Intermediate-Term Results of Extracorporeal Membrane Oxygenation Support Following Congenital Heart Surgery

Syed M. Peer; Dominic A. Emerson; Michael K. Shu; David Zarakowski; Richard A. Jonas; John T. Berger; Dilip S. Nath
1. Cardiovascular Surgery, Children's National Medical Center, Washington, DC, United States.
2. Critical Care Medicine and Cardiology, Children's National Medical Center, Washington, DC, United States.
3. Departments of Anesthesia and Surgery, Boston Children's Hospital, Boston, Harvard Medical School MA, United States.

There is considerable data regarding in-hospital results of congenital heart surgery patients requiring post-cardiotomy extracorporeal membrane oxygenation (ECMO) support; however there is limited information on mid-term outcomes.

Materials and Methods

• Single institutional retrospective review
• 25 consecutive post-cardiotomy ECMO patients surviving to hospital discharge
• January 2003 to June 2008

Primary endpoint
• Survival at last follow-up

Secondary endpoints
• Neurological deficits
• Renal injury
• Respiratory failure
• Unplanned cardiac re-interventions
• Unplanned hospitalizations
• Postoperative medical technology dependence
• Systemic Ventricular Function at follow up

Conclusion

Intermediate-term post-cardiomy ECMO patient survival encouraging
Neurological impairment and unplanned cardiac re-interventions remain significant concerns

Background/Hypothesis

Results

Secondary End Points

Postoperative Medical Technology Dependence

Unplanned Cardiac Reinterventions

Unplanned Hospitalizations: 47% (n=9/23)