

the aortic root dilation commonly associated with significant aortic insufficiency or the need for aortic root surgery. Several risk factors for these outcomes were noted, though no one risk factor was the same in all groups.

Perspective: Whereas the long-term outcomes of the ASO for D-TGA have generally been thought to be quite favorable, several investigators have now reported aortic root dilation and aortic insufficiency as potential clinical problems occurring in these patients over the years. This study documents the highest incidence of aortic root dilation noted in recent reports, with an occurrence of neo-aortic root dilation in 49% of the patients. Though the finding of aortic root dilation appears to be quite common, reassuringly few of the patients also had moderate or more significant aortic regurgitation and even fewer needed further surgery on the aortic root. Nevertheless, this is an important clinical finding requiring further follow-up and examination by other investigators to clarify the occurrence of aortic root dilation in patients following ASO and, more importantly, what the long-term clinical consequences of it are. SW

Extending the Boundaries of the Primary Arterial Switch Operation in Patients With Transposition of the Great Arteries and Intact Ventricular Septum

Kang N, de Laval MR, Elliott M, et al. *Circulation* 2004;110 Suppl II:II-123-7.

Study Question: Is there an upper age limit beyond which an arterial switch operation (ASO) cannot be safely performed for transposition of the great arteries with intact ventricular septum (D-TGA/IVS) because the LV is no longer “prepared” to support the systemic circulation?

Methods: A retrospective review of patients at a single large-volume surgical center included all patients with D-TGA/IVS having an arterial switch operation over an almost 17-year period. For comparisons, these patients were divided into two groups by age: those younger than 3 weeks (the early ASO group) and those greater than 3 weeks (the late ASO group).

Results: Among 380 patients with D-TGA/IVS, 105 patients had the ASO at an age older than 3 weeks, with the remaining 275 patients having early ASO. Of the late ASO patients, 4 died prior to discharge for a mortality rate of 3.8% in this group. Six of the late ASO group required mechanical support (ECMO) in the postoperative period, with 5 survivors. There was no statistically significant difference in mortality, use of ECMO nor ECMO survival between the late ASO patients and the early ASO patients. There was a significantly longer time on the ventilator and hospital stay for the late ASO patients.

Conclusions: Although early ASO is the optimal timing for surgery, the investigators suggest that it is possible to perform primary ASO successfully in infants older than 3

weeks of age, especially if there is access to mechanical support postoperatively.

Perspective: In D-TGA/IVS, once the pulmonary vascular resistance falls after birth, the LV no longer pumps at systemic pressure levels and may become deconditioned and unable to do so. This physiologic situation is why early ASO is thought to be the best course of action for patients with D-TGA/IVS. Nevertheless, late diagnosis of D-TGA/IVS occurs, or sometimes D-TGA/IVS is known but the patient is not an optimal surgical candidate owing to some resolvable problem such as prematurity or infection. The best treatment approach for these patients has been controversial. Several surgical options have been advocated including ASOs or a two-stage approach with “retraining” of the LV preceding the ASO; however, definite downsides exist to these alternative approaches. This study supports the idea that the preferred surgery, an ASO (which achieves an anatomic and physiologic repair of the congenital heart disease), can still be accomplished in most patients, even those who are older than 3 weeks of age. The late ASO can be successful, particularly when performed in a center that has access in the postoperative period to mechanical support and, by inference, also high-quality intensive care, to help get these potentially very sick patients through the immediate postoperative period. SW

Radiofrequency Ablation in Children With Asymptomatic Wolff-Parkinson-White Syndrome

Pappone C, Manguso F, Santinelli R, et al. *N Engl J Med* 2004;351:1197-205.

Study Question: Is there a role for prophylactic accessory pathway (AP) ablation in asymptomatic children who have a Wolff-Parkinson-White (WPW) pattern on the electrocardiogram?

Methods: Subjects of this prospective study were 47 asymptomatic children (median age 10 years) with a WPW pattern who underwent electrophysiologic testing and were found to have inducible atrioventricular reciprocating tachycardia (AVRT) or atrial fibrillation (AF). The children were randomly assigned either to radiofrequency ablation of the AP (n=20) or to a control group (n=27).

Results: The AP was successfully ablated in all patients in the ablation group. Three patients (15%) had a complication (transient or permanent right bundle branch block, or pericardial effusion). At median follow-up of 19-34 months, 1 child (5%) in the ablation group had recurrent AVRT, and 7 children (26%) in the control group had either AVRT or AF associated with syncope/presyncope. Another 3 children (11%) in the control group had either sudden death or ventricular fibrillation during follow-up.

Conclusions: In asymptomatic children with a WPW pattern on the electrocardiogram, AP ablation should be performed to prevent life-threatening arrhythmias if AVRT or AF is inducible during electrophysiologic testing.

Perspective: The high incidence of symptomatic arrhythmias in the control group during follow-up is quite remarkable and suggests that the researchers' criteria for identification of high-risk cases were valid. But should all children with an asymptomatic preexcitation undergo electrophysi-

ologic testing on the basis of a single, relatively small study? Perhaps atrial pacing with an esophageal lead could be used to screen for high-risk subjects who have inducible AVRT or AF, thereby avoiding the need for an invasive procedure in all children with asymptomatic preexcitation. FM