

9285

**The Comparison of Sequestrectomy and Conventional Discectomy for the Treatment of a Lumbar Disc Herniation: A systematic review**

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**Abstract**

**Study design.** Systematic review

**Objective.** To compare effects of sequestrectomy versus conventional microdiscectomy for lumbar disc herniation.

**Summary of Background data.** Open surgery for LDH can be performed by sequestrectomy or conventional discectomy. Generally, it has been assumed that the former is associated with higher risk of recurrence and less radicular pain and low back pain after surgery.

**Methods.** We searched MEDLINE and EMBASE from 1980 to November 2014. We selected randomized controlled trials (RCTs) and prospective studies that compared conventional discectomy versus sequestrectomy for adult patients with LDH and evaluated the following primary outcomes: radicular pain or LBP as measured by a visual analogue scale, neurological deficit of lower extremity. We also evaluated the following secondary outcomes: complications of surgery, reherniation rate, duration of hospital stay, postoperative analgesic use, and health related quality of life measures. Two authors independently reviewed citations and articles for inclusion. We assessed the risk of bias as well as the level of evidence for each study, and we used standard methodological procedures recommended by Cochrane Collaboration.

**Results.** We identified 5 studies (746 participants) that met our inclusion criteria comparing sequestrectomy versus microdiscectomy. Comparison revealed that with low-quality evidence, there is no significant difference for radicular pain, LBP, functional outcome, complications and hospital stay for two years. In addition, with moderate-quality evidence, there is no significant difference for recurrence rate. Meanwhile, there is very low-quality evidence that analgesic consumption is lower in sequestrectomy than micro/discectomy.

**Conclusion.** Both interventions had similar effect on pain after surgery, recurrence rate, functional outcome, and complications; however sequestrectomy may be superior in terms of post-operative analgesic consumption.

**Keywords:** discectomy, sequestrectomy, lumbar disc, systematic review, fragmentectomy