

FROM BAGHDAD TO GERMANY: USE OF A NEW PUMPLESS EXTRACORPOREAL LUNG ASSIST SYSTEM IN TWO SEVERELY INJURED US SOLDIERS

ZIMMERMANN M, PHILIPP A, SCHMID FX, DORLAC W, ARLT M, BEIN T
ASAIO J. 2007 MAY-JUN;53(3):E4-6

CE1-71

Objective

Describe the use of an extracorporeal pumpless interventional lung assist system (iLA) for long distance air transport, thereby enabling lung protective ventilation strategy, in US soldiers with severe acute respiratory distress syndrome received from enemy action in Iraq.

Study Design

Case report

Methods

Following blast injury, radiographs revealed signs of acute respiratory distress syndrome, and blood gas values suggested hypoxic and hypercapnic decompensation despite maximum ventilatory support available under the prevailing condition. Immediately after implementation of the iLA, oxygenation increased markedly, and carbon dioxide elimination improved. The patient was stabilized and then transferred to Germany by air transportation (MEDEVAC, ambulance helicopter).

Results

ILA therapy was uneventfully implemented in both cases. The system was removed after 15 and 8 days of continuous operation, respectively, and both soldiers were successfully weaned from mechanical ventilation.

Commentary

Interventional, extracorporeal pump-free pulmonary support opens up new possibilities for pulmonary protection due to ease of use, effectiveness, and low costs; however, there is concern of distal limb ischemia. Experiences to date are encouraging, although randomized studies are lacking, and the procedure carries significant risks.

