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**Safety and efficiency in transcatheter closure of atrial septal defect (ASD) using Cocoon Septal Occluder.**

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Introduction: Transcatheter closure of secundum type of atrial septal defect (ASD) is currently considered the first-choice therapeutic option. Various Amplatzer modifications are currently available on the market. The aim of the study was to evaluate feasibility, safety and efficiency of percutaneous ASD closure using Cocoon Septal Occluder (Sanare Company, Philippine) in our institution during the short term follow-up. It is made of nitinol wires covered with platinum using nano fusion technology to prevent nickel release from it.

Methods: There were 33 (28 F) patients in whom transcatheter closure of ASD was made from 26.06.2017-27.11.2017 in Silesian Centre for Heart Diseases in Zabrze, Poland. The indications for atrial septal defect closure were: right ventricle enlargement and hemodynamically significant left-right shunt. Mean weight of patients who underwent transcatheter closure was  $33,9 \pm 25,3$  kg (range 8-92 kg) and age  $13,85 \pm 17,7$  years (range 1,3-65 years) respectively. Transcatheter closure of ASD was conducted in all patients using Cocoon Septal Occluders (CSO)

Results: The devices were implanted successfully in all patients. Mean ASD diameter in patients, who underwent transcatheter closure in TEE was  $12,14 \pm 4,1$  mm (single ASD). There were 8 patients with multiple ASD. Mean implant size was  $14,7 \pm 4,5$  mm (range 8 – 26). Balloon calibration were made in 14 patients. Mean stretch diameter of ASD in these cases was  $16,6 \pm 4,25$  mm (range 10 – 24). Mean fluoroscopy time was  $5,6 \pm 2,6$  min (range 2-12). In 3 patients minor complications occurred: atrial fibrillation (n = 1), arteriovenous fistula (n=1), short term fever after procedure (n = 1). Mean follow-up time was 5 months. During this time no complications were observed.

**Conclusions:**

Percutaneous closure of ASD using Cocoon Septal Occluder is safe and effective procedure, however long-term follow-up is needed.