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Treatment of Disk Herniation: New Study Compares Surgical vs. Nonoperative Treatment

BUT NOT ENOUGH PATIENTS CHOOSE CHIROPRACTIC AS AN ALTERNATIVE

Deborah Pate, DC, DACBR

A randomized clinical trial published in the *Journal of the American Medical Association* suggests surgery is no more effective than nonoperative treatments, including chiropractic, for patients with lumbar disk herniation causing sciatica.[1] While preparing to write an article on the study results, we received the following analysis of the *JAMA* study from longtime *DC* columnist Deborah Pate, DC, DACBR. Her experience as a chiropractic clinician and radiologist makes her an ideal choice to interpret these important findings for the profession.

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Deborah Pate, DC, DACBR, practices in San Diego. She can be contacted at patedacbr@cox.net. For more information, including a brief biography, a printable version of this article and a link to previous articles, please visit Dr. Pate's columnist page online: www.chiroweb.com/columnist/pate.

Results of the Spine Patient Outcomes Research Trial (SPORT) are out. SPORT is a randomized clinical trial enrolling patients between March 2000 and November 2004, from 13 multidisciplinary spine clinics in 11 states. All of the patients were considered surgical candidates: 501 total patients with the mean age of 42 years. All patients had imaging-confirmed lumbar intervertebral disk herniation and persistent signs and symptoms of radiculopathy for at least six weeks.

The objective of the study was to assess the efficacy of surgery for lumbar intervertebral disk herniation. In the United States, lumbar diskectomy is the most common surgical procedure performed for patients with back and leg symptoms. Interestingly enough, the efficacy of the procedure relative to nonoperative care has been controversial for decades. This is an extremely useful study and will affect the treatment and management of patients with disk herniations for a long time to come. I would like to discuss the main points as I see them. Please do not just take my opinion. Review the study for yourself at http://jama.ama-assn.org/cgi/content/full/296/20/2441 [full text available free to JAMA subscribers, otherwise it will cost you $15].

In this study, there were two broad treatment categories compared; surgical intervention and nonoperative care. Patients in the surgical group received a standard open diskectomy with examination of the involved nerve root. The nonoperative treatment group received "usual care," with the study protocol recommending that minimum nonsurgical treatment include at least active physical therapy, education/counseling with home exercise instruction, and nonsteroidal anti-inflammatory drugs, if tolerated. Other nonoperative treatments included CMT, acupuncture, braces, magnets, TENS and orthotics. The physicians participating in the study were encouraged to individualize treatment to the patient. I think it's interesting that out of 323 patients in the nonoperative treatment group, only 36 received chiropractic care, as opposed to 142 who received physical therapy. (For more information, take a look at table 2 in the original article.)

Patients in both the surgery and nonoperative treatment groups improved substantially over the

first two years. Between-group differences in improvement consistently favored surgery for all outcomes and at all time periods, but differences in outcome measures were small and not statistically significant, except for the secondary measures of sciatica severity and self-rated improvement. The authors note, "Because of the high numbers of patients who crossed over in both directions, conclusions about the superiority or equivalence of the treatments are not warranted based on the intent-to-treat analysis alone."

This study does not determine which treatment is best; it mainly confirms that with either treatment, the patient's symptoms will improve. Time is on our side. No one who waited had serious consequences (many surgeons like to purport that waiting causes serious harm to nerve roots), and no one who had surgery experienced a disastrous result, either.

It's estimated that 1 million Americans suffer from sciatica, the most common cause being a disk herniation impinging on the root of the sciatic nerve. An estimated 300,000 patients have surgery every year to relieve the symptoms. Patients often are told that if they delay surgery, they risk permanent nerve damage, leg weakness, and even loss of bowel or bladder control. This is not the case. According to this study, the symptoms will resolve over a two-year period, even if the patient does nothing. Most people do have to do *something* because the symptoms often are intolerable. This study did not include people who had lower back pain only or people with herniation-related symptoms that would require immediate surgery, such as losing bowel or bladder control.

In my opinion, one of the major weaknesses in this study in regard to chiropractic is that a very small percent of patients received any chiropractic treatment. Basically, anything short of surgery was considered nonoperative, from magnets to steroidal injections. What we can take from this study is that there is no need to rush into surgery and the patient will not get worse if he or she waits.

This study will have an impact on the treatment of patients with disk herniations. We have yet to see how this study will be comprehended by the insurance carriers.

Editor's note: The November 22/29, 2006 issue of *JAMA* also featured the results of a SPORT observational cohort on the efficacy (or lack thereof) of surgical intervention for lumbar disk herniation.[2] That study, also available in its entirety at http://jama.ama-assn.org, involved 743 patients, 528 of whom received surgery. As with the randomized trial, while patients in the surgery group reported greater improvement in outcome measures at three months, differences narrowed by the two-year mark.

In the U.S., lumbar diskectomy is the most common surgical intervention for patients with back and leg symptoms. As the results of these studies suggest and as Dr. James Weinstein, faculty member at Dartmouth Medical School and lead author of both studies, emphasizes, the bottom line is that patients with this condition will get well regardless of whether they go under the knife. "There's actually a choice," he said. "If you don't want the risk of surgery, you can do watchful waiting."[3]

References

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