

P-252

Postcardiotomy ECMO in pediatric patients: excellent outcomes in a contemporary series

Melo M., Aguilar Jimenez J.M., Garcia Torres E., Rojas Bermudez C., Belda Hofheinz S., Boni L. Hospital Universitario "12 de Octubre", Madrid, Spain

Introduction: A percentage of patients undergoing cardiac surgery requires a circulatory and respiratory support with an Extracorporeal Membrane Oxygenation (ECMO) device for a variable period, due to an insufficient reaction to maximal conventional therapy in the immediate postoperative period.

Methods: From 2009 to 2018, 80 pediatric patients required ECMO in our institution. 44% of them were new-borns, with an average age of 15.4 months and a weight of 6.9 Kg. The most common univentricular physiology was HLHS (6 patients), whereas regarding biventricular correction it was Transposition/Taussig Bing Type (9), followed by biventricular correction of Hypoplastic Left Heart Complex (8). The main indication (60%) was an impossibility to wean the patient from Extracorporeal Circulation.

The variables that have been analyzed were: sex and age of the patients, cardioplegia solutions types, neonatal age, patients physiology, extracorporeal circulation and cross-clamp time, left vent drainage, hemofiltration in the postoperative period, reinterventions during ECMO assistance, long-term ECMO (> 5 days), Ecmo indications, need for a second ECMO after weaning from the first one, postoperative complications.

Results: Of the 80 patients, weaning from the ECMO was achieved in 78% of the patients, with a survival rate of 66%. The Last ELSO data of July 2018 report 68% of weaning with a survival rate of 52%.

The risk factors associated with mortality in the univariate analysis were: Neonatal age ($p=0,013$), univentricular physiology ($p= 0,004$), hemofiltration in the postoperative period ($p=0,011$) and between the postoperative complications, only the neurological ones ($p=0,05$).

On the multivariate analysis, risk factors were Neonatal age ($p=0,02$) and Univentricular Physiology ($p=0,03$).

During the Ecmo period, there were noticed residual lesions that needed some kind of interventions (by surgery or catheterism) in 47% of the patients.

Conclusions: We herein report a series of postcardiotomy ECMO in pediatric patients with good results in terms of weaning and survival. Almost half of the patients needed some kind of reintervention, hence it is very important looking for postoperative residual lesions.