

**PDA stenting in duct dependent pulmonary circulation- 5 year single centre experience**

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**Background:** The Blalock-Taussig shunt(BTS) is considered gold standard initial palliative procedure for duct dependent pulmonary circulation in neonates but is fraught with morbidity and in recent times the mortality rate has risen throughout the world. PDA stenting is an alternative and its low morbidity and mortality makes it an attractive option. Our centre has employed ductal stenting as primary palliation for duct dependent circulation from 2011. We report our experience.

**Methods:** All patients were considered, excluding: - weight <2.5kg, presence of pulmonary artery stenosis, or spiral-type tortuous PDA on echocardiography.

**Results:** 43 patients presented from April 2011 to August 2016. 6 patients were excluded after angiography. 4 cases were abandoned due to haemodynamic instability. 33 patients underwent successful PDA stenting. The basic demographics are illustrated in table 1.

**Table 1: Patient characteristics**

PARAMETER	MEAN	RANGE
Age (days)	36.4	1-175
Weight (kg)	3.54	2.6-6.4
Flouroscopy time (min)	18.4	4-41.6
Procedure time (min)	87.4	40-153

23/33 patients had "biventricular" repair while 10/33 had "univentricular" future. Table 2 illustrates the spectrum of diagnoses and their ductal morphology based on "biventricular" or "univentricular" repair.

**Table 2: Ductal morphology**

DIAGNOSIS	BIVENTRICULAR REPAIR- Ductal morphology (N)= 23	UNIVENTRICULAR REPAIR Ductal morphology (N)=10
PA/VSD	Underside of Arch, Straight (5) Underside of Arch, Tortuous (5) From Innominate, Straight-(2)	Underside of Arch, straight (1) Underside of Arch, Tortuous (1)
PA/IVS	Underside of Arch, Straight (2)	Underside of Arch, straight (2) Underside of Arch, tortuous (1)
FALLOT	Straight (5) From Innominate – Straight (2) From Innominate – Tortuous (1)	
TGA/VSD/PS		Straight (1)
EBSTEINS+/-PA	Underside of Arch Straight (1)	Underside of Arch, Tortuous (1)
UNBALANCED AVSD		Straight (1)
TA/PA		Underside of Arch, Straight (1) Underside of Arch, Tortuous (1)

In all but 4 cases the stents were deployed from the arterial side through 4 F Mullins sheath. There were 2 early (within 30 days) and 1 late death. These were unrelated to the procedure. 2/33 patients developed femoral clots needing heparin. 2/33 needed re-intervention (1-stent, 1-balloon dilatation)

**Conclusions**

With careful case selection, PDA stenting is a safe, feasible and good alternative to BTS as an initial palliative procedure for duct dependent pulmonary circulation.