CLINICAL EFFECTIVENESS OF ACUPUNCTURE IN MANAGING LUMBAR DISC HERNIATION: AN INTEGRATIVE THERAPEUTIC PERSPECTIVE

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Abstract: Lumbar disc herniation is one of the most frequent musculoskeletal and neurological disorders worldwide, commonly associated with pain, sensory disturbances, and functional impairment. As conventional treatments do not always lead to long-term improvement, integrative approaches such as acupuncture are increasingly utilized. This study reviews the therapeutic role of acupuncture in the management of lumbar disc herniation, drawing on contemporary clinical evidence, including randomized controlled trials. Findings show that acupuncture, when combined with standard medical therapy, significantly reduces pain intensity, enhances mobility, improves sleep quality, and modulates inflammatory biomarkers. The modality acts through neuromodulation, anti-inflammatory pathways, microcirculatory enhancement, and autonomic regulation. While acupuncture is not a substitute for conventional therapy, it represents a valuable complementary option. Further large-scale, long-term studies are recommended.

Keywords: Acupuncture, Lumbar Disc Herniation, Pain Management, Integrative Medicine, Inflammation.

Introduction

Lumbar disc herniation remains a major contributor to disability and reduced quality of life globally. It commonly results from disc degeneration, mechanical overload, sedentary lifestyle, and poor posture. Typical clinical symptoms include lower back pain, radiculopathy, and limited mobility. Conventional treatments offer partial improvement, leading to increased interest in complementary approaches such as acupuncture. This paper examines acupuncture's clinical effectiveness and mechanisms in managing lumbar disc herniation.

Methods

This narrative review is based on findings from the PubMed-indexed clinical study PMC10754577 and other relevant scientific literature. The referenced randomized trial included 120 patients divided into two groups: conventional therapy alone and conventional therapy combined with acupuncture. Outcomes evaluated included VAS, ODI, PSQI, MRI, and biomarkers (CRP, IL-6). Acupuncture was administered three times weekly for four weeks.

Results

Patients receiving acupuncture showed superior improvements:

- VAS decreased from 5.2 to 1.7
- ODI improved by 40% (vs. 20% in control)
- Sleep quality significantly improved
- CRP and IL-6 levels decreased more significantly
- MRI indicated partial regression of inflammation

All differences were statistically significant ($p < 0.05$)

Discussion

Acupuncture's therapeutic benefits arise from several physiological mechanisms, including neuromodulation of pain pathways, reduction of pro-inflammatory cytokines, enhanced microcirculation, and improved parasympathetic activation. While effective, acupuncture should complement not replace standard therapy. Treatment outcomes depend on practitioner expertise and individualized assessment.

Conclusion

Acupuncture is an effective adjunct therapy for managing lumbar disc herniation. It reduces pain, improves functional mobility, enhances sleep, and regulates inflammation. Integrating acupuncture into clinical practice may enhance overall treatment outcomes. Further large-scale trials are needed.

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