



The Association of Inflammatory Bowel Disease and Immediate Postoperative Outcomes Following Lumbar Fusion

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Introduction

The United States Centers for Disease Control estimates the prevalence of inflammatory bowel disease (IBD) at over 3.1 million people. For spine surgeons, patients with IBD have a unique complication profile because IBD patients may present with poor nutritional status and because the medications used to manage IBD have been associated with poor vertebral bone mineralization. There are very limited data regarding perioperative outcomes among lumbar fusion patients with IBD because IBD is a relatively rare comorbidity. National databases are therefore uniquely positioned to fill this gap in the literature

Methods

All patients aged eighteen and older in the Nationwide Inpatient Sample from 1998-2011 that underwent primary lumbar fusion surgery were included. Outcome measures were prevalence of IBD among lumbar fusion patients, surgical complications, medical complications, length of stay (LOS), and hospital costs.

Multivariable logistic and linear regression were used to determine the association between IBD and odds of complication, length of hospital stay (LOS), and hospital costs. All models adjusted for patient demographics, 29 comorbidities, and hospital characteristics.

Results

IBD prevalence increased among primary lumbar fusion patients, from 0.21% in 1998 to 0.48% in 2011 (p<0.001). The odds of experiencing a post-operative complication were not significantly different when comparing IBD patients to control patients after adjusting for demographics, comorbidity burden, and hospital characteristics (p=0.1). LOS was significantly longer for IBD patients (10.8% longer, 95% CI 6.2% - 15.7% longer , p<0.001) and costs were significantly greater for IBD patients (5.3% greater, 95% CI 0.98% - 9.8% greater, p<0.001).

Conclusions

Among lumbar fusion patients, IBD is a rare comorbidity that is becoming increasingly more common. Importantly, IBD patients were not at increased risk of immediate postoperative complications. Spine surgeons should be prepared to treat more IBD patients and should incorporate the present findings into preoperative risk counseling.

Learning Objectives

By the conclusion of this session, participants should be able to: 1) Identify the growing share of spinal surgery patients that present with inflammatory bowel disease (IBD) as a comorbidity, 2) Recognize that IBD patients use more hospital resources but are not at increased risk of in-hospital complications, 3) Be prepared to more appropriately counsel patients with IBD regarding postoperative risks and expected length of stay.