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The Minimally Invasive Paramedian Approach for Foraminal Disc Herniation

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Introduction

Foraminal disc herniation (FDH) accounts for up to 12% of lumbar herniated discs. The disc fragment presents a challenge as it often resides lateral to the pedicle and posterior to the facet joints, forcing some surgeons to violate the facet joint which disrupts spinal stability. Herein, we describe a series of patients that underwent minimally invasive paramedian approach with hemilaminectomy, partial medial pars resection, medial facetectomy for foraminal disc herniation.

Methods

We retrospectively reviewed 21 cases of patients with FDH who underwent a minimally-invasive paramedian microdiscectomy. Demographic and clinical varaibles were obtained from medical records. Improvement in functional outcomes was evaluated using the Visual Analogue Scale (VAS) and Oswestry Disability Index (ODI).

Results

A total of 21 patients were included in this study .The average age was 56.47+/-9.4yrs and body mass index was 31.92 +/- 7.7Kg/m2. 47.8% of cases were L4-5 FDH. Average duration of symptoms was 7.58 +/- 10.1months. The estimated blood loss was 31.32 +/- 19.8 ml. The average length of hospital stay was 1.11 +/- 0.3days. All patients were discharged home. Follow up duration was about 5.22 +/- 4.7 months. Overall, there was a significant improvement in the VAS (pre-op: 8.21 +/- 2.1; post-op: 2.59 +/- 2.7; p-value: <0.0001) and ODI (pre-op: 57.16 +/- 13.2; post-op: 21.47 +/- 9.9; p-value: <0.0001) post-operatively. Only one patient required revision fusion for asymmetric collapsed disc height and severe foraminal stenosis.

Conclusions

The minimally invasive paramedian approach provides satisfactory outcomes as a safe strategy in the treatment of foraminal disc herniation. Herein, there was a significant improvement in pain and functional outcomes, minimal blood loss and decreased hospital stay.

Learning Objectives

The minimally invasive paramedian approach is safe for far lateral foraminal disc herniation

Significant reduction in pain and improvement in functional outcomes

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