



Reducing time on for extra-corporeal membrane oxygenation for adults with H1N1 pneumonia with the use of the Volume Diffusive Respirator.

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BACKGROUND: The investigators compared a series of adult survivors of severe H1N1 pneumonia treated with extracorporeal membrane oxygenation (ECMO) with members of the Extracorporeal Life Support Organization registry for patients with H1N1 with regard to ventilator management while on ECMO.

METHODS: Adults who survived ECMO were compared regarding time on ECMO for those treated with the Volume Diffusive Respirator (VDR) or with conventional "lung rest." The VDR delivered 500 Percussions/min, with tidal pressures of 24/12 CmH₂O and a fraction of inspired oxygen of .4 at 15 beats/min.

RESULTS: There were no differences between the study patients (n = 7) and the Extracorporeal Life Support Organization cohort (n = 150) regarding age, pre-ECMO ventilator days, pre-ECMO ratio of partial pressure of oxygen to fraction of inspired oxygen, or survival after lung recovery. Patients treated with VDR required ECMO support for a shorter duration (mean, 193.29 ± 35.71 vs 296.63 ± 18.17 hours; P = .029).

CONCLUSIONS: These data suggest that the VDR enhanced pulmonary recovery from severe H1N1 pneumonia in adults. Shorter times on ECMO may improve the risk/benefit and cost/benefit ratios associated with ECMO care.

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