HealthManagement
Promoting Management and Leadership

Adjunctive Vasopressin Initiation for Septic Shock Patients

Vasoactive drugs are commonly prescribed to critically ill adult patients in ICUs, with noradrenaline being the first-line treatment for septic shock. Vasopressin, a second-line vasopressor, is also widely used. However, there is uncertainty regarding the timing of vasopressin initiation.

The VASST and VANISH trials, which investigated vasopressin in septic shock, found no significant impact on 28-day mortality, although some studies suggested potential benefits when started in patients with less severe shock or without acute kidney injury. The Surviving Sepsis Campaign guidelines recommend starting vasopressin when noradrenaline doses range between 0.25-0.5 mg/kg/min. This range is broad and does not consider shock duration. Further research is needed to explore whether earlier initiation of vasopressin has complementary effects.

A new study examined if the timing of vasopressin initiation affects mortality and whether physiological changes vary depending on when vasopressin is started. The study utilised routinely collected clinical data from electronic medical records across twelve ICUs in Queensland, Australia.

The study found that patients with septic shock who started a vasopressin infusion within 6 hours of vasopressor initiation had lower hospital mortality compared to those who started vasopressin after 6 hours. The timing of vasopressin initiation was independently linked to hospital mortality, and this association remained significant even after adjusting for differences between early and late initiations.

Patients in the study were twice as likely to receive vasopressin early, with a clear distinction of over 12 hours between the two groups in terms of initiation time. Additionally, vasopressin was associated with a rapid reduction in noradrenaline use, acidaemia, hyperlactataemia, tachycardia, and crystalloid fluid requirements, regardless of when it was started.

The study found that earlier initiation of adjunctive vasopressin in septic shock patients was independently associated with lower hospital mortality. Vasopressin use was linked to reduced noradrenaline doses, lower tachycardia, less acidaemia, and decreased lactate levels, regardless of initiation timing. After adjusting for propensity, patients who received vasopressin within 6 hours of vasopressor infusion had lower hospital mortality.

These findings suggest that earlier vasopressin initiation may be safe and beneficial in septic shock, offering a rationale for further interventional trials on early vasopressin therapy.

Source: Critical Care and Resuscitation
Image Credit: iStock

Published on : Tue, 26 Nov 2024