

Introduction

Lumbar discectomy is frequently performed to alleviate radicular pain resulting from disc herniation. While this goal is typically achieved in the majority of patients, additional improvement in low back pain has been reported inconsistently. The goal of this study was to better characterize how low back pain resolves following discectomy and identify factors associated with back pain improvement.

Methods

We performed a retrospective analysis of prospectively collected data from the Canadian Spine Outcomes Research Network (CSORN) registry. Any patient who underwent discectomy (using any technique) for single-level lumbar disc herniation were eligible for inclusion. The primary outcomes were back pain numerical rating scale (BPNRS) and Oswestry Disability Index (ODI) assessed at 3, 12 and 24 months. Multivariable logistic regression was used to model the relationship between the outcomes and potential factors associated with a minimal clinically important difference (MCID) change in back pain, using a backward selection procedure.

Results

There were 751 patients included in the analysis; 53% were male, 72% were married and 22% were smokers. The chief complaint was radiculopathy in 79%; 47% underwent a minimally invasive procedure. Back pain improved at 3 months by 43% and this improvement was sustained at all follow-ups. Back pain and leg pain were correlated. 58% of patients achieved the MCID. In the various multivariate models, the factors most consistently associated with a clinically significant reduction in back pain were the preoperative pain level, marriage, working status, education, expectations regarding the procedure, time with pain pre-op and multilevel procedures.

Conclusions

In an unselected, real-life cohort, clinically significant improvement in low back pain is observed in 58% of patients after lumbar discectomy and is maintained up to 2 year follow-up. The level of preoperative pain is most associated with who will show clinically significant improvement.

Learning Objectives

Discuss the predictors of back pain improvement following discectomy

[Default Poster]