

## **Single Stage Repair of Aortic Coarctation and Ventricular Septal Defects in Neonates.**

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**Introduction:** The surgical approach to the treatment of aortic coarctation and ventricular septal (CoA VSD) defects in neonates is controversial. Some advocate initial repair of the coarctation (CoA) in the neonatal period, and a later elective repair of the VSD. Using this approach they suggest that the surgical risk is lower albeit the patient has to 2 operations through 2 different incisions. Others suggest single stage repair of both defects in the neonatal period through midsternotomy, this approach utilizes either circulatory arrest or antegrade cerebral perfusion (ACP) and is thought to be more complex and risky. For the last 2 years we have been performing single stage repair of CoA VSD. The purpose of this study is to evaluate our early results.

**Materials and methods:** Retrospective analysis of all hospitalization and clinic charts of neonates that underwent repair of CoA VSD between January 2007 and November 2008.

**Results:** 21 patients underwent surgical correction for CoA VSD. All of them had single stage repair through midsternotomy using ACP. 19 patients underwent full repair while 2 patients were banded due to VSD anatomy. One patient (2kg) had intra-operative balloon dilatation of the aortic valve. There was one operative mortality and there were no neurologic complications. 2 patients required permanent pacing due to CAVB, one patient required a Ross Konno operation due to progressive LVOTO disease one year after the initial operation. There were no significant gradients across the CoA repair upon discharge.

**Conclusion:** Single stage repair of CoA VSD can be safely performed in the neonatal period.