

Corticosteroid Treatment in ARDS



Acute respiratory distress syndrome (ARDS) is a life-threatening condition that is characterised by bilateral pulmonary infiltrates on chest imaging and refractory hypoxaemia. ARDS is common in critically ill patients in ICUs and is associated with significant mortality. Findings from a recent study show that approximately 10% of ICU patients suffered from ARDS, and hospital mortality of ARDS patients was around 40%.

Despite the high prevalence of ARDS in critically ill patients and decades of research in this area, pharmacological treatments for this condition are still limited. The use of corticosteroid therapy in ARDS remains controversial. Clinical evidence to date reports conflicting results.

A meta-analysis was conducted to assess the effect of corticosteroids in the treatment of patients with ARDS. Researchers evaluated the efficacy of glucocorticoids. Glucocorticoids have anti-inflammatory and anti-fibrosis effects. The primary outcome of the analysis was hospital mortality. Secondary outcomes included the number of ventilator-free days at day 28, oxygenation improvement and adverse effects.

Nine studies were analysed with 1371 participants. Of these, five studies used methylprednisolone, two hydrocortisone, and two dexamethasone. Mortality in the glucocorticoid group and the control group was 39.4% and 49.1%, respectively. Glucocorticoids were associated with reduced hospital mortality. Six trials had data on the number of ventilator-free days at day 28. Pooled results showed that glucocorticoid use was associated with more ventilator-free days at day 28. Six trials investigated oxygenation improvement and found that glucocorticoid use might significantly improve oxygenation. Pooled results also showed that glucocorticoid treatment was not associated with a higher incidence of new infection.

In this meta-analysis, researchers found that glucocorticoids could reduce mortality and duration of mechanical ventilation and improve oxygenation in patients with ARDS. Also, glucocorticoid use was not found to be associated with increased risks of new infection and hyperglycaemia.

Overall, these findings show that the use of glucocorticoids could result in reduced mortality in patients with ARDS. They can thus be recommended as an adjunct to standard care for ARDS. However, further studies need to be conducted to determine the optimal dose and duration of steroid therapy.

Source: [Critical Care](#)

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