Commentary: Functional health status after repair of transposition of the great arteries

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The arterial switch operation has become the gold standard for anatomic correction of transposition of the great vessels since the 1980s, when Yacoub,¹ Castaneda,² and others³ showed the procedure could be successfully carried out in neonatal patients. This landmark achievement was born out of decades of surgical and medical innovation, beginning in the 1950s with the first surgical atrial septectomy. Subsequent decades saw novel approaches to improve atrial level mixing with the advent of balloon atrial septostomy⁴ and the development of physiologic surgical repair through the atrial baffle procedures.^{5,6} The culmination of that experience, and the adoption of the neonatal arterial switch operation as the gold standard for anatomic correction of transposition, has led to many congenital cardiac surgery units reporting operative mortality rates less than 7%.⁷⁻⁹ As a result, there has been a shift in how the outcomes of surgical repair of transposition are evaluated, focusing more on long-term morbidity.

In this issue of the *Journal*, Jegatheeswaran and colleagues¹⁰ from the Congenital Heart Surgeons Society present a compelling study looking at longitudinal, self-reported, functional health status of patients with transposition of the great vessels who have undergone complete repair. Two features of their analysis distinguish this work from other similar reports in congenital heart disease. First, it follows the same cohort of patients longitudinally and, second, it assesses functional health status as perceived by the patient. However, it includes predominantly patients with less complex forms of transposition. Missing from the analysis, in any meaningful numbers, are patients with significant left ventricular outflow tract obstruction.

Three quality of life surveys were used to assess functional health status. The central finding was that adult patients who had undergone repair of transposition of the great vessels perceived their health to be the same as control patients regardless of the type of repair, ie, atrial baffle procedure or arterial switch operation. These results, as

Roosevelt Bryant III, MD

Central Message

Young adult patients report normal functional health status after repair of transposition of the great arteries.

See Article page 604.

remarkable as they are, have to be interpreted in the context of important limitations of study. Of the 659 patients known to be alive, there were 210 respondents included in the analysis. It is conceivable that a more robust response rate to the survey might have yielded very different results. In this regard, it is notable that 5 potential respondents to the survey were excluded due to severe cognitive deficits. This fact will hopefully encourage the authors to continue their diligence in understanding the functional health status of the 449 patients who did not respond the questionnaire. It is also difficult to know the impact of the normative data used as a control group for the respondents. Using patients restricted to the northeastern United States and a Dutch cohort as control groups may not create a broad-based population for comparison with the study group. Despite these limitations, the study is a landmark analysis for the specialty. It demonstrates that the innovative efforts of the congenital heart surgery and cardiology community continue to benefit the patients for whom these efforts were made.

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