Research Proves Spinal Decompression Can Lead to an Increase in Disc Height And an up to 90% Reduction in Pain

Management of Low-back Pain with a Non-surgical Decompression System (DRX9000™) – Case Report
CASE REPORT: Management of Low-back Pain with a Non-surgical Decompression System (DRX9000™)


Chronic low-back pain (LBP) is widespread and debilitating, affecting as many as 27% of adults in the US report having experienced LBP in the past three months.1 LBP is the second most common reason for a visit to a physician, after the common cold.2 It is estimated that 80% of the population will experience LBP at some point in their lives.3,4 While there are broad treatment options for treating LBP—surgical, non-surgical, and pharmacological—LBP can often lead to a host of problems which is appropriate or preferable for various scenarios. Current evidence-based guidelines recommend conservative treatment for at least two months, and often for much longer, before a surgical option is considered.5,6 Surgery is associated with risks, and the outcome in many patients with discogenic back pain has been found to be a “shared risk” in which symptoms can vary widely and are individualized to the patient. This includes accuracy, risk, cognitive behavioral therapy, analgesics, superficial heat therapy, patient education, and back surgery. In 2011, a study published in the Journal of the American Academy of Orthopaedic Surgeons found that the majority of patients who underwent lumbar transforaminal epidural steroid injections had pain that was either unchanged or worse compared to their baseline pain.7

Presentation of Case

A 69-year-old man, patient A, presented at our outpatient facility in October 2007. He complained of having experienced LBP during the last year. Patient A said the pain had progressively worsened over the past two months. Patient A also reported radiating pain into the buttocks and legs, as well as a burning sensation down both legs into the feet and the right inguinal region. Patient A was 68 inches tall and weighed 192 pounds. His medical history revealed cervical spine surgery, diabetes, hypertension, and lumbar surgery 13 years previously. At the time of presentation, the most recent MRI was the Vertebral Axiol Decompression (VAD) system (VadTech, Inc.). Several other discs have been since 2009 (DRX9000™ device, VadTech Inc., West Palm Beach, Florida, and the DRX9000™ device, VadTech Inc., West Palm Beach, Florida). The DRX9000™ computerized non-surgical spinal decompression system was designed to provide maximum decompression for a patient’s spine with the use of a non-invasive approach that may help maintain healthcare resources and offers patients an optimal therapeutic approach to the treatment of LBP.

The DRX9000™ aims to relieve pain by enhancing intra- discal spaces, reducing herniation and decreasing intradiscal pressure during treatment. A retrospective chart analysis of patients provided preliminary data that chronic LBP may improve with DRX9000™ spinal decompression.8 A prospective trial with 12 patients found that pain improved significantly after DRX9000™ treatment, with fewer analgesics and experiencing better function.9

Table 1: Per- and Post-Treatment Magnetic Resonance Imaging Measurements for Patient A

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Pre-Treatment</th>
<th>Post-Treatment</th>
<th>Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height of Disc Space (mm)</td>
<td>5.0</td>
<td>6.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Width of Disc Space (mm)</td>
<td>4.5</td>
<td>5.0</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Discussion

Spiral cord compression systems such as the DRX900™ have become more prominent in clinical practice for the treatment of LBP. These systems were developed to provide an alternative to surgery and included many parameters that were tested over a seven-week period. The initial parameters began at a maximum decompression force of 180 pounds, with a maximum decompression treatment of 200 pounds. The final treatment parameters were a maximum of 129 pounds and a minimum of 80 pounds. The decompressive force was determined in increments of five pounds and the total force applied to the disc was determined by the physician. The angle of treatment force—which allows the physician to make adjustments to treat the affected lumbar region—was from 90 to 180 degrees. The DRX9000™ system includes digital traction to reduce end plate cancellous bone and stress fractures, as well as instruction on therapeutic exercises and nutritional support upon discharge. At initial treatment, patient A reported pain at “10” on a scale of 0 to 10. At the end of the treatment protocol, the pain score was 0, achieving a complete pain relief.

Spiral cord compression systems such as the DRX900™ have become more prominent in clinical practice for the treatment of LBP. These systems were developed to provide an alternative to surgery, and they have been shown to be effective in reducing pain and improving function. The DRX9000™ system is designed to provide a non-invasive approach that may help maintain healthcare resources and offers patients an optimal therapeutic approach to the treatment of LBP. The DRX9000™ aims to relieve pain by enhancing intra-discal spaces, reducing hernaion and decreasing intradiscal pressure during treatment. A retrospective chart analysis of patients provided preliminary data that chronic LBP may improve with DRX9000™ spinal decompression.8 A prospective trial with 12 patients found that pain improved significantly after DRX9000™ treatment, with fewer analgesics and experiencing better function.9

References

SUMMARY OF STUDY

Symptoms Prior to Treatment
- Radiating pain into the buttocks and legs
- Burning sensation down both legs into the feet and the right inguinal region.

Activities Making Symptoms Worse
- Walking and standing for more than 15 minutes
- Disrupted sleep
- Difficulty moving from a sitting to a standing position

MRI showed
- Disc protrusions at all lumber levels
- Degenerative changes throughout lumbar spine
- Decreased Disc Space

7 Week Protocol
- 22 Treatments

Post Treatment
- Pain went from a 10 on a scale of 1-10 down to a 1
- No longer felt the burning sensation in the buttocks or legs
- Decrease in the frequency of burning in the right inguinal region
- Improvement in muscular strength

MRI revealed
- Decreased herniation size
- Increased disc height at multiple lumbar levels

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Individual results may vary. These statements have not been evaluated by the FDA. All spinal decompression devices currently registered with the FDA have received their 510K clearance by claiming their device is substantially similar to predicate traction devices.