SHORT AND INTERMEDIATE TERM SAFETY AND EFFICACY OF PERCUTANEOUS DEVICE CLOSURE FOR SECUNDUM ATRIAL SEPTAL DEFECTS USING OCCLUTECH FIGULLA OCCLUDER N

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BACKGROUND

Transcatheter closure has become the method of choice for most patients with secundum ASD. Although the Occlutech device may have some advantageous characteristics there is a paucity of data on outcomes after the use of this relatively new device.

OBJECTIVES

To investigate the safety, effectiveness & hemodynamic effects of percutaneous atrial septal defect (ASD) closure using the Occlutech® devices in a prospective trial.

METHODS

Observational, single arm study including 111 patients who underwent ASD closure between October 2013 and December 2015. Device performance, immediate, short and intermediate-term outcomes were assessed.

RESULTS

Median age and ASD size were 7.8 years (8 months–59 years) and 16.5 mm (4.8–38 mm) respectively. Deficient or absent retro-aortic rim was observed in 30 patients (27%). All patients had dilated right side chambers. Pulmonary artery systolic pressure > 35 mmHg was observed in 57 (51%) patients who had significantly larger ASDs (p=0.009) and larger RV lengths (p=0.006). Implantation of Occlutech device (mean size of 19.4±8 mm) with successful closure was reported in 95.5%. Closure success was linked to larger IVC rims (p = 0.009). An IVC rim ≥ 7.2 mm is 97.1% sensitive, while IVC rim ≥ 11.2 mm is 100 % specific for closure success. Median follow-up of 6 months was obtained in all patients. Successful closure lead to significant regression of RV & pulmonary artery dimensions at 1, 3 & 6-months follow up (p<0.001).

CONCLUSIONS

Transcatheter closure of secundum ASDs using the Occlutech septal Occluder is safe, and effective in children, adolescents, and adults. The device performed well in a wide range of anatomical scenarios resulting in excellent short and intermediate-term outcomes. Sufficient IVC rim is the most important factor in predicting successful closure.