ICU
MANAGEMENT & PRACTICE

Noninvasive Ventilation in Early Stage Mild ARDS

A recent study assessed the ability of early noninvasive ventilation (NIV) intervention to decrease the need for invasive ventilation in patients with mild forms of acute respiratory distress syndrome (ARDS). This method has already proved successful for acute respiratory failure patients but has not been tested in ARDS.

Use of NIV in ARDS patients has been highly debated, especially in cases of mild pneumonia-induced ARDS. It has been hypothesised that patients with mild ARDS may not need invasive ventilation.

In a randomised control trial involving multiple centres, researchers tested to see if early NIV intervention could reduce the risk of mild ARDS evolving into moderate or severe forms. Researchers also explored whether this could reduce the possibility of patients receiving invasive mechanical ventilation compared with just oxygen use.

The trial analysed 200 individuals which were split into an NIV group and a control group (given only oxygen via a Venturi mask). The primary outcome of the study was the number of patients that reached the intubation criteria.

Results showed that NIV did not decrease the number of mild pneumonia-induced ARDS patients that needed to undergo intubation. There was found to be no significant difference between the NIV group and the control group, which had intubation rates of 10.8% and 9.2%, respectively. These results were found despite the improvement in PaO_2/FIO_2 in the NIV group after the first two hours following inclusion which then remained stable for 72 hours afterwards.

The study also highlighted the possibility for high minute ventilation as an identifier for NIV failure. Researchers noted that minute ventilation could be considered as an independent risk factor if greater than 11L/min at 48 hours. It was, therefore, suggested that the mechanical ventilation parameter in early mild ARDS should be less than this.

Source: Critical Care
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