Transcatheter closure of atrial septal defects in children and adolescents: a single center experience with the occlutech figulla septal occluder

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Background: The aim of this study was to evaluate the efficacy and reliability of the Occlutech Figulla Septal Occluder (OFSO) device in children and adolescents with isolated secundum atrial septal defect (ASD).

Methods: We reviewed the clinical records of 70 patients who underwent percutaneous closure of ASD with an Occlutech OFSO between May 2012 and May 2017.

Results: OFSO was applied to 70 patients during the study period and the results were analysed in this study. Forty-seven of the patients were girl and 23 of them were boy. The median age of the cases was 7 year (range; 4-16 year) and the median weight was 21 kg (range, 12 kg-75 kg). 69 patients (98.5%) underwent successful ASD closure with the OFSO. Transoesophageal echocardiography showed complete closure in 68 patients (98.5%) following the procedure, minimal residual shunt in 1 patients (1.5%). Color flow Doppler echocardiography at 12 month after postimplantation showed that complete closure was achieved in this patient. All patients (100%) had complete closure at 12th months of follow-up. No cardiac rupture, device embolisation, thromboemboli or procedure-related deaths were observed.

Conclusion: The results of this study showed that transcatheter ASD closure with OFSO is a safe and effective method. Although the total closure and complication rates with OFSO are similar to those of ASO, the procedure time is shorter and the radiation exposure is less.