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“Spinal Epidural Abscess: Institutional Insights, Patient Outcomes, Epidemiology, and Prognostic Factors”

Introduction: Spinal epidural abscess (SEA) is a serious infection within the epidural space along the spinal cord, often leading to severe neurological complications. The rapid progression of this condition underscores the critical need for early diagnosis and treatment.

Objective: This study investigates the management of SEA at a single Level I Trauma Center. Our primary goal is to identify prognostic factors and outcomes associated with SEAs and to determine the characteristics of patients and pathologies that benefit most from surgery.

Methods: We conducted a retrospective chart review of patients presenting with SEA at our institution between 2015 and 2021, analyzing relevant patient factors.

Results: Out of the 119 patients diagnosed with a SEA, operative patients (n=46) had longer hospital stays than non-operative patients (17.5 vs. 6.0 days, $p < 0.001$). Within the operative group, 78.3% experienced symptom improvement, contrasting with those without improvement (41.7% vs. 30%, $p = 0.71$). IVDU patients in the operative group did not have prolonged hospitalizations (18.0 vs. 17.5 days, $p = 1$), whereas in the non-operative group, IVDU patients had shorter stays (3.5 vs. 28.5 days, $p = 0.001$). At discharge, patients with and without a history of IVDU displayed similar modified Rankin scale scores ($p = 0.50$). Age did not significantly impact hospital stays ($p = 0.53$) or modified Rankin scale scores ($p = 0.32$) in either treatment group.

Conclusion: SEA presents a formidable challenge, necessitating early recognition and intervention. The choice between surgical and medical management hinges on a comprehensive evaluation of patient factors, with age, comorbidities, and neurological status playing pivotal roles. Notably, certain factors, such as intravenous drug use, correlate with extended hospital stays and suboptimal follow-up. In the future, identifying specific patient factors will allow for tailored treatments, ultimately optimizing patient outcomes.