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The Disability Cascade: A Preventable Consequence Of The Loss Of Disc Height Following Lumbar Microdiscectomy

Cureus: DOI: 10.7759/cureus.5169
https://doi.org/10.7759/cureus.5169
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Abstract

Lumbar discectomy is a mainstay surgical treatment for herniation of the lumbar discs and is effective at treating radicular symptomology. Despite the overall success of the procedure; the potential for reherniation and reoperation is significant. To avoid this potential recurrence, surgeons often perform discectomy more aggressively, removing a larger volume of nuclear material in the hopes of minimizing the likelihood of reherniation. This approach, while beneficial in minimizing the chance of reherniation, is associated with a volumetric reduction of the nucleus within the disc space, making the disc more prone to collapse and thus inducing a significant post-operative loss of disc height. While potentially minor in isolation, the loss of disc height, in fact, impacts several aspects of overall patient well-being. We hypothesize that the loss of disc height following discectomy causes an increase in pain and subsequent disability, the combination of which ultimately impacts socioeconomic factors affecting both the patient and the healthcare system as a whole. In this report, we outline the evidence in support of this disability cascade and provide recommendations on methods for limiting its impact. Given the current focus on cost-effectiveness in healthcare decision-making, methods for limiting this potentially damaging sequence of events must be investigated.