INITIAL PALLIATION OF TETRALOGY OF FALLOT: COMPARISON BETWEEN BT SHUNT AND RVOT STENT

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BACKGROUND
Neonatal repair of symptomatic infants with Fallot-type (ToF) lesions remains the exception in the UK. Initial palliation can be achieved by creation of a BT shunt, or RVOT stenting.

AIMS
To compare the outcome of BTS and RVOT stent in the palliation of TOF.

METHODS
10 year retrospective review of the outcome of 101 ToF patients who required initial palliation (RVOT stent n=60; BTS n=41) prior to complete repair. Detailed assessment of PA growth in patients with comparable underlying anatomy.

RESULTS
In the RVOT stent group vs the BT shunt group, there was a lower PICU admission rate (22% vs 100%) [p<0.001], a lower early mortality (1.7% vs 4.9%) [ns], a shorter initial hospital stay (7 vs 14 days) [p<0.004], and a shorter time to surgical repair (232 vs 428 days) [p<0.001]. In terms of PA growth after palliation, the benefit of RVOT stenting versus mBTS was +0.599 z-score for the LPA and +0.749 z-score for the RPA. Rise in oxygen saturations was greater with RVOT stenting (p=0.012). There were 3 non-cardiac deaths in the RVOT stent group and none in the BTS group. There were no deaths after correction, and comparable bypass times and rate of transannular patching / conduit use. Overall mortality was comparable (8.4% vs 4.9%) [p = 0.69].

CONCLUSIONS
RVOT stenting is a safe and effective palliation in the initial treatment of infants with symptomatic Fallot-type lesions and provides superior growth of the pulmonary arteries.