

Interventional catheterisation after total cavopulmonary connection: experience in 68 patients.

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Introduction. Total cavopulmonary connection (TCPC) is performed in patients with single ventricle to allow the passive flow of systemic venous blood to the lungs. In this population interventional catheterization is needed to treat residual defects or complications. We discuss our results concerning 68 patients.

Patients and methods. From January 1995 to December 2010, 68 patients had TCPC. There were 2 early take-down and 5 deaths (7.4%). 3 patients were lost at follow-up, 58 are regularly evaluated. Mean age at TCPC was 5 years (2.5-18); mean interval between TCPC and catheterization 5.6 years (1.5-15). One patient had severe protein-losing enteropathy and one plastic bronchitis. All patients underwent catheterization because of cyanosis or after > 10 years from TCPC.

Results. 55 catheterizations were performed in 47 patients. 16 patients (34%) evaluated after a median period of 8 years (4-15) from TCPC had low venous pressure, absence of right to left shunt and did not need any intervention. Oxygen saturation was significantly lower in patients requiring interventional catheterization (90.5±4.8 and 93.1±5.2 and p=0.003). Interventions, performed in 31 patients (66%) consisted into: fenestration closure (n=15), embolization of venous vessels prompting right to left shunt (n=14), stenting or reconnection of pulmonary arteries (n=4), stenting or reconnection of systemic veins (n=8), other procedures (n=3). In two patients the fenestration could not be closed because of high venous pressure. After interventions oxygen saturation increased from 90.5±4.8 % to 94.73±3.6 % (p=0.002).

Conclusions. Our data show that an unexpected high proportion of patients with TCPC are doing well late after TCPC. However, the majority of patients continue to need interventions generally aimed to suppress stenoses at various levels of TCPC or vessels prompting right to left shunt. This population should enter into a multicenter program aimed to identify patients at risk.