

**Closure of perimembranous VSD using the Amplatzer duct occluder I device**

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Introduction: Transcatheter closure of perimembranous VSDs (pmVSD) has been tempered by increasing awareness of procedure-related complications, in particular AV block in young patients. In developing countries, the prohibitive cost of devices specifically designed for pmVSD closure has also limited their use. We report on off - label use of the Amplatzer duct occluder device (ADO I) in this setting.

Methods: 35 patients (20 male), median age 3.5 years (range 7 months - 17 years), median weight 14 kg (5.2 - 51), BSA 0.57 M2 (0.29 - 1.39) and median LVEDD z score of 2.6 (-0.7 to +4.9) underwent the procedure, based on a combination of clear clinical indications. In 12 patients a continuous arteriovenous loop through the VSD was developed to deliver the device (median fluoroscopy time of 41 minutes) . In 23, a direct venous approach was used (median fluoroscopy time of 25 minutes). Results: Median VSD Diameter was 6mm (3 - 9mm). Device sizes used were 6/4 (n=6), 8/6 (n=12), 10/8 (n=14), and 12/10 (n=3). Two procedures were aborted after the initial device chosen pulled through the VSD. In the remainder the VSD was successfully closed. Complete closure rates were 91% immediately, increasing to 97% at 6 weeks. No patient developed heart block upto the most recent follow-up. None had new onset aortic or tricuspid valve insufficiency. Antifailure medications were discontinued in all patients following successful closure.

Conclusions: A significant proportion of symptomatic pmVSDs in small patients can be cheaply and effectively closed with the Amplatzer ADO I device.