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## Stenting of branch pulmonary artery stenosis after surgical correction in children under 14 kg

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**Background & Purpose:** In infants and young children with congenital heart disease, post-operative branch pulmonary artery stenosis is a major cause of morbidity and mortality. While angioplasty is a standard treatment option, high rates of restenosis is reported. We report our experience of using stents to treat branch pulmonary artery stenosis in small children (<14 kg).

**Materials & Methods:** From November 2014 to December 2016, percutaneous stent implantation was performed in 15 small children (10 males and 5 females) with mean weight of 9.6±3.3 kg (2.2 kg-13.9 kg), mean age 2.2±1.5 years (1.5 month-5 years). Stents used included the Valeo Vascular stent, Palmaz Genesis XD, and genesis stent pre-mounted on OPTA PRO via 6 Fr-8 Fr Cook sheath. One patient had a left pulmonary artery occlusion; other 14 patients had pulmonary artery ostial and proximal stenosis after cardiac surgery.

**Results:** Interventional correction was successful for all 15 patients. Valeo Vascular stents were implanted in 10 patients, Palmaz Genesis XD stents in 4, and Genesis stent pre-mounted on OPTA PRO in 1. One patient required a second stent due to residual ostial stenosis. The minimum diameter post stent increased from 2.6±1.3 mm to 7.5±1.4 mm. Mean right ventricular to pulmonary artery gradient decreased from 62±10.4 mm Hg to 19±4.3 mm Hg. Five infants who required mechanical ventilation prior to stenting was successfully weaned off in 1-3 days.

**Conclusion:** Stent treatment of post-operative branch pulmonary artery stenosis in children under 14 kg is safe and effective, and may shorten mechanical ventilation support post operatively.

### Biography

S U Kadirova works in the Department of Pediatric Cardiology at the University National Research Center for Cardiac Surgery, Kazakhstan. She has many published papers in reputed journals. She is a Leading Expert in Structural Heart Interventions at NCRC and her research interests mainly deals with Minimally Invasive Procedures.

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