

EXTRACORPOREAL CARBON DIOXIDE REMOVAL USING THE NOVALUNG® IN A PATIENT WITH INTRACRANIAL BLEEDING

MALLICK A, ELLIOT S, MCKINLAY J, BODENHAM A
ANAESTHESIA. 2007;62(1):72-4

CE1-61

Objective

To report the use of iLA Membrane Ventilator in a case of intracranial bleeding with lung failure.

Study Design

Case Report.

Study Population

One adult.

Methods

A neurosurgical patient who required repeated surgery for intracranial haematoma developed acute respiratory distress syndrome. The resultant arterial partial pressure of carbon dioxide remained unacceptably high. Interventional Lung Assist device (iLA) was connected from the right femoral artery to left femoral vein and treatment by extracorporeal carbon dioxide removal was started.

Results

iLA use reduced the arterial carbon dioxide, corrected the respiratory acidosis and enabled control of the intracranial pressure. Subsequently the requirements for both respiratory and cardiovascular support were reduced. The patient made a complete neurological recovery.

Commentary

Raised intracranial pressure proved difficult to manage whilst attempting to maintain optimal gas exchange. This is quite typical for neurosurgical patients as some treatment principles of protective ventilation are contradictory to treatment principles for the treatment of raised intracranial pressure, e.g. permissive hypercapnia. This creates a dilemma for the treating team which – as in this case – can be solved by the application of iLA.

