Amplatzer Duct Occluder II Additional Sizes (ADO II AS; AGA Medical, Plymouth, MN, USA, now Abbott AGA Medical, Plymouth, MN, USA, now Abbott) was introduced in 2011 next-generation self-expanding nitinol wire mesh device, designed to address percutaneously medium to large patent arterial ducts (PDA) in small children (1). Low-profile retention discs, which do not protrude in the aorta and pulmonary artery and only 4 Fr delivery system make it suitable not only for low body weight infants (2), but also for older patients (3). The literature about off-label ADO II AS use is scarce (4; 5).

To date, ADO II AS has gained the CE mark for use in Europe, but not FDA approval in the USA.

Objective
To report early and midterm results of label (PDA) and innovative off-label transcatheter application of ADO II AS in young patients.

3. Results
All procedures but one were successful (99.2%). In a 5.6 kg infant with huge A-type PDA (aortic ampulla of 6.5 mm) a stable position of occluder was achieved with neither ADO II AS 5 x 6 mm nor Amplatzer Duct Occluder 1.6/4 mm (AGA; successful surgery 1 month later). There were transient access site complications in 3 pts (pulse loss followed by heparinization in all, additionally successful alteplase administration in a 4.6 kg patient), groin haematoma in 4 pts and transient bifascicular block in one pt after 3 mm perimembranous VSD closure with ADO II AS 5 x 2 mm (disappeared after steroids therapy) observed in peri-procedural period.

The median follow-up was 12 months (1-48 months; 121 pts in follow-up) with no procedure-related complications as embolization, protrusion into pulmonary artery or descending aorta, infective endocarditis and death.

Insignificant residual shunt was observed in 2 pts with postoperative ventricular septal defect with no need for reintervention.

4. Conclusions
ADO II AS is an effective and safe occluder with lower residual shunt rate in comparison to coils, which could be used not only to close different types of PDA in infants and small children, but also in adolescents and adults.

Furthermore, off-label ADO II AS application in properly selected ventricular septal defects or extracardiac shunts is possible.

REFERENCES

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