

Category : **Respiratory: mechanical ventilation**

A256 - Prone position (pp) on patients (pt) supported with veno-venous extracorporeal membrane oxygenation (vv-ecmo): a risk worth taking?

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Introduction:

PROSEVA proved that PP in severe ARDS reduces mortality without an increase in adverse outcomes. However, complications such as cannula displacement could be life-threatening, and the benefits of PP whilst on ECMO are yet to be proved. Our study aimed to assess safety of proning patients on VV-ECMO and try to identify signs of potential benefit of this therapy.

Methods:

Retrospective data collection from electronic Pt notes including: demographics; SARF aetiology; CT findings; indication; number of PP sessions; duration of ECMO and complications. Pre and post P/F ratio, ventilator and ECMO settings were compared. The data was analysed using statistical software SPSS®

Results:

Fifty-two ECMO Pts (71% male; 46±14 years-old; BMI 29±6 kg/m²) were PP from 2016-2021. 73% survived to ECMO decannulation and were discharged from our centre. ECMO duration was 26±18 days.

The most frequent aetiologies of SARF were community acquired pneumonia (38.4%) and COVID-19 pneumonitis (23.1%). CT chest prior to PP documented consolidation in 94.2% and bilateral infiltrates in 84.6%. A high PEEP CT was performed in 16 Pts, showing recruitability in 81%.

Most patients were proned for recruitment (32.7%) or due to refractory hypoxia (30.8%).

Ventilator and ECMO support decreased with PP (FiO₂ on the ventilator 0.5±0.2 vs 0.4±0.2; p=0.001; ECMO blood flow (4.4±0.8 vs 4.2±0.8 L/min; p=0.006). A significant improvement in the following variables was seen after PP: lung compliance (19±17 vs 25±20 ml/cmH₂O; p=0.014), P/F ratio (137±102 vs 180±126; p=0.001) and 100% test (17±10Kpa vs 31±16Kpa, p<0.001).

Two Pts required emergency deproning due to oropharyngeal bleeding and one due to sudden drop in ECMO flow. Otherwise, no major adverse events (ECMO cannula removal, accidental extubation or central vascular access removal) were documented.

Conclusion:

PP in VVECMO support therapy seems to be safe and is associated with improvement in lung mechanics and oxygenation. Further research is warranted to assess its effect on ECMO duration.