

**Off-label use of duct occluder devices in low-income countries to close hemodynamically relevant perimembranous ventricular septal defects: a multicenter experience.**

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**Objectives.** The off-label use of duct occluder devices to close perimembranous ventricular septal defect (pmVSD) is of interest in low-income countries. Limited data exist on this technique. We sought to evaluate the feasibility, technical aspects, and outcome of transcatheter pmVSDs closure using duct occluder devices with a single retention disc.

**Methods.** From 2010 to 2016, 222 patients (female 47.7%) were identified from databases of 5 participating institutions in whom pmVSD closure was attempted using an Amplatzer Duct Occluder I or Lifetech duct occluder device.

**Results.** Patients ranged in age from 0.7 to 52 years (median, 7.0 years; 15.8% were 2 years of age or younger). Weight range was 4.3 to 70 kg (median, 18 kg; 61.1% were less than 20 kg). The mean size of the VSD was  $6.2 \pm 1.5$  mm (median 6.0 mm). A large defect (> 6 mm) was present in 137 patients (61.7%). Device closure was successful in 218 patients (98.2%). The 10/8 mm device was used in most patients (n = 85, 38.3%), and the vascular approach was from the right ventricle in 169 patients (76.1%). There were 18 complications in 17/218 patients (7.8%). Three patients (1.4%) developed complete heart block (transient n = 2; requiring permanent pacing n = 1). Median follow-up was 6 months (6 months - 6 years). A mild residual shunt without clinical significance was seen in 10 patients at 6 months follow-up.

**Conclusions.** The immediate results of transcatheter pmVSD closure using a duct occluder device with a single retention disc are promising. It is an effective and straightforward technique with a low rate of complications.