

NASS 23RD ANNUAL MEETING

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Radiographic findings did not predict outcome for degenerative spondylolisthesis treatment

TORONTO — Certain radiographic features, such as magnitude of slip, disc space narrowing and intervertebral hypermobility, have been linked to outcomes in degenerative spondylolisthesis treatment. A study presented at the North American Spine Society 23rd Annual Meeting, however, showed that baseline radiographic findings did not predict outcome in patients with degenerative spondylolisthesis.

“The study showed that patients with grade 2 listhesis had a greater treatment effect of surgery at one year compared to those with grade 1 slips, primarily due to less improvement with nonoperative treatment for patients with large slips,” said Jon D. Lurie, MD, Dartmouth College, Lebanon, NH. “At two years, most of these differences were no longer significant. Given these results, patients with grade 2 listhesis should probably be informed that they are unlikely to improve substantially over the first year with nonoperative treatment.”

Lurie and colleagues at Rush University Medical Center, Chicago, and the Hospital for Special Surgery, New York City, studied a subset of 222 degenerative spondylolisthesis patients culled from the Spine Patient Outcomes Research Trial (SPORT). SPORT is a multicenter study that examined the three most common back conditions and compared operative and nonoperative treatments. It included randomized and observational cohorts from 13 institutions in 11 states.

To measure outcomes, the investigators used the SF-36 Bodily Pain and Physical Function scales, the Oswestry Disability Index (ODI), the Stenosis Bothersomeness Index and the Low Back Pain Bothersomeness Index.

The investigators determined the Meyerding listhesis grade on a neutral radiograph. If disc height was less than 5 mm, they classified the patient as low disc height. They evaluated flexion-extension radiographs for mobility. They defined hypermobility as more than 10 degrees rotation or 4 mm translation.

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Using longitudinal regression models, Lurie and colleagues compared outcome changes between listhesis (Grade 1 vs. Grade 2), disc height (low vs. normal) and mobility (stable vs. hypermobile).

The results showed that 86% of patients had Grade 1 listhesis, 78% had normal disc height and 73% were stable. At baseline, symptom severity was similar between the groups.

Analysis showed that surgical patients improved more than nonsurgical patients. One-year outcomes for surgical patients were similar for listhesis, disc height and mobility groups. In the nonsurgical group, Grade 1 patients improved more than Grade 2 patients. Hypermobile patients improved more than stable patients.

"The most surprising finding was that hypermobile patients, those who have been described as 'unstable' by some authors, improved more with nonoperative treatment than 'stable' patients on the Oswestry Disability Index at both one and two years," Lurie said. "In addition, the hypermobile group surprisingly included a higher proportion of men than did the stable group. While the hypermobile patients still improved more with surgery than with nonoperative treatment, these findings suggest that hypermobility should not be a contraindication to nonoperative treatment as these patients tend to do well with nonoperative care."

About NASS

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