

RESCUE VENO-VEINOUS ECMO IN SEVERE LEGIONELLA PNEUMONIA: a retrospective comparison with influenza-related ARDS.

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Argomento: Insufficienza respiratoria acuta e ventilazione meccanica

Introduction:

The pandemic influenza season in 2009 gave rise to the widespread use of veno-venous ECMO (vvECMO) as a rescue manoeuvre in the most severe cases of Influenza-related ARDS, with a 60-75% survival. Legionella was recently reported as a reemergent pathogen; the abrupt onset of Legionella-related ARDS is a clinical challenge and salvage vvECMO resulted in a high survival rate (67-84%). Given a recent outbreak of Legionnaire's disease in our geographical region, we reviewed our ECMO experience with these two infective etiologies of severe ARDS.

Methods:

We performed a retrospective analysis of adult patients with severe ARDS with an admission diagnosis of Legionella and Influenza virus pneumonia undergoing vvECMO at the University Hospital San Gerardo from 2009 to 2018.

Results:

126 patients were supported with vvECMO during the study period; 41 (33%) had pneumonia caused by Influenza whereas 17 (13%) had Legionella pneumonia. The main results of our analysis are reported in the following table.

We did not observe any difference in demographic characteristics and severity of ARDS. Patients with Legionella had higher severity at presentation (SOFA score 10.6 ± 3.3 vs 7 ± 3.3). Renal, liver and cardiovascular failure accounted for this higher severity in the Legionella population. ICU mortality was 10/41 (24%) in the Influenza group compared to 1/17 (6%) in the Legionella. We observed that 19/41 (46%) in Influenza had a bacterial or fungal co-infection compared to an infection rate of 18% (3/17) in Legionella group.

Conclusion:

Despite higher severity at presentation and demanding clinical resources, Legionella-related ARDS had a favorable outcome, even better than Influenza patients in which the higher incidence of new infections appear related to death in 8 out of 10 patients.