



EXTRACORPOREAL LIFE SUPPORT FOR OUT-OF-HOSPITAL REFRACTORY CARDIAC ARREST: SHOULD WE STILL FIGHT FOR? A SINGLE-CENTRE, 5-YEAR EXPERIENCE

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INTRODUCTION



Refractory cardiac arrest is usually defined by the lack of return of spontaneous circulation within a period of at least 30 min of cardiopulmonary resuscitation under medical direction¹

Extracorporeal life support could be utilized as a therapeutic option in the setting of in-hospital as well as out-of-hospital refractory cardiac arrest²

¹Riou et al.

²Morrison et al.

Ann Fr Anesth Reanim 2009;28(2):182-90

Circulation 2010;122(16 Suppl 2):S345-421

METHODS



- Retrospective, observational analysis
 - Single centre, 5-year experience
 - Inclusion criteria:
 - witnessed
 - refractory
 - out-of-hospital
- CARDIAC ARREST**

Patients who experienced in-hospital cardiac arrest were excluded from this analysis

STUDY PROTOCOL



OUT-OF-HOSPITAL CARDIAC ARREST



REFRACTORY OUT-OF-HOSPITAL CARDIAC ARREST



ECLS CRITERIA:
No-flow time \leq 5 minutes
Low-flow time \leq 100 minutes
 $E_TCO_2 \geq 10$ mmHg



RESULTS (I)



01/01/2010 – 31/12/2014

85 patients

Mean age: 44.9 ± 11.1 (21 - 71) years

63 M (74.1%) / 22 F (25.9%)

Cardiac rhythm at ECLS implantation:

VF = 37 pts (43.5%)

Asystole = 44 pts (51.7%)

PEA = 4 pts (4.8%)

Median No-flow time: 1 minute

Median Low-flow time: 90 minutes

RESULTS (II)



01/01/2010 – 31/12/2014

GROUP I

VF = 37 patients

Weaning rate = 10 pts (27.0%)

Survival to discharge = 9 pts (24.3%)

GROUP II

ASY + PEA = 48 patients

Weaning rate = 3 pts (6.2%)

Survival to discharge = 0 pts (0%)

Weaning rate = 13 pts (15.2%) / ECLS support = 6.4 ± 2.6 (3 - 12) days

Survival to discharge = 9 pts (10.5%)

Among survivors, 4 (44.4%) patients experienced major neurologic disabilities (CPC 3-4)

CONCLUSIONS



- *The use of ECLS as a salvage option in patients with out-of-hospital refractory cardiac arrest should be rigorously limited in consideration of its poor, especially neurological, outcome*
- *Asystole should be probably considered as a formal contraindication but more data are necessary in order to improve the decision-making algorithm of ECLS for out-of-hospital refractory cardiac arrest patients*