01. Sepsis-Associated Encephalopathy (SAE) as an Early Predictor of Mortality: Using Neurological Status (GCS or Delirium Scores) upon ED Admission to Predict Long-Term Outcomes in Septic Patients.

Ria Singh Rawat[1], Sunita Parmar[1], Rahul Radhakrishnan Pillai[1], Gautam Gokul[1]

[1] BGS Global Institute of Medical Sciences, India

Background: Sepsis-Associated Encephalopathy (SAE) is a dangerous and multifactorial complication of sepsis, causing diffuse dysfunction of the brain, and is a common presentation in the Emergency Department (ED). Sepsis-associated encephalopathy (SAE) presents a spectrum from mild cognitive deficits to deep coma. However, the lack of specific biomarkers and the confounding effects of sedation make SAE a challenging diagnosis of exclusion. It requires the systematic elimination of alternative etiologies for altered mentation in the febrile, critically ill patient. **OBJECTIVE**: To evaluate the efficacy of neurological assessment tools and biochemical markers at ED admission as early predictors of Sepsis-Associated Encephalopathy and long-term patient outcomes. **METHODOLOGY**: A comprehensive analysis of studies showing the GCS scores and Delirium screening in ED during admission for early identification of SEA and determination of 28-day mortality and long-term cognitive outcomes based on data from published literature. **RESULT**: The analysis of literature reveals that SEA affects 53% to 70% of patients. A GCS score of ≤14 on average during admission carries a 49.3% mortality rate, while GCS scores between 3–8 increases the risk to 63%. Delirium increases mortality by 4.3-fold, showing a 15.8% mortality after 28 days and long-term cognitive decline. **CONCLUSION**: Early identification of Sepsis-Associated Encephalopathy clinically calculating the GCS scores and delirium screening on arrival in the ED is essential and beneficial as these assessments serve as powerful independent and non-invasive predictors of 28-day mortality and long-term cognitive impairment, enabling clinicians to implement critical neuroprotective strategies and improve prognostic chances immediately upon admission.

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