



Paramedian, Zero Trauma Approach Through the Ligamentum Flavum for Extruded Disc Herniations in the Lumbar Spine

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No Cutting, No Bleeding, No Scarring
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Introduction

With typical laminotomy/discectomy, including the so-called "minimally invasive" techniques, bone and ligamentum flavum need to be removed in order to access the spinal canal and the pathology. Depending on the size and location of the extruded fragment/s, the amount of bone removal ranges from a conservative laminotomy to a wider laminectomy with or without hemi-facetectomy. In either case, once the normal anatomy has been altered the possibility of failed back surgical syndrome increases dramatically.

We use a non-traumatic access small tubular system, that allows dilation without cutting through the muscle fibers and the ligamentum flavum, giving access to the spinal canal while having excellent visualization via working-channel scope. The lack of bleeding that such a system produces explains the lack of scar tissue formation we observe.

Methods

We performed a retrospective analysis since 2009 until the present. Results are reported utilizing the MacNab criteria. Population included 77 patients with Lumbar extruded disc fragments, 25% women and 75% men, from 20 to 66 years of age. The average follow-up was 6 wks.

Results

Statistical analysis showed the following results: Excellent: 81.82% (n=63), Good: 14.29% (n=11), and Poor: 3.89% (n=3). The overall success rate was 96.10%. One patient developed a "rare" discal cyst in the postoperative period that became symptomatic 4 wks after surgery. The discal cyst was diagnosed by discography and successfully treated with a second non-traumatic approach through the ligamentum flavum with excellent result.

Conclusions

This method achieves better success rates and avoids the potentially deleterious long term ill effects of trauma that occur with typical procedures.

Learning Objectives

There are zero access trauma alternatives for lumbar discectomy.