

### Timing of the Arterial Switch Operation in Late Presenting D-Transposition Following Ductal Stenting

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**Aims:** Late presentation of (prenatally undiagnosed) transposition of the great arteries (D-TGA) is common in the developing world. Methods to retrain the left ventricle (LV) include two stage BT shunt with or without PA banding, and ductus arteriosus (DA) stenting. The timing of arterial switch surgery (ASO) after DA stenting is not certain. This study attempts to ascertain the duration required to retrain the (LV) using echocardiographic parameters.

**Methods:** D-TGA patients with regressed LV who underwent DA stenting were included. Echocardiographic parameters: indexed LV mass, LVPWd, LVEDV and sphericity index were measured serially on day 0 (day of DA stenting), 3, 5, 7 and weekly till surgery. Outcomes and complications were recorded.

**Results:** 12 patients underwent DA stenting (8M). Their median age and weight were 6.5 months (range 1 - 16 months) and 5.5 kg (2.4 - 9.2 kg) respectively. ASO was performed after a median period of 34 days (range 14 - 65 days). Serial echocardiographic parameters showed improvement in sphericity index, increased LV mass  $> 35 \text{ g/m}^2$  and increased LVPWd, allowing determination of optimal timing of ASO. 10 patients are doing well. One infant died of pneumonia 1 month post ASO, and another child died suddenly 3 years post ASO.

**Conclusion:** Transcatheter DA stenting is a good technique for retraining of regressed LV in late presenting D-TGA. Transthoracic echocardiographic parameters are useful in determining the optimal time of surgery