

2023 대한심장혈관흉부외과학회

제55차 추계학술대회 & APELSO 2023

2023. 11. 02 (Thu) - 11. 04 (Sat), 그랜드 인터컨티넨탈 파르나스 서울

Predictors Of Weaning Failure In VA ECMO After Cardiac Surgery

공지사항

- 소속기관이나 저자명이 드러나지 않도록 해주세요.
- 제목 슬라이드 포함 최대 6장, Font size 20 이상
- PPT 파일 작성 후 PDF로 전환해서 접수(필수)



- The utilization of venoarterial (VA) extracorporeal membrane oxygenation (ECMO) for cardiogenic shock following cardiac surgery has seen a recent increase. While the importance of early VA ECMO weaning for prognosis is well recognized, limited data are available regarding predictive factors. This study aimed to identify factors that may assist in predicting VA ECMO weaning failure.

- A retrospective review was conducted on patients who underwent VA ECMO support after cardiac surgery from January 2005 to December 2021.

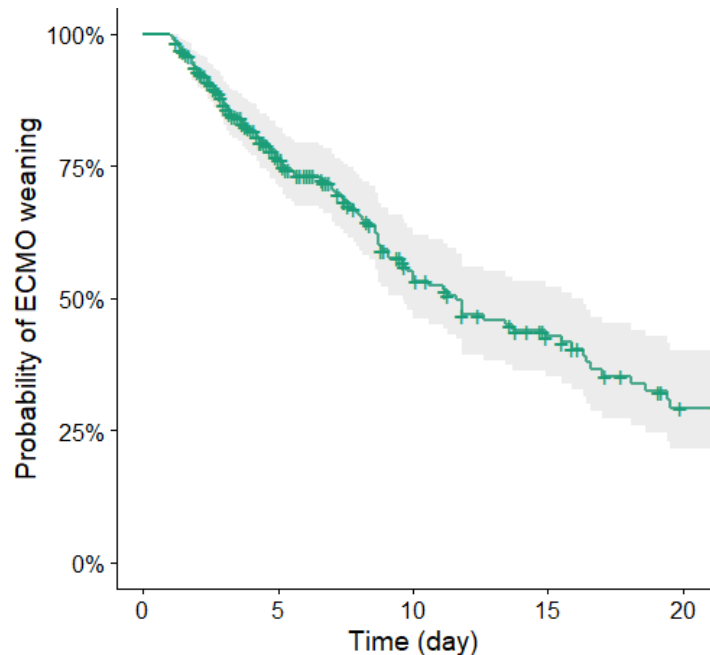
<Baseline Characteristics>

- Total 337 patients
- Weaning success 171(50.7%) vs Weaning failure 166(49.2%)

Variables	Total (n=337)	Weaning Success (n=171)	Weaning Fail (n=166)	P value
Age (Mean),yr	63.1 ± 13.1	61.1 ± 14.4	65.2 ± 11.2	0.004
Male gender, n(%)	190 (56.4%)	101 (59.1%)	89 (53.6%)	0.369
BMI	23.3 ± 4.4	22.6 ± 4.8	24.0 ± 3.8	0.002
HTN, n(%)	90 (41.9%)	31 (33.0%)	59 (48.8%)	0.029
DM, n(%)	62 (23.3%)	30 (24.8%)	32 (22.1%)	0.706
CKD, n(%)	19 (7.1%)	14 (11.6%)	5 (3.4%)	0.02
EF	53.0 ± 15.0	51.2 ± 16.1	54.5 ± 14.0	0.071

Table.1 Baseline characteristics

- **Age, BMI, hypertension, chronic kidney disease, and lactate levels** before VA ECMO support were risk factors for ECMO weaning failure.
- ECMO weaning probability 10days : 58.6% ECMO weaning probability 20days : 17.3%
- The cutoff threshold for the duration of VA ECMO support associated with ECMO weaning failure was found to be **6.9 days**
- VA ECMO support extended beyond 6.9 days, ECMO weaning failure **OR=2.22, CI [1.35-3.64], p=0.0017.**



Univariable analysis			
Variable	OR	C.I.	P-Value
Age (y)	1.03	1.01 – 1.04	0.0046
Sex(M)	1.25	0.81 – 1.92	0.3134
BMI	1.09	1.03 – 1.15	0.0032
HTN	1.93	1.11 – 3.38	0.0206
DM	0.86	0.49 – 1.52	0.6009
CKD	0.27	0.10 – 0.78	0.0155
Lactate Pre	1.06	1.01 – 1.12	0.0172

Table.2 Univariable analysis of ECMO weaning failure

Fig.1 Kaplan-Meier curve of ECMO weaning

- To improve VA ECMO weaning outcomes, it appears advantageous to establish a treatment plan for weaning within 7 days. Special attention should be given to patients with advanced age, hypertension, chronic kidney disease, and elevated lactate levels during ECMO weaning.