

MANAGEMENT OF ACUTE RESPIRATORY DISTRESS SYNDROME USING PUMPLESS EXTRACORPOREAL LUNG ASSIST

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Objective

To describe the use of a pumpless extracorporeal lung assist device in the treatment of severe acute respiratory distress syndrome (ARDS).

Study Design

Case report of post-traumatic ARDS with mechanical lung damage, hypercarbia and impaired but acceptable oxygenation. iLA treatment lasted for seven days until lung recovery. Mechanical ventilation was at times reduced to apnoeic ventilation during iLA.

Study Population

A 15-year-old girl with life threatening trauma.

Methods

iLA was combined with apnoeic ventilation, spontaneous ventilation and nitric oxide application.

Results

The patient recovered without sequelae. No complications occurred. PEEP adjustment and nitric oxide application were used to improve oxygenation.

Commentary

Acute lung failure with elevated paCO_2 is a prototype indication for iLA and apnoeic ventilation is the marked expression of reduced ventilatory invasiveness during iLA. The authors discuss possible mechanisms that define the variable effects on oxygenation.

