Percutaneous device closure of large patent ductus arteriosus in the very young

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The practice of percutaneous interruption of ductal shunt continues to evolve with the advent of novel occlusive materials. These evolutions have advanced the frontiers for interventional paediatric cardiologists, allowing them to undertake percutaneous ductal shunt interruption in progressively younger paediatric patients.

We report the case of a 3 month old baby symptomatic and failing to thrive with a large patent ductus arteriosus (PDA), measuring 4mm in diameter. The birth weight of the baby was 3kg and weight at 3 months was 2.9 kg. Elective percutaneous device closure of the large PDA was successfully undertaken with complete abolition of the ductal shunt using a 4/4 mm Amplatzer Duct Occluder II - ADO II. (AGA Medical Corporation, Nathan lane, North Plymouth, USA). The device was deployed across the ductus from the retrograde approach through the 4Fr ADO II device delivery system. (AGA Medical Corporation, Nathan lane, North Plymouth, USA). There was no flow obstruction in the descending aorta or left pulmonary artery. The baby exhibited immediate clinical improvement allowing withdrawal of anti-failure medications.

The device design of ADO II lends itself favourably for successful percutaneous closure of large PDA in small babies weighing <3kg without any vascular complications.