ABSTRACT

OBJECTIVE
This study aimed to review our experience in transcatheter closure of residual/iatrogenic VSDs and to report on the 12-month outcome.

METHODS
All patients who underwent transcatheter closure of residual/iatrogenic VSDs after surgical or transcatheter congenital heart disease (CHD) interventions between January-2015 and January-2020 were included. Patients’ medical records were reviewed, and analyzed.

RESULTS
Fourteen patients with a mean age of 14.31 ± 8.81 years were included. The original diagnosis was isolated VSD in 5 (35.71%) patients, VSD/DCRV in 3 (21.43%) patients, TOF in 3 (21.43%) patients, coarctation/VSD/PDA in 1 (7.14%) patient, SAM/PDA in 1 (7.14%) patient, and AVSD/TAPVD/VSDs/PDA in 1 (7.14%) patient. The age at first intervention was 8.93 ± 7.49 years and the time since last intervention was 6.09 ± 5.16 years. The VSD was residual in 11 (78.57%) patients and iatrogenic in 3 (21.43%) patients. The VSD site was peri-membranous in 6 (42.86%) patients, high- muscular in 4 (28.57%) patients, mid-muscular in 2 (14.29%) patients, and Gerbode shunt in 2 (14.29%) patients. The QP/QS ratio was 2.45 ± 0.73, and the VSD diameter was 6.08 ± 2.10 mm. Most, 10 (71.43%) patients underwent antegrade device deployment, and 4 (28.57%) patients underwent retrograde deployment with 1 (7.14%) patient required two devices. Amplatzer™ muscular VSD devices were used in 9 (64.29%) patients and duct occluders were used in 5 (35.71%) patients with a mean device size of 8.77 ± 2.77 mm. Procedural and fluoroscopy times were 55.13 ± 16.24 and 16.25 ± 4.03 minutes respectively. During follow-up (23.31 ± 15.88 months), no patient required re-intervention or exhibited mortality.

CONCLUSION
Transcatheter closure of post-operative and post-intervention residual/iatrogenic VSDs represents a safe, and effective therapeutic approach.