

The only venous access of transcatheter duct closure in children below 10 kilos.

Kusa J., Ras M., Czesniewicz P., Nahirny R.

Wroclaw Regional Hospital Paediatric Cardiology Department Wroclaw Poland

Introduction: The least invasive method of PDA closure is transcatheter method. However especially in the youngest group of patients (below 10 kg year of life) there is a significant probability of vascular complications, mainly arterial damage. The aim of study is preliminary presentation of our experience with PDA closure solely with venous access.

Materials and methods: In our center 98 ducts were closed with ADO in 2003-2012. In the last year 5 patients aged 9-14 months were enrolled in to interventional PDA closure with only venous access. The diameter of the ducts were 2,6-3,5 mm. From the venous access after location of the catheter in the way that part of the holes stayed in pulmonary artery and the second part in aorta angiography was performed. Later the proper sizes of implants were chosen basing on the measurements from that injection of contrast. The device was deployed in a standard manner but the procedure and final results were evaluated solely with echocardiography.

Results: Among all 5 patients enrolled into the PDA closure there were 4 patients who had PDA closed with ADO 6/4. There was one case of the complete duct constriction after introduction of PIG into the duct which resulted with inability of the precise PDA measurement and its morphology assessment. Because of that complication we had to add the arterial access and after the removal of the catheter from the duct there was an aortography performed. After 10 minutes the duct has dilated and then it was closed with PDA ADO occluder 6/4. The short and mid- term results are good – after 7 months of observation all patients are in good condition with PDA closed with echo assessment. In all the patients we observe complete normalization of the left chambers.

Conclusions: Transcatheter occlusion of the persistent arterial duct without an arterial access is the effective and safe method of treatment allowing to reduce the complications connected with the artery puncture. The possible complication of this method may be the constriction of the duct as the result of multiple maniof the catheters within the duct during the procedure.