

## **Reduction of Lumbar Disc Prolapse by Manipulation**

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### FROM ABSTRACT:

In patients with symptoms and signs characteristic of a mechanical lumbar spine disorder epidurography showed the presence of small disc prolapses.

Treatment by manipulation relieved the symptoms of lumbago, and repeat epidurography showed that the prolapses were reduced in size.

Reduction of disc prolapse by manipulation has not before been objectively demonstrated.

### THESE AUTHORS ALSO NOTE:

"Manipulation of the lumbar spine has been used as an empirical treatment of low backache since antiquity. The persistence and popularity of this type of treatment was based on the clinical impression that it is beneficial."

"The frequent accompaniment of acute onset low back pain by spinal deformity suggests a mechanical factor, and the accompanying abnormality of straight-leg raise or femoral stretch test suggests that the lesion impinges on the spinal dura matter of the dural nerve sheaths."

The controversy surrounding the mechanism of lumbago and its relief by manipulation led to this study.

All patients had low back pain of rapid onset and of less than one week's duration, and without pain radiating below the knee.

The manipulations performed were without anesthetic and using a "rotation technique." "The lumbar spine was rotated away from the painful side to the limit of its range, the buttock or thigh of the painful side being used as a lever; a firm additional thrust was made in the same direction. This manoeuvre was repeated until abnormal symptoms and signs had disappeared, progress being assessed by repeated examination."

The authors present two representative cases. In both cases there was an acute onset of low back and buttock pain, antalgia, positive stretch tests, and failure to improve with rest. In both cases an epidural venogram showed a protruded L4-L5 disc. Both cases became symptom free without antalgia following a

series of rotary lumbar spine manipulation maneuvers. "The epidurograms showed a reduction in the size of the disc protrusions, represented by concavities in the contrast medium, following manipulation. This effect had not previously been demonstrated." These authors concluded "it seems likely that the reduction effect [of the disc protrusion] is due to the manipulating thrust used."

Epidurography is more efficient than conventional myelography at demonstrating small disc protrusions.

"Rotation manipulations apply torsion stress throughout the lumbar spine. If the posterior longitudinal ligament and the annulus fibrosus are intact, some of this torsion force would tend to exert a centripetal force, reducing prolapsed or bulging disc material."

"The results of this study suggest that small disc protrusions were present in patients presenting with lumbago and that the protrusions were diminished in size when their symptoms had been relieved by manipulations."

#### KEY POINTS FROM DAN MURPHY:

- 1) "Manipulation of the lumbar spine has been used as an empirical treatment of low backache since antiquity."
- 2) In this study, the patients clearly had disc protrusions causing low back and leg pain (not below the knee).
- 3) The lumbar spine manipulations delivered to these patients were clearly long-lever rotation manipulations, using the shoulder and iliac crest as levers, accompanied with a thrust maneuver.
- 4) The manipulations performed in this study were repeated until abnormal symptoms and signs had disappeared.
- 5) Following the manipulations there was resolution of signs, symptoms, antalgia, and reduction in the size of the protrusions.
- 6) "Rotation manipulations apply torsion stress throughout the lumbar spine. If the posterior longitudinal ligament and the annulus fibrosus are intact, some of this torsion force would tend to exert a centripetal force, reducing prolapsed or bulging disc material."
- 7) "The results of this study suggest that small disc protrusions were present in patients presenting with lumbago and that the protrusions were diminished in size when their symptoms had been relieved by manipulations."