

PRELIMINARY RESULTS FROM THE STUDY

EFFICACY OF SPINAL DECOMPRESSION THERAPY IN INDIVIDUALS WITH LUMBAR DISC HERNIATION - A RANDOMIZED CONTROLLED TRIAL

NARKEESH ARUMUGAM, Professor, Department of Physiotherapy,
Punjabi University, Patiala, Punjab, India

DIVYA MIDHA, Senior Research Fellow, PhD Scholar, Department of Physiotherapy,
Punjabi University, Patiala, Punjab, India

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ABSTRACT

Background: Pain, sensory abnormalities, muscle weakness and movement limitation are typical symptoms of lumbar intervertebral disc herniation. Lumbar area is the most prone to slipped disc characterized by herniation of degenerated disc material out of its original position. Pain is currently managed via drug therapy, physiotherapy or, as the last option, surgical care. Spinal decompression therapy is recently gaining popularity due to non-invasive approach and clinical effectiveness.

Aim: The primary aim of this randomized controlled trial was to evaluate the effect of the conventional therapy and lumbar stability exercises with spinal decompression combined treatment in individuals with lumbar intervertebral disc herniation.

Methods: Participants were randomly assigned into experimental and control groups. Nine treatment sessions were scheduled within 3 weeks (3 therapy sessions/week) for each patient. Experimental group: 15 participants underwent treatment with spinal decompression device (BTL Industries Ltd.) along with conventional therapy and lumbar stability exercises.

Control group: 15 participants underwent conventional therapy along with lumbar stability exercises. At baseline, 10th and 21st day of the trial, participants were asked to fill in an Oswestry low back pain questionnaire and determine level of the pain via Numeric Pain Rating scale.

Results: Non-parametric Wilcoxon sign rank test confirmed a significant improvement in Oswestry Disability Index (ODI) and Numeric Pain Rating scale (NPR) for both patients groups. Significant impact of spinal decompression therapy was proved. The experimental group achieved about 15% better ODI and 11% better NPR score difference than the control group.

Conclusion: A significant improvement in patients suffering from lumbar disc herniation in both experimental and control groups was observed. Spinal decompression therapy further enhanced results in terms of decreased disability and pain score and proved to be an effective tool in the treatment of lumbar disc herniation.

Keywords: Spinal decompression therapy, Lumbar intervertebral disc herniation, Oswestry index, Numeric pain scale.

OSWESTRY INDEX

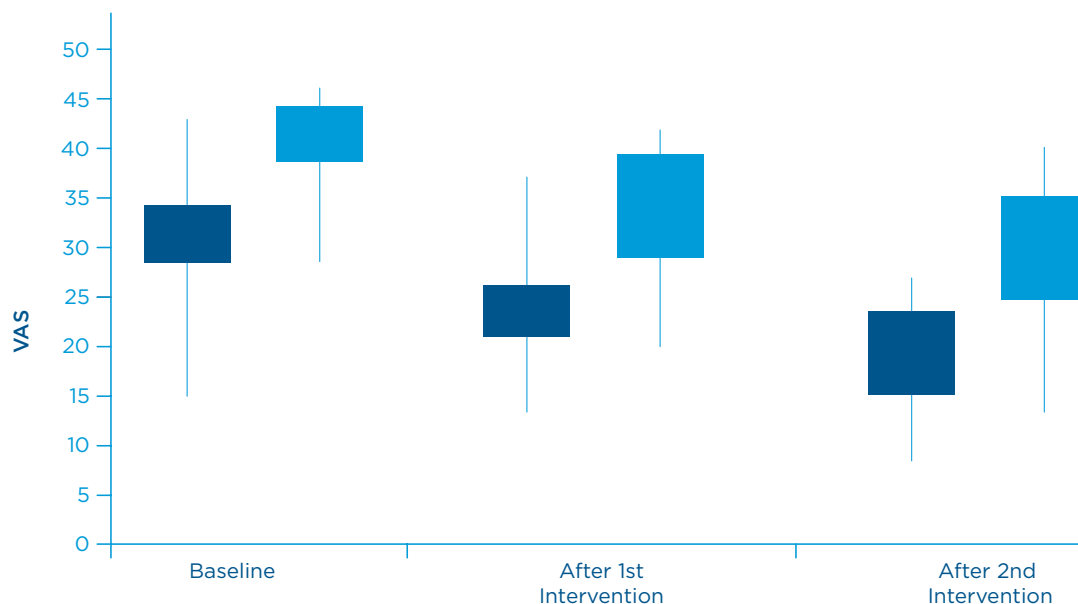


Figure 1: Visual Evaluation of Oswestry Index values obtained throughout the study course for experimental (blue) and control (red) groups.

PAIN RAITING

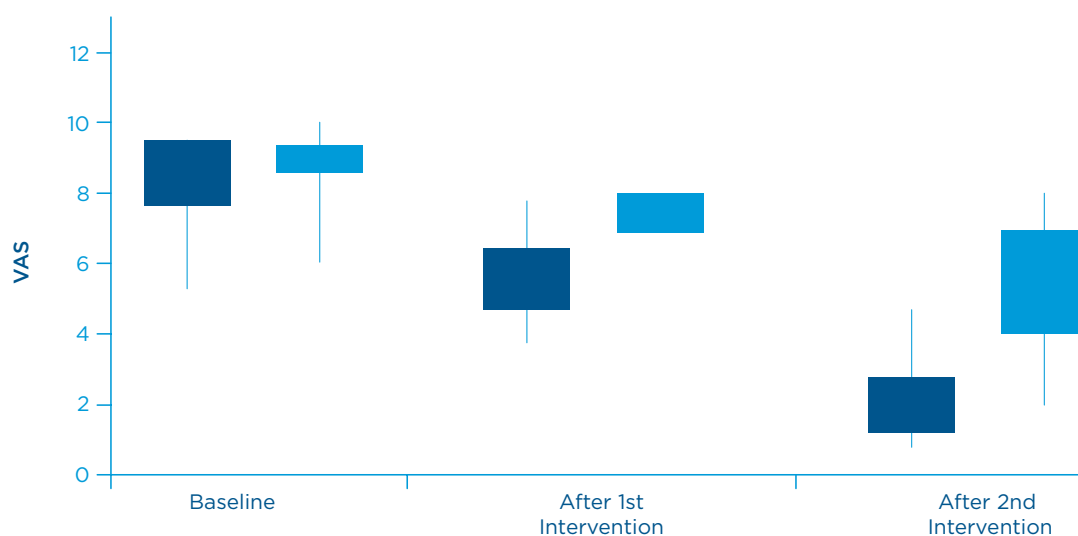


Figure 2: Visual Evaluation of Numeric Pain Rating scale values obtained throughout the study course for experimental (blue) and control (red) groups.