TRANSCATHETER CLOSURE OF ATRIAL SEPTAL DEFECTS IN PAEDIATRIC PATIENTS WITH THE NIT-OCCLUD ASD-R DEVICE

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OBJECTIVE
To describe our experience with the Nit-Occlud ASD-R (NOASD-R) device for percutaneous closure of ostium secundum atrial septal defects (OS ASD) in a paediatric population.

PATIENTS
66 patients (41 female)  
Median age: 5 y [ICR: 3.7-9]  
Median weight: 19.7 Kg [ICR: 15.5-28.5]

DEFECT
Mean ASD diam: 11.5±3.7 mm  
Multiple defects: 8 pt (12.1%)  
Deficient aortic rim: 19 pt (28.8%)

DEVICE/PROCEDURE
Mean 2D diam / weight: 0.59±0.3  
Mean device size: 14 mm [ICR: 10-16]  
Mean device size / 2D diameter: 1.19±0.18  
Median fluoroscopic time: 7 min [ICR: 5-11.7]

SUCCESS/COMPLICATIONS
Successful implantation: 65 pt (98.5%)  
No major complications  
Minor complications: 4 pt (6%)  
1 SVT (resolved)  
1 first-degree AV block (resolved)  
1 second-degree AV block (resolved)  
1 AV femoral fistula

FOLLOW-UP (27.3±15.7 months)
Small pericardial effusion (resolved within 1 month): 2 pt  
Residual flow through the device at 24h: 20 pt (30%)  
Complete occlusion at last follow-up: 64 pt (97%)  
NO: erosion, embolization, endocarditis, neurologic events, death

CONCLUSIONS
• Closure of OS ASD with the NOASD-R device is safe and effective in the pediatric population.  
• Most patients had short-term intra-device residual flow but the definitive closure rate is high.  
• Implantation success is high with no major complications in the short and medium-term.