PEARLS: Practical Evidence About Real Life Situations

"The spine surgery community should be prudent about adopting this procedure on a large scale."

Caution required with total disc replacement for chronic back pain

CLINICAL QUESTION

How effective is total disc replacement for chronic low back pain in the presence of lumbar disc degeneration?

BOTTOM LINE

Total disc replacement compared with conventional fusion surgery for degenerative disc disease appeared to result in a small but clinically irrelevant improvement with respect to pain relief, disability, and quality of life in a selected population, in the short term (2 years, with only one study extended to 5 years). As harm and complications may occur after years, the spine surgery community should be prudent about adopting this procedure on a large scale.

CAVEAT

Although the risk of bias of five studies could be considered low, the most important items, sequence generation, allocation concealment, blinding, and comparable baseline values were not met in most studies. Currently available trials did not assess adjacent level disease and facet joint degeneration adequately.

CONTEXT

In the search for better surgical treatment of chronic low back pain in the presence of disc degeneration, total disc replacement has received increasing attention in recent years.

A possible advantage of total disc replacement compared with fusion is maintained mobility at the operated level, which has been suggested to reduce the chance of adjacent segment degeneration.

COCHRANE SYSTEMATIC REVIEW

Jacobs W, Van der Gaag NA, Tuschel A, *et al*. Total disc replacement for chronic back pain in the presence of disc degeneration. *Cochrane Database Syst Rev* 2012; **9**: CD008326. DOI: 10.1002/14651858.CD008326.pub2.

This review contains 40 studies involving 7000 participants.

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