Deliberate dilatation of the meshwork of CP-Stents - creation of adequate flow to overstented vessels

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Introduction: The implantation of stents has become a routine interventional procedure for stenotic lesions in pediatric cardiology. However, the area of branching blood vessels is particularly difficult and “overstenting” may impair blood flow. We report our initial experience in deliberate dilatation of the meshwork of CP-stents to overcome this problem.

Patients: Two patients had a CP-stent placed to treat left sided pulmonary artery stenosis and the stent length necessary for secure placement necessitated overstenting of the right pulmonary artery. In the third patient treatment of aortic recoarctation required overstenting of the left subclavian artery. In all patients flow impairment occurred, partially due to the underlying anatomy and vessel distortion. In all patients, the meshwork was crossed and sequential balloon dilatation using high pressure balloons was performed. Fracture of the welding points of the CP-stent was achieved and flow obstruction was resolved thereafter.

Discussion. The use of the CP-stent may offer specific possibilities when treating stenotic vessel areas with important side branches. Deliberate dilatation of the meshwork is possible with the use of high pressure balloons.