



Preservation of the Posterior Longitudinal Ligament During Anterior Cervical Spine Decompression
Surgery: Short Term Clinical Outcomes and Complications

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Introduction

Anterior cervical discectomy and fusion (ACDF) is one of the most common procedures performed in the cervical spine. However controversy still exists over the management of the posterior longitudinal ligament (PLL). A recent report showed no clinical difference between removal or preservation of the PLL in anterior cervical surgeries. Additionally, studies have supported the important role of the PLL for spine stability in the cervical region.

Methods

In this study we retrospectively review all ACDF cases performed by a single surgeon in a single institution with a detailed analysis of patients with PLL preserved after surgery.

Results

Retrospective analysis of a prospective database of thirty (30) consecutive patients undergoing ACDF surgery with PLL preservation was performed. The mean age at surgery was 58 years, 50% were female, mean BMI was 29.3. Thirty percent of patients smoked and 10% had a previous surgery on the cervical spine. Seventy three percent of the patients had myelopathy initially. Thirty percent of surgeries were 1 level ACDF, 43.3% 2 levels, 16.7% 3 levels and 10% 4 levels. Mean length of surgery was 123 minutes, blood loss was 29.2 mL and mean length of stay 1.7; there was no statistical difference between male and female for these values. The mean NRS before surgery was 5.6 and 0,5 three months after surgery (p<0.001). NDI before surgery was 42% and 4% at 3 months (p=0.002). Mean Nurick score before surgery was 1.5 and 0.4 at the last follow up (p<0.001). There were 2 complications (6.6%): one patient with nosocomial pneumonia and one patient with persistent dysphagia.

Conclusions

Our results show that preservation of PLL after ACDF for degenerative diseases of the cervical spine yields excellent clinical outcomes. If no disk fragments are visible behind the PLL on MRI, the surgeon can leave the PLL intact while performing an ACDF.

Learning Objectives

By the conclusion of this session, participants should be able to: 1) Describe the importance of the PLL in anterior cervical surgeries, 2) Identify patients who will benefit from preservation of the PLL

References

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