

**Closure of the patent ductus arteriosus with the new Duct Occluder II additional sizes device**

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**Objective:** The objective of this study was to evaluate the technical feasibility, safety and efficacy of the new device Amplatzer duct occluder II additional sizes (ADO II AS) for closure of patent ductus arteriosus (PDA).

**Background.** Transcatheter device closure is the standard care for PDA. Currently available technology is not designed for closure of small PDA in young children.

**Methods:** From April to September 2011, 11 children (7 females, median age 2 years, median weight 11.4 Kg) underwent PDA closure with the ADO II AS. Ten had isolated PDA, 1 had PDA associated with preductal coarctation. There were 4 type A, 3 type C, 1 type E and 3 type D PDAs. We evaluated early and short-term results.

**Results:** All but two PDAs were closed via an antegrade approach. Mean fluoroscopy and procedural times were 8.0+3.9 and 49.8+27.9 minutes. Mean radiation dose was 5038 + 944.9 Gy/cm<sup>2</sup>. No complications occurred. Immediate trivial residual shunt was present in 1 patient. In all devices the retention discs laid flat against the walls of the pulmonary artery and aorta, without protrusion into the vessel lumen. The echocardiography performed after 24 hours did not show any residual shunt. At a median follow-up of 2 months the PDAs were completely occluded without obstruction of the pulmonary arteries or aorta.

**Conclusions:** The new device ADO II AS was safely deployed with complete resolution of the PDA shunt. The lower profile and symmetry of this device allows for venous or arterial approach and smaller delivery catheter size. The ADO II AS proved to be suitable to several anatomical types and might be a preferable alternative for closure of small-moderate PDAs.