

Minimally Invasive 360 Degrees Decompression for Ligamentous, Bony and Discogenic Lumbar Canal Stenosis

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Abstract

Background: For decades, traditional open surgical techniques were used to treat lumbar disc herniation and lumbar canal stenosis (LCS). However, seeking for better outcomes for patients and avoiding extensive bony loss with its sequences had raised minimally invasive technique for treating these disorders as an alternative surgery. **Methods:** This is a retrospective study in which 54 patients of LCS were operated upon via unilateral minimally invasive technique to decompress the canal in a 360 degrees fashion through laminotomy, derroofing of opposite laminar side, sublaminar ligamintectomy, bilateral foraminotomies and discectomy. We used VAS scores and ODI to assess clinical outcomes with a period of one year follow-up. **Results:** Our results demonstrated that minimally invasive techniques for treating these disorders are effective procedures. Minimally invasive 360 degrees decompression for treating LCS had better outcomes regarding postoperative back pain, smaller incisions, less bony loss and early ambulation. **Conclusion:** Minimally invasive techniques for treating lumbar canal stenosis of different causes could be considered a better option instead of traditional full laminectomy with better outcomes as regards respecting the anatomical layers such as posterior spinal integrity and musculature, postoperative pain, accompanied with less blood loss, shorter hospital stays, and shorter recovery periods.