

TRANSCATHETER RECONSTRUCTION OF SUBAORTIC RIDGE WITH CLOSURE OF PERIMEMBRANOUS SUBAORTIC VSD WITH OR WITHOUT AR

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BACKGROUND

Subaortic ridge (SAR) is almost always a progressive disease and recurrence after surgery may occur in nearly one third of patients.

PURPOSE

To evaluate the safety and efficacy of management of perimembranous (PM) ventricular septal defect (VSD) and SAR with or without aortic regurgitation (AR) using the ADO type I.

METHODS

During the period from 1/2/2014 to 1/10/2016, 29 of 318 patients (9.1%) with PM VSD were found to have a SAR. The same protocol for catheter closure of PM VSD under TTE was done. The aortic disc of the device was pulled toward the defect capturing and/ or compressing the ridge against the ventricular septum.

RESULT

The patients age ranged from 1.5-35 years (mean=6.1years) and their weight ranged from 7-73 kg (mean=16kg). Those patients almost always have VSDs with complex anatomy including their close proximity to the aortic valve with 20-30% of malalignment, prolapsing RCC &/or NCC was found in 22 patients (75.8%) with mild-moderate AR in 11 patients (38%) whose TTE follow up revealed improvement in the severity of the AR. Obstructive SAR was found in 8 of 29 patients (27.6%) with the mean LVOT PG of 25mmHg. Successful VSD closure with capturing and/ or compressing the SAR was achieved in 24 patients (82.7%). Five patients underwent failed trial due to deficient aortic rim in two patients and increased severity of AR in the other 3 patients.

CONCLUSION

Transcatheter closure of PM VSD with SAR using ADO type I is safe and effective with the very low incidence of complications.