Epidural Steroid Injection and Infection Risk Following Posterior Cervical Surgery

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INTRODUCTION: Epidural steroid injection (ESI) is a helpful tool in alleviating pain and possibly preventing the need for spinal surgery. However, a recent small scale study found that ESI within 3 months prior to cervical fusion was associated with an increased risk of postoperative infection. The purpose of this study was to characterize infection risk of preoperative ESI with an expanded set of indications while matching for a full list of comorbidities in patients undergoing posterior cervical surgery.

METHODS:

Patients from 2010-2020 with cervical myelopathy, spondylosis, and radiculopathy who underwent posterior cervical procedure including laminectomy, laminoforaminotomy, fusion, or laminoplasty were queried from the PearlDiver database. Patients who underwent revision or fusion above C2 or who had a diagnosis of neoplasm, trauma, or pre-existing infection were excluded. Patients were then divided based on whether they received an ESI within 30 days prior to the procedure. The two groups were subsequently matched based on age, gender, and preoperative comorbidities. A chi-square test was used to calculate the risk of developing a postoperative wound infection within 90 days of surgery.

RESULTS: Based on our inclusion and exclusion criteria, 82,907 patients were identified, including 991 who received a preoperative ESI and 81,916 who did not. Matching resulted in 975 in the injected group and 1,929 in the control group. There was no significant difference in postoperative infection rate in those who received an ESI within 30 days preoperatively and those who did not (3.28% verus 3.78%, OR=0.86, 95% CI: 0.57-1.32, p=0.494).

DISCUSSION AND CONCLUSION: The present study found no association between preoperative ESI within 30 days prior to surgery and postoperative infection in patients undergoing posterior cervical surgery.