

Bidirectional Cavopulmonary Anastomosis

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Abstract

The Fontan operation has been used to palliate patients with a functional single ventricle. In many such patients the operative risk for a Fontan procedure is high. The bidirectional cavopulmonary anastomosis (BCPA) is a useful intermediate palliative procedure before Fontan correction. It may reduce the deleterious sequelae of chronic hypoxaemia and long-term ventricular overload, thus yielding a more suitable Fontan candidate.

We reviewed our experience of 9 patients with univentricular hearts who were at the time of the BCPA not considered suitable candidates for conventional Fontan operation. Two patients had double inlet right ventricle (DIRV) with pulmonary stenosis (PS) and ventricular septal defect (VSD), 2 had univentricular heart, 4 had tricuspid atresia (TA) and hypoplastic right ventricle (RV), 1 patient had atrioventricular septal defect (AVSD) with double outlet right ventricle (DORV) with hypoplastic RV. Two of the 9 patients had bilateral superior vena cavae. All except one had undergone prior palliative operations. The mean age at BCPA was 4.7 years (range 1.5 years to 6 years) and the mean weight at surgery was 15 kg (range 7 to 22 kg). There were no operative deaths. The mean hospitalization stay was 8.5 days (range 5 to 13 days) with a mean follow up of 14 months. Median oxygen saturation improved from $78.7 \pm 6.3\%$ to $85.9 \pm 3.9\%$. The BCPA is a useful palliative procedure to stage Fontan type reconstruction in selected patients with univentricular hearts.

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