123. DETERMINANTS OF SURVIVAL AND RESOURCE UTILIZATION IN ACUTE CNS INFECTIONS: A 2025 RETROSPECTIVE STUDY OF 74 EMERGENCY CASES

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Introduction. Central Nervous System (CNS) infections are among the most serious emergencies in modern medicine, where the window for effective intervention is incredibly narrow. In the high-pressure environment of an emergency department, clinicians must often make rapid, life-saving decisions before a specific pathogen is identified. Understanding why certain patients face fatal outcomes while others recover is critical for refining triage protocols and improving survival rates in these complex neurological crises.

Aim of the study. To identify the clinical and demographic factors associated with mortality in patients presenting with emergency CNS infections. To evaluate the resource burden, measured by hospital stay duration and the necessity for intensive care interventions. To determine the impact of etiological categories on patient survival.

Methods and materials. This research was a retrospective, cross-sectional analysis of 74 patients admitted to the Emergency Medicine Institute (IMU) in Chisinau between January and December 2025. The study utilized clinical archives to analyze demographics, length of stay, discharge status, and specific medical or surgical interventions for each patient.

Results. The study identified a significant mortality rate of 27.0% (n=20) within the total cohort. The demographic profile skewed toward males (63.5%) and the elderly, with a mean age of 56.4 ± 16.4 years. Bacterial etiologies (ICD-10 G00-G06) emerged as the most lethal, exhibiting a 35.3% mortality rate and requiring the longest periods of specialized care, with some critical cases remaining hospitalized for up to 133 days or even 246 days. Fatal outcomes were frequently associated with severe secondary complications such as cerebral edema, intracranial hemorrhage, and the need for prolonged life-support measures, including percutaneous tracheostomies and gastrostomies.

Conclusions. High mortality is strongly correlated with bacterial etiologies and advanced age, highlighting the need for immediate, aggressive screening in these high-risk groups. The extreme duration of hospital stays for non-survivors and severely ill patients underscores the massive burden CNS emergencies place on intensive care and neurosurgical resources. Survival is contingent on the rapid coordination of neurology and neurosurgery teams, emphasizing that the management of secondary complications within the first 24 hours is the primary determinant of clinical outcomes.

Keywords. : Emergency Neurology, Mortality Determinants, CNS Infections, Clinical Severity, Resource Utilization,.

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