

Early Decompression Predicts Improved Neurologic Outcomes in Spinal Epidural Abscess

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Introduction

Surgical decompression offers many advantages for patients who present with symptomatic spinal epidural abscess (SEA). However, the optimal timeframe for surgical intervention is not well defined in the literature.

Methods

A retrospective analysis of all patients that presented to a single tertiary care institution with symptomatic SEA treated with surgical decompression between 2010 and 2015 was performed. Preoperative, postoperative pre-discharge, and 6-month postoperative ASIA scores were calculated for all patients. Fisher's exact and Wilcoxon rank-sum tests were used to determine predictors of ASIA grade improvement postoperatively using preoperative patient-specific factors.

Conclusions

For patients suffering from symptomatic SEA, early surgical decompression predicts improved neurologic outcomes postoperatively. Other commonly used markers for extent of abscess burden do not have similar predictive value.

Results

A total of 152 patients fit inclusion criteria. The mean age of all patients was 58 years old with 81% being Caucasian and 61% male. 8% of patients required reoperation for persistent abscess. 49% of patients maintained ASIA E scores or had a 1 or higher ASIA grade improvement, 45% of patients remained at their preoperative ASIA grade and 6% of patients had worsening of preoperative ASIA grade. Worse preoperative ASIA score ($p < 0.001$) and longer duration of preoperative paresis ($p < 0.001$) was associated with an increased risk of not obtaining improvement in ASIA grade. Numerous other patient-specific factors including preoperative age, BMI, CRP, ESR, WBC, diabetes status, and degree of thecal sac compression were not predictive of postoperative outcome.

Learning Objectives

By the conclusion of this session, participants should be able to: 1) Describe the importance of early surgical intervention in patients with SEA, 2) Discuss, in small groups, patient outcomes after surgical decompression for SEA, 3) Identify an effective treatment protocol for SEA