

Authors

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Introduction

Status asthmaticus refractory to conventional therapy can lead to life-threatening respiratory failure. Veno-venous extracorporeal membrane oxygenation (VV ECMO) is a potentially life-saving intervention for this population, but current literature is limited. We hypothesized that patients with status asthmaticus who received VV ECMO would have favorable survival rates.

Methods

We performed a single-center retrospective review of adult patients (≥ 18 years) supported with VV ECMO for status asthmaticus between January 2014 and January 2025. Patients were identified through our Lung Rescue Unit database. Clinical characteristics, outcomes, and scoring metrics (PRESET, RESP, SOFA, SAPS II, and GCS) were analyzed. The primary outcome was survival to hospital discharge.

Results

Fifteen patients met inclusion criteria (median age 32 years; 53% male). The survival rates for status asthmaticus (86.7%; $n=13/15$) and our overall VV ECMO cohort (78.0%; $n = 439/563$) were not statistically significant ($p = 0.42$). Survivors of status asthmaticus had longer hospital stays (16 vs 5 days, $p=0.03$) and were less likely to have had a cardiac arrest prior to ECMO initiation (7% vs 100%, $p=0.03$), compared to non-survivors. Mean pre-cannulation pH was 7.08, and mean paCO_2 was 81 mmHg. Scoring systems suggested high expected survival: mean scores were RESP 3, SOFA 8, SAPS II 28, and PRESET 5. Compared to the broader institutional VV ECMO cohort, status asthmaticus patients had shorter ECMO durations and lower tracheostomy rates (13% vs 15%, $p=0.01$).

Conclusions

VV ECMO is a viable therapy for patients with status asthmaticus refractory to conventional

management, with our center's survival rate approaching 90%. Further research is needed to refine selection criteria and optimize outcomes in this population.

Admin Details

Flights

Flight, IAD to SFO

Flight, SFO to IAD

place	link
Hotel	The Clift Royal Sonesta San Francisco , 495 Geary St, San Francisco, CA 94102
ATS venue	Moscone North
Sunday, NTM dinner	Hilton San Francisco Union Square, Continental 4/5 , 333 O'Farrell St, San Francisco, CA 94102
Monday, UMMC dinner	La Mar Cocina Peruana , PIER 1 1/2 The Embarcadero N, San Francisco, CA 94111
Tuesday, Chronic cough dinner	Marriott Marquis, Yerba Buena 9 , 780 Mission St, San Francisco, CA 94103
Wednesday, 11:30: my presentation	
Wednesday, 21:41: SFO flight to IAD	

Transit

BART Schedules

Inbound

ETA: 40 min

From SFO, take RED-N or YELLOW-N to [Powell Street](#)

Outbound

ETA: 40 min From [Powell Street](#) , take YELLOW-S or RED-S to [SFO](#)

Schedule

18, Sunday

- 07:15: IAD Flight to SFO

- 18:30 - 20:30: [NTM dinner](#)

19, Monday

- 18:00: UMMC ATS Meeting
 - [La Mar Cocina Peruana](#)

20, Tuesday

21, Wednesday

- 11:30: my presentation
- 21:41: SFO flight to IAD

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