patients with postoperative MR, 41 (66%) had functional recovery. Compared to preoperative MR, intraoperative MR worsened, and subsequently improved at discharge, but not to preoperative levels (Fig. 1). None of the patients who developed MR required surgical reintervention. Seven (7%) patients died in the follow-up period but none were due to MR and all 9 patients who developed moderate/severe MR survived. The 3-year freedom from death was 90.4%.

Conclusions: Development of post-operative MR is a relatively common occurrence, although moderate/severe MR is less frequent. The majority of MR improved spontaneously in the postoperative period indicating the functional nature of the mechanism causing MR. Development of MR is not related to mortality.