

# A case of measles-related severe acute respiratory distress syndrome (ARDS): role of ECMO

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Argomento: Caso clinico

## BACKGROUND

Measles is a highly contagious disease, rarer than in the past because of vaccination but with some recrudescence. Severe complications and deaths due to measles-related pneumonia have been reported in literature.

## CASE REPORT

We present a case of a 27-year-old man who presented to our emergency department, tachypnoic, hypoxic and with history of fever followed by appearance of maculopapular rashes over the face, trunk and upper and lower limbs in the last week.

Diagnosis of measles was confirmed by Serum IgM and IgG, and chest Computed Tomography was performed due to severe hypoxia, showing bilateral diffuse interstitial infiltrates suggestive for ARDS, and final diagnosis was confirmed accordingly to the recent Berlin criteria. Patient was transferred in intensive care unit (ICU), monitored, intubated and given mechanical ventilation optimized with Electrical Impedance Tomograph (Pulmovista). Patient required muscle relaxant (cis-atracurium) continuous infusion because of poor ventilator adapting, and he received intravenous antibiotic, steroids and immunoglobulines. Arterial blood gas (ABG) showed severe hypoxemia, and the patient developed bilateral emphysema and left pneumothorax. Bronchial toilet and bronchoalveolar lavage were repeatedly performed but after six days pulmonary function continued to deteriorate, BGA showed severe hypoxemia and Murray score was 3, so veno-venous ECMO was initiated after protected transfer to ECMO center.

After seven days ECMO oxygenation status gradually improved, tracheostomy was performed and ECMO was discontinued with no consequences. After 12 days he came back to our intensive care to continue treatment with mechanical ventilation support, and chest XR showing disappearance of bilateral diffuse interstitial infiltrates. After weaning from mechanical ventilation and tracheostomy, 30 days after initial admission he was discharged from our intensive care in full recovery.

## CONCLUSION

This case suggests that veno-venous ECMO can be a rescue method for patients with measles-related ARDS refractory to conventional ventilator support treatments.