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Palliative Potts anastomosis for primary pulmonary hypertension in children: mid-term results.

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Despite permanent progresses of medical treatments, primary pulmonary hypertension in children (PPHTC) remains a not curable disease with a severe prognosis. Moreover, permanent intravenous treatment is particularly unacceptable for the quality of survival at this age.
Background:
In May 2004, it was decided to try a surgical palliative treatment: anastomosis from the descending aorta to the left pulmonary artery without cardiopulmonary bypass. The reason of this attempt was the relatively good prognosis of Eisenmenger syndrome with large patent ductus arteriosus.
Objectives:
To know the risks of that surgery and the mid term results of the first cases.
Methods:
From 06/05/2004 to 23/03/2007, six children underwent Potts anastomosis for PPHTC. Age were from 2.4 to 11 years, weight from14 to 23 Kg. All were NYHA IV. All received Bosentan, all but two intravenous permanent prostacyclin and one Revatio.
Immediate results:
No death occurred during operation.
One child died at D12 with staphylococcus infection and major cyanosis: it was the child with Bosentan monotherapy.
Mid term results:
No death occurred during a mean follow-up of 4 years and 2 months. For the 5 surviving patients, functional status increased from NYHA IV to NYHA I (3 pts) and NYHA II (2 pts). Intravenous prostacyclin therapy was stopped for 3/4 pts who received it before. Potts anastomosis remained large with right to left shunt and same pressure in pulmonary arteries and aorta. Oxygen saturation in inferior limbs is stable, from 88 to 72 %. All have mild to moderate polycythaemia.
Conclusion:
Surgical Potts anastomosis is a palliative solution for PPHTC with an acceptable perioperative risk and a good midterm result.