

PROLONGED HEMODYNAMIC STABILITY DURING ARTERIOVENOUS CARBON DIOXIDE REMOVAL FOR SEVERE RESPIRATORY FAILURE

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Objective

To show prolonged hemodynamic stability during arteriovenous CO₂ removal over a 7 day period.

Study Design

Experimental study.

Study Population

6 adult female sheep.

Results

AV shunt flow throughout the 7 day period ranged from 1.24 to 1.43 l/min equivalent to 26 % of cardiac output. Heart rate, mean arterial pressure and pulmonary pressure remained relatively constant and were not statistically different compared with baseline at any time during the study. Likewise there were no significant changes in systemic or pulmonary vascular resistance associated with the AV shunt.

Commentary

This study in a large animal model of ARDS provides a valuable statement on the hemodynamic stability during an AV shunt used for extrapulmonary gas exchange.

