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CORR Insights®: Which Variables Are Associated With Patient-reported Outcomes After Discectomy? Review of SPORT Disc Herniation Studies

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Where Are We Now?

When conservative treatment fails, operative intervention can help patients with lumbar disc herniation. However, the degree to which various social and medical comorbidities affect the outcomes of nonoperative and operative care is less-defined. The authors in this review article have

performed an excellent analysis of eleven papers on subgroup analysis of the Spine Patient Outcomes Research Trial (SPORT) on intervertebral disc herniation. The results of the paper are consistent with current knowledge. Results showed improvement both in surgical and nonoperatively treated patients. No subgroup analysis was associated with worsening in either group. Patients showed greater benefit if they did not have joint problems,

were married, had a worsening symptom trend at baseline, and did not have diabetes. All subgroups improved more with surgery than with nonoperative treatment with the exception of worker's compensation patients. Previous studies [1–3] have also found fewer self-reported beneficial effects of surgical procedures in workers compensation patients, but how this information is to be used remains unclear. Should surgeons withhold surgery to a patient with a workplace injury and an open claim who has clearly failed nonoperative intervention? I would argue that bonafide failure of conservative measures make worker's compensation patients surgical candidates in the same realm as noncompensation patients.

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Where Do We Need To Go?

More evidence to inform decision making for individual patient with specific cofactors affecting outcomes would be helpful. Patient's

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preoperative understanding as to how their own social and or medical comorbidities may affect the potential benefits of surgery is invaluable. Although some evidence exists, how we use the evidence is still not clear. How these risk factors are characterized by the physician to the patient is critically important. For example, the presence of joint problems limited self-reported improvement after discectomy in this study. How does a physician use that information? Should a patient be dissuaded from considering a discectomy because of a coexisting hip osteoarthritis? In any study, the effect of long-term 100% relief of herniated nucleus pulposus symptoms will be muted in followup analysis of Oswestry Disability Index, SF-36 bodily pain, and SF-36 physical functioning in a patient with slowly progressive hip osteoarthritis. Clearly, if the same patient had to deal with worsening hip disability, along with

persisting sciatica, and a neurological deficit, he or she would be far worse off.

How Do We Get There?

This paper's usefulness is diminished by its stated limitations. The SPORT study was not powered to assess the subgroup analyses, which needs to be interpreted with caution. Therefore, while the results of this paper "inform", they do not provide definitive evidence. Further studies should provide data obtained from specifically designed future studies sufficiently powered on each subgroup. Will the information obtained justify the cost involved in performing the studies? The National Institute of Arthritis and Musculoskeletal and Skin Diseases funded the multicenter SPORT study at a considerable cost. Perhaps a more

cost-effective method may be obtained by analyses derived from large single center or multicenter registry databases, which may be more readily available in the modern era of electronic medical records.

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