
DUCTAL STENTING BEYOND NEONATAL PERIOD: IS IT ACCEPTABLE AS A SUBSTITUTE TO A SURGICAL SHUNT

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OBJECTIVES

Ductal stenting is increasingly used as a substitute to surgical shunt in neonates due to lesser traumatic burden and complication rate. Reported uses of this method in older patients are rare. If effective, it may be reasonable to use it in older patients as well.

MATERIALS

Since February 2014, we have used ductal stenting to increase pulmonary blood flow in seven patients older than 2 months with pulmonary atresia and ventricular septal defects (3–96 months old, median 14). Cobalt-chromium stents were used in all patients due to their excellent trackability (either peripheral Palmaz Blue or coronary Kaname stents). Five stents were implanted via femoral artery and two from axillary artery.

RESULTS

Oxygen saturation increased between 7 to 35% (median 20) after stenting. The older patients had the worst results. In the oldest patient, we could only stent the distal ductus arteriosus due to the narrow aortic side. A major aortopulmonary collateral artery stenting made the procedure favorable. The next oldest (59 months) had a tight obstruction at the middle of the duct, which could not be dilated with a high pressure balloon (14 atm). The third patient (22 months) developed a waist at the middle of the stent, which was relieved by a high pressure balloon at a second catheterization.

CONCLUSION

Ductal stenting can be a good substitute for surgical shunts in patients younger than 2 years.