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Stenting of the right ventricular outflow tract below the pulmonary valve as a palliative measure in symptomatic neonates with TOF

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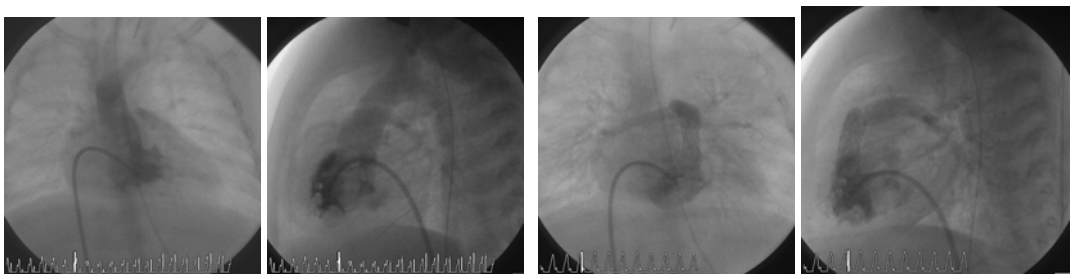
Introduction: Symptomatic neonates with tetralogy of Fallot (TOF) may require early treatment to improve oxygenation. Cyanosis in these patients is usually caused by severe infundibular stenosis, high grade valvular pulmonary stenosis, hypoplastic pulmonary arteries or a combination thereof. Conventional treatment may include balloon dilatation of the pulmonary valve, surgical shunt insertion or early repair.

Patients: We report of two symptomatic neonates with hypercyanotic spells in whom balloon dilatation was unsuccessful and severe cyanosis was caused by massive infundibular hypertrophy. Stent implantation into the RVOT was performed using premounted Palmaz-Genesis Stents (7 mm x 18 mm) and without overstenting the pulmonary valve. Immediate and persistent normalization of oxygenation occurred followed by complete relief of clinical symptoms. Elective repair could be performed thereafter.



Discussion: Stent implantation in the right ventricular outflow is a challenging procedure in neonates; however excellent relief of RVOTO may be achieved without impairing the pulmonary valve. Therefore this procedure offers an attractive alternative to palliate symptomatic newborns with TOF.