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CLINICAL AND IMAGING OUTCOMES OF NON-SURGICAL SPINAL DECOMPRESSION FOR LUMBAR INTERVERTEBRAL DISC LESIONS: A CASE SERIES

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ABSTRACT

Objective: Non-surgical spinal decompression is a conservative approach to treating lesions of the spinal column. As low back pain is a common health complaint that has a substantial economic burden laden with treatment options with poor long-term outcomes, it is requisite to explore the non-pharmacological application of non-surgical spinal decompression to treat common presentations of spinal lesions (intervertebral disc, sciatica, degenerative disc disease, etc.).

Clinical Features: In this case series, we present 13 patients (7 male; 6 female; age 18-82 years) with a broad presentation of intervertebral disc lesions (level, radiating pain, disability, etc.). Patients were selected from a convenience sample of those that had both pre- and post-intervention MRIs. Two separate radiologists provided independent medical imaging impressions.

Intervention and Outcome: After confirming diagnosis via MRI, these patients received 20 treatments of non-surgical spinal decompression delivered with the DRX9000. Clinical examination was performed and outcome measures of pain, disability, and subjective improvement of activities of daily living were assessed both pre- and post-intervention.

Conclusion: The results demonstrated that there was significant ($p<0.001$) improvement of pain (80%), disability (50%), and subjective recovery (75%). Further, both the average disc height and canal anterior-posterior dimension increased by 1.0-1.6 mm and 1.5-2.1 mm, respectively. Thus, non-surgical spinal decompression demonstrated good to excellent clinical outcomes as a conservative, non-surgical treatment for intervertebral disc lesions. *(J Contemporary Chiropr 2025;8:81-87)*

Key Indexing Terms: Intervertebral Disc; Spinal Decompression; Clinical Imaging; Case Series

INTRODUCTION

Low back pain (LBP) is 1 of the highest incidence of medical conditions contributing to disability, decreased activities of daily living (ADL), decreased quality of life (QoL), and inability to work (US and worldwide). (1,2) LBP affects approximately 70-85% of people during their lifetime, (3,4), with about 20% becoming chronic (age 20-59). (3) As a leading musculoskeletal (MSK) condition, LBP largely contributes (~21%) to US financial burden (approximately $980B annually; 5.8% of US Gross Domestic Product). (1,5) In fact, LBP has been the leading cause of disability for numerous decades. (6) Further, many chronic MSK pain patients do not respond to surgery (7-10) and many develop dependence on opioids. (11,12)

There is reason for alarm with current clinical approaches to treating chronic LBP. For those who visit the emergency room for LBP, 45% are prescribed opioids. (13) Even outside of the emergency room, opioid prescription increases 4.7% later in the day at primary care clinical appointments. (14) A recently published report (Jones et al.) of a randomized placebo-controlled

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