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Percutaneous closure of perimembranous vsd in infants and children using amplatzer duct occluder I; Single center experience

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Background/Aim of the work: Amplatzer duct occluder I (ADO I) devices appear to be an attractive option in perimembranous (pmVSD) type. The design of the device with absent bulk on RV side appears to be suitable for pmVSDs having tricuspid tissue at the edge. In developing countries, the lack of early available and affordable surgery, and the relatively high cost of currently devices designed for VSD closure create additional problems. We report on the immediate and mid-term follow-up results of using ADO I devices to close pmVSDs in a consecutive series of young patients.

Patients & Methods: Retrospective case note review of all children referred for transcatheter closure of pm VSD using the ADO I device.

Clinical inclusion criteria: at least 3 of the following had to be present: Overt heart failure, Failure to thrive, Recurrent

respiratory infections, C/T ratio ≥ 0.55 , LA/AO > 1.5 , LVEDD z-score indexed to body surface area of ≥ 2 , QP/QS > 1.5 at cardiac catheterization, 8History of IE related to the VSD.

Morphologic inclusion criterion: Isolated pm VSD, up to 10 mm minimum diameter by TTE.

TEE: to describe the anatomical position of the VSD, the distance to important structures such as the aortic valve, the diameter of the defect at the LV and RV sides, the shape of the defect and the presence of tricuspid tissue from the septal leaflet trying to estimate the needed device size.

Conclusion: the transcatheter closure of pm VSD with Amplatzer ductal occluder I was successful in 95% without any residual flow or heart block. ADO I is safe and effective for transcatheter closure of pmVSDs in symptomatic infants and children. The device is affordable and widely available.

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