

## A NEW PUMPLESS EXTRACORPOREAL INTERVENTIONAL LUNG ASSIST IN CRITICAL HYPOXEMIA/HYPERCAPNIA

BEIN T, WEBER F, PHILIPP A, PRASSER C, PFEIFER M, SCHMID FX, BUTZ B, BIRNBAUM D, TAEGER K, SCHLITT H.  
CRIT CARE MED 2006;34(5):1372-7

CE1-45

### Objective

To analyze the results of a large number of iLA uses in a university hospital.

### Study Design

Retrospective study.

### Study Population

Ninety patients with acute respiratory distress syndrome.

### Methods

Interventional lung assist was inserted in 90 patients with acute respiratory distress syndrome. Oxygenation improvement, carbon dioxide elimination, hemodynamic variables, and the amount of vasopressor substitution were reported before, 2 hrs after, and 24 hrs after implementation of the system. Statistical analysis of the collected patient data was performed.

### Results

Interventional lung assist led to an acute and moderate increase in arterial oxygenation (Pao<sub>2</sub>/Fio<sub>2</sub> ratio 2 hrs after initiation of iLA [median and interquartile range], 82 mm Hg [64-103]) compared with pre-iLA (58 mm Hg [47-78],  $p < .05$ ). Oxygenation continued to improve for 24 hrs after implementation (101 mm Hg [74-142],  $p < .05$ ). Hypercapnia was promptly and markedly reversed by iLA within 2 hrs (Paco<sub>2</sub>, 36 mm Hg [30-44]) in comparison with before (60 mm Hg [48-80],  $p < .05$ ). The incidence of complications was 24.4%, mostly due to ischemia in a lower limb. Thirty-seven of 90 patients survived, creating a lower mortality rate than expected from the Sequential Organ Failure Assessment score.

### Commentary

The publication was compiled by a group with large experience in iLA use. Although it may cover a learning curve (especially in lower limb perfusion problems) the data describe a clinical reality which makes this publication very valuable.

It is especially interesting to read that the ventilator settings of the patients could be changed towards less aggressive settings.

