

## ECMO SUPPORT IN CARDIAC PATIENTS

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**Background:** ECMO (Extracorporeal membrane oxygenation) has a place in management of patients with acute, severe lung and heart failure. Despite it is most commonly used for respiratory reasons, its importance in modern cardiac therapy is increasing. Indications for cardiac support include inability to terminate CPB during surgery, refractory cardiogenic shock, acute cardiomyopathy and a bridge therapy to heart transplant or placement of ventricular assist device. The purpose of this review is to report on our experience with ECMO support in cardiac patients.

**Methods:** We retrospectively analysed a total of 7 patients, who were treated with ECMO in the Intensive Care Unit of John Paul II Hospital in Cracow, Poland between 2009 and 2012.

**Patients:** Out of 7 patients, 5 were surgical ones (post pulmonary embolectomy, reMVR, ascending aorta repair, MVR in course of endocarditis and rePVR post Fallot repair) and the remaining 2 were admitted to ICU with acute cardiomyopathy of unknown origin. Mean age was 28,7 (20 years – 37 years), 5 males vs 2 females.

**Results:** The overall ICU recovery was 57% (4/7). Recovery in surgical patients was 60% (3/5) and in medical patients 50% (1/2). The mean length of ECMO support was 13,4 days (3 days – death vs 22 days – death). In one case we decided to reimplant new set in 13<sup>th</sup> day and successfully terminated therapy in 16<sup>th</sup> day. The mean length of ICU stay was 19,7 (4 days – death vs 32 days). In 3 cases it was used directly when it was impossible to wean patient from the CPB, in 2 cases ECMO was inserted in course of postoperative hemodynamic instability despite maximal inotropic and IABP support.

**Conclusions:** ECMO is an established method of treatment in patients with fatal cardiogenic shock of whatever origin. Despite its costs, in many cases it gives the only opportunity of survival and time for cardiac recovery.