Hydrocortisone Versus Placebo in Patients with Septic Shock

Septic shock is a serious illness that is associated with high morbidity and mortality. A significant number of patients who develop septic shock also have a number of comorbidities that further worsens the prognosis. Over the years, many studies have been published on the benefits of corticosteroids in patients with septic shock. Most of these studies have not shown any significant benefit. The few studies that have shown benefit were not randomised or prospective; the duration of follow up was short, and/or the inclusion criteria were not always consistent. However, some researchers believe that corticosteroids are beneficial in shock because of their potent anti-inflammatory effects, provided the right patients are selected.

Recently, two randomised controlled trials (Adjunctive Glucocorticoid Therapy in Patients with Septic Shock [ADRENAL] and Activated Protein C and Corticosteroids for Human Septic Shock [APROCCHSS]) of corticosteroids in patients with septic shock reported different treatment effects on 90-day mortality. Both trials enrolled patients who met the criteria for septic shock using the second international consensus definitions for sepsis and septic shock (Sepsis-2), but the APROCCHSS trial mandated a greater severity of shock as an inclusion criterion.

In this study, researchers conducted a sensitivity analysis of the ADRENAL trial to determine the effects of hydrocortisone versus placebo in subgroups selected using third international consensus definitions for sepsis and septic shock (Sepsis-3) diagnostic criteria or APROCCHSS inclusion criteria. The study looked at 973 patients on hydrocortisone and 977 on placebo from the ADRENAL trial and 455 hydrocortisone and 450 placebo patients who met the APROCCHSS criteria.

As per the results, patients assigned to hydrocortisone had a rapid resolution of shock. In addition, in the adrenal sepsis 3 cohort, patients assigned to hydrocortisone demonstrated an increase in the number of days they were alive and free from mechanical ventilation. However, no difference in time to death was observed after 90 days between the two groups. Overall, continuous infusion of hydrocortisone did not result in lower 90-day mortality than placebo in septic shock

The role of corticosteroids in sepsis has been extensively studied, and the majority of studies do not report any benefit. It is important to note that while corticosteroids do have anti-inflammatory effects, they also have potent immunosuppressive activity, which can, in fact, worsen the septic condition.

Source: Anesthesiology
Image Credit: iStock

Published on : Sun, 1 Dec 2019

© For personal and private use only. Reproduction must be permitted by the copyright holder. Email to copyright@mindbyte.eu.