

## PUMPLESS EXTRACORPOREAL LUNG ASSIST IN SEVERE BLUNT CHEST TRAUMA

BREDERLAU J, ANETSEDER M, WAGNER R, ROESNER T, PHILIPP A, GREIM C, ROEWER N  
J CARDIOTHORAC VASC ANESTH 2004;18(6):777-9

CE1-04

### Objective

Use of iLA in a patient with severe blunt chest trauma with bilateral lung contusion and bilateral open femoral fractures from a high-speed motorcycle accident.

### Study Design

Case report.

### Study Population

27-year-old man.

### Methods

On admission 4 hours after trauma the patient had extremely impaired lung function ( $\text{PaO}_2 = 60$  mmHg), and continued to deteriorate. ILA was initiated 12 hours after the trauma.

### Results

Oxygenation and significant  $\text{CO}_2$  elimination were possible at 2.2 to 2.5 l/min shunt flow. This allowed to focus mechanical ventilation on lung protection instead of gas exchange. On day 6 the patient's pulmonary function improved. However contracture of the left calf muscles occurred and after eventful decannulation the patient developed a compartment syndrome of the lower left leg. Following fasciotomy amputation was required below the knee. It remains unclear whether arterial cannulation or trauma was the leading cause of lower extremity ischemia.

### Commentary

This case report shows the need of careful arterial cannulation and continuous monitoring of the perfusion of the cannulated leg. To reduce the risk of ischemia smaller arterial cannula are used today (13–19 Fr).

