



SHORT-TERM OUTCOME OF TRANSCATHETER CLOSURE OF VENTRICULAR SEPTAL DEFECTS BY OCCLUTECH DEVICE

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Background:

Ventricular septal defect is a common congenital heart defect. Transcatheter closure of ventricular septal defect (VSD) is an effective method alternative to surgical closure. The aim of the study is to evaluate the procedural result, early and short-term follow-up outcome of transcatheter closure of VSD by Occlutech device.

Methods:

From January 2021 to June 2022, we retrospectively identified the patients who underwent transcatheter device closure of VSD. All patients underwent transthoracic echocardiography (TTE) and electrocardiogram (ECG) before and after the procedure. Follow-up evaluation was done at 1, 2, 6 and 12 months thereafter with TTE.

Results:

Total 38 patients had catheter-based intervention of VSD (2 outlet-type VSD and 36 perimembranous VSD). The mean age at the time of procedure was 36.9 ± 38.6 months (range 8 months ~ 168 months) and the mean weight was 13.1 ± 7.4 kg (range 5.9 ~ 40 kg). 21 patients (55,2%) had body weight less than 10 kg at the time of procedure. The mean size of waist of the implanted device was 4 mm. The device was successfully implanted in 37 patients (97,4%). Immediate post-procedural echocardiography showed complete occlusion in all but 7 patients (18,4%) had trivial residual shunt, which disappeared 2 months later. During the procedure, only one patient (2,6%) had transient bradycardia due to delivery system, which improved dramatically right after the device deployment. Total early adverse events occurred in 3 patients: transient mild tricuspid regurgitation but recovered completely after 1 month follow-up (7,9%). No patient had significant, complete AVB nor mitral nor aortic valve regurgitation. During a median follow-up period of 8 months (range 1 ~ 12 months), no serious adverse events and complete AVB were encountered.

Conclusions:

In our experience, the incidence of serious adverse event is extremely low and no late onset of complete AVB with excellent success rate and follow-up results, confirming the transcatheter closure of VSD by Occlutech VSD device is a valuable alternative to surgical closure in selected patients.

