

Surgery for Aortic Coarctation in the Neonate : Results of Extended Arch Reconstruction Using either Left Thoracotomy or Mid-sternotomy.

Gabriel Amir¹, Georgy Frenkel¹, Jacob Katz⁴, Tamir Dagan³, Bernardo Vidne¹,
Elhanan Bruckheimer³, Eyal Porat², Michael Berant³, Einat Birk³

¹ Heart Surgery, Pediatric Heart Surgery, Schneider Medical Center, ² Heart Surgery, Rabin Medical Center, ³ Pediatric Cardiology, Schneider Medical Center, ⁴ Pediatric Anesthesia, Schneider Medical Center, Petach Tikva, Israel

Surgical approach to the repair of aortic coarctation in neonates evolved over time. Extended end to side has become the most commonly used technique of repair. This study evaluates our surgical approach and results in neonates following resection and extended end to side anastomosis for isolated aortic coarctation using either left thoracotomy or midsternotomy.

Patients and Methods: Retrospective analysis of all patient charts of neonates under 2 months of age that underwent repair of isolated aortic coarctation at Schneider Children's Medical Center between January 2007 and November 2008.

Results: 30 neonates were diagnosed with isolated aortic coarctation. 27 patients were operated on using left thoracotomy while 3 patients were operated through a mid-sternotomy approach due to severe hypoplasia of the transverse arch. There no operative deaths. One patient died 2 months after the operation due to severe progressive cardiomyopathy. 3 patients required re-intervention due to recurrent obstruction, one patient required intraoperative balloon aortic valvotomy. The remaining patients are asymptomatic, with no residual gradients

Conclusions: Tailored approach to the surgical repair of neonatal coarctation yields low mortality rate, low rate of residual or recurrent aortic arch narrowing. Clear criteria for using anterior approach for the repair of isolated neonatal coarctation need to be developed.