MP4-2

Percutaneous Closure of Arterial Duct with Amplatzer Duct Occluder II Additional Sizes in a high-volume tertiary referral centre

Santoro G., Mahmoud H.T., Gaio G., Giordano M., Palladino M.T., Iacono C., Di Nardo G., Esposito R., Argiento P., Fratta F., Morelli C., Ricci C., Russo M.G.
Paediatric Cardiology, A.O.R.N. "Ospedali dei Colli", 2nd University of Naples, Naples, ITALY

INTRODUCTION. Transcatheter closure of AD remains challenging in low body weight patients and those who have a persisting shunt following a previous attempt at interventional closure. Recent technical advances in device design may address these issues. This study aimed to report a large, single-center experience of percutaneous arterial duct (AD) closure using Amplatzer Duct Occluder II Additional Sizes device (ADO II-AS)(St. Jude Medical Corp, St. Paul, MN, USA).
METHODS. From May 2011 to October 2016, 113 patients underwent attempted percutaneous closure of AD with ADO II-AS at our Institution. Mean age and weight were 4.8±8.1 years (range 0-48) and 21.4±20.6 kg (range 3-93), respectively. Fifteen patients (11.5%) were ≤6 kg (age 3.5±2.0 months; weight 4.7±1.1 kg). Arterial duct morphology was type A in 65 (57.5%), type B in 1 (1%), type C in 33 (29.2%), type D in 7 (6.1%) and type E in 6 patients (5.3%), respectively. Arterial approach was used to negotiate and deploy the occluding device in 103 patients (91.2%).
RESULTS. AD diameter was 2.2±0.6 (range 1.5–4.5) resulting in QP/QS of 1.9±0.7 (range 1-3.3). Mean pulmonary artery pressure and PA/aortic pressure ratio were 19.3±5.0 mmHg (range 12-38) and 0.34±0.14 (range 0.14-0.95), respectively. Successful device deployment was achieved in 110 patients (97.3%). Neither procedural morbidity nor mortality was recorded. Immediate, 24h and mid-term (30±17 months) complete occlusion was recorded in 71%, 98.1%, and 100% of patients, respectively.
CONCLUSION. In our experience, trans-catheter closure of AD of different sizes and morphologies using ADO II-AS is highly feasible, safe and effective also in challenging anatomic/clinical settings.