

## **Systemic to Pulmonary Shunting in 93 Cyanotic Neonates**

Neale Nicola Kalis, MBChB (Stell), FCP (Ped, SA), MMed (Ped)\*  
Habib Ebrahim Al-Tarief, MD, FRCS (I)\*\* Zaid Arakat, MD, FRCS\*\*\*  
Suad Rashid Al Amer, MD, DCH, SSC-P, SF-Ped (Card)\*\*\*\*

**Background:** Systemic to pulmonary shunting is still the main palliation option in many neonates with cyanotic heart disease.

**Design:** A Retrospective Study.

**Setting:** The Mohammed bin Khalifa bin Salman Al-Khalifa Cardiac Center, Bahrain Defence Force Hospital, Bahrain.

**Method:** All infants from January 1995 to December 2008 who had undergone systemic to pulmonary shunting procedures were included in the study.

**Result:** Ninety-three infants underwent 108 shunt type procedures, 39 females and 54 males. One hundred five Modified Blalock-Taussig Shunts (MBTS) and three classic Blalock-Taussig shunts were performed. Tetralogy of Fallot/Double Outlet Right Ventricle (DORV) with right ventricular outflow tract obstruction was the most common diagnosis, 51 (55%).

Early postoperative mortality was 1 (1%). Late postoperative mortality was 4 (4%); sepsis was the major cause. Early (<1 month postoperatively) shunt failure/occlusion occurred in 6 (6%) patients. Under 14 days of age at the time of shunting and shunt size of 5mm (18% versus 4.6%) were risk factors for early shunt occlusion/failure. Eight (8%) patients required late shunt revision at two months to 5 years post initial shunting. Fifty-one patients had undergone final corrective surgery.

**Conclusion:** MBTS shunting provides effective and safe palliation in small infants with complex cyanotic heart disease. Early shunting (<14 days of age), and 5mm shunt size are additional risk factors for early shunt failure.