

Systemic to Pulmonary Shunting in 93 Cyanotic Neonates

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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.