

## **Neonatal and Pediatric Extracorporeal Membrane Oxygenation in**

**Queen Sirikit National Institute of Child Health.**

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**AIM:** Extracorporeal Membrane Oxygenation (ECMO) has become an established therapy in pediatric age group, most often post cardiac surgery. Our unit has done cardiopulmonary bypass with complex congenital heart diseases. We have organized the ECMO life support for helping our patients who have cardiopulmonary problems after open heart surgery. The reason for this presentation is to review our cases.

**Methods:** We performed a retrospective review of 27 patients who had been treated with the ECMO life support.

**Results:** From 2010 – 2012, 27 patients were treated with the ECMO. 14 patients have done the ECMO in the operative room and 13 patients in the ICU (emergency). The ECMO modalities were VA-ECMO 24 cases (Right atrium – Aorta 8 cases, Right atrium – Carotid artery 6 cases, Jugular vein - Carotid artery 4 cases, Femoral vein - Femoral artery 3 cases, Femoral vein - Carotid artery 3 cases, Femoral vein - Carotid artery 3 cases) and VV-ECMO 3 cases (Femoral vein – Jugular vein 3 cases). Mean age and body weight of 4 neonates were 17.25 days and 3.05 kg. Twenty three paediatrics had mean age 644 days and mean body weight 6.8 kg. There were 5 cases of modified Norwood's operation, 3 cases of Truncal repair, 3 cases of Rastelli's operation, 2 cases of arterial switch operation and 14 cases of other operation. The reasons for supporting were low cardiac output 18 cases, poor LV function 6 cases, severe pneumonia 1 case, respiratory failure 1 case and lung complication 1 case. Peritoneal dialysis was performed in 25 cases while continuous renal replacement therapy (CRRT) was done in 2 cases. Redo ECMO was performed in 1 case about 4 hours after weaning of ECMO. Thirteen cases were successfully wean of the ECMO. The mean ECMO time for these cases was 121.07 hours. Four cases died after discharge ( 2days in 2 cases, 6days and 10 days ). 14 cases died during ECMO. The mean ECMO time in these cases was 122.4 hours.

**Conclusion:** Although there is high mortality rates and high cost in ECMO, this advance technology can save life in some cases and reduce anxiety of patient's parents .

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