Steroid injection May Lead To Worse Outcome For Spinal Stenosis Patients

For patients with spinal stenosis, epidural steroid injections (ESI) may actually lead to worse outcomes—whether or not the patient later undergoes surgery, according to a study in the February 15 issue of Spine. The journal is published by Lippincott Williams & Wilkins, a part of Wolters Kluwer Health.

The study raises questions about the benefits of steroid injection—a widely used treatment for the common problem of spinal stenosis in the lower (lumbar) spine. "There was no improvement in outcome with ESI whether patients were treated surgically or nonsurgically," according to the study by Dr Kris E. Radcliff of Thomas Jefferson University, Philadelphia, and colleagues.

The researchers analyzed data from the Spine Outcomes Research Trial (SPORT)—one of the largest clinical trials of surgery for spinal disorders. In SPORT, patients meeting strict criteria for spinal stenosis (or other common spinal problems) were randomly assigned to surgery or nonsurgical treatment (such as physical therapy and medications). Patients with spinal stenosis have narrowing of the spinal canal, causing back pain, leg pain, and other symptoms.

The current analysis focused on the effects of ESI as part of treatment for spinal stenosis. Steroid injection is commonly recommended for patients whose symptoms don't improve with initial treatment.

Dr Radcliff and colleagues compared outcomes for 69 patients who underwent steroid injection during their first three months of enrollment in SPORT versus 207 patients who did not receive ESI. The two groups were similar in terms of most initial characteristics, although patients receiving steroid injections were more likely to prefer nonsurgical treatment: 62 versus 33 percent.

"Despite equivalent baseline status, ESI were associated with significantly less improvement at four years among all patients with spinal stenosis in SPORT," the researchers write. Among patients who eventually had surgery, those who had ESI showed less improvement in physical functioning through four years' follow-up. For those treated nonsurgically, steroid injections were associated with less improvement in pain as well as functioning.

There was also evidence that surgery was more complicated in patients who had previously been treated with epidural steroids. On average, surgery took about one-half hour longer in patients who had received ESI, who also spent about one day longer in the hospital. Patients who received ESI were also more likely to "crossover" from their initially assigned treatment to the other treatment group. There was no evidence that receiving steroid injections helped patients to avoid surgery.

Lumbar spinal stenosis is a common problem in older adults. Epidural steroid injection is a common treatment for spinal stenosis, despite a lack of evidence showing its long-term benefits. The SPORT data provides an opportunity to examine how steroid injections affect long-term outcomes of spinal stenosis.

The new study has some important limitations, especially in that patients weren't randomly assigned to epidural steroid treatment. However, the results suggest that patients with spinal stenosis who receive ESI have less improvement at four years' follow-up, whether or not they subsequently undergo surgery.

Dr Radcliff and colleagues conclude, "Despite the common treatment practice of incorporating one or more ESI in the initial nonoperative management of patients with spinal stenosis, these results suggest that ESI is associated with worse outcome in the treatment of spinal stenosis," write. They believe the "most likely" reason for the worse outcomes after ESI is that the injection causes worsening of the spinal narrowing or result spinal nerve impingement, although other explanations are possible. The authors call for further research to clarify the "indications and results of this common procedure."

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