Microdiskectomy Superior for Disk Herniation

BY SHERRY BOSCHERT
San Francisco Bureau

SAN FRANCISCO — Children with herniated spinal disks fared better after microdiskectomy, compared with conservative management, in a study of 52 patients treated from 2000 to 2004.

The series is not the largest in the medical literature, but it is the only one to include pediatric diskectomies performed solely in the era of microsurgery and MRI, Kevin L. Stevenson, M.D., said at a meeting on pediatric neurologic surgery.

Physicians' decisions about management of children with disk herniation "are often based on literature that's 40-plus years old," Dr. Stevenson said at the meeting, jointly sponsored by the American Association of Neurological Surgeons and the Congress of Neurological Surgeons.

In collaboration with his colleagues at Children's Healthcare of Atlanta at Scottish Rite, Dr. Stevenson reviewed the charts of all children seen for disk herniation at the center during the study period and obtained further follow-up information by phone interviews. All patients underwent 7 weeks of conservative management, defined as a complete cessation of strenuous activity, ongoing NSAID therapy, and a course of physical therapy after the initial disk flare-up. The study excluded patients with only a disk bulge. The study's 52 patients had 62 herniated disks—1 in the cervical spine, 2 in the thoracic spine, and 59 in the lumbar spine. The injuries comprised 39 central herniations, 22 lateral herniations, and 1 far lateral herniation. Nine patients had more than one herniated disk.

Conservative management continued in 28 patients. The other 24 had surgery, consisting of 37 unilateral laminotomies and microdiskectomies, 1 complete laminectomy, 1 thoracotomy, and 5 multilevel laminectomies.

Telephone questionnaires completed an average of 38 months after presentation found that none of 19 patients in the surgery group who originally complained of radiculopathy had an active radiculopathy at follow-up. Of 20 control group patients, 8 with initial radiculopathies had active disease at follow-up, said Dr. Stevenson.

Of 22 patients in the surgical group who originally complained of back pain, 2 reported at follow-up that they had back pain only upon exertion. In the control group, all 28 patients complained of back pain at presentation, and the pain persisted in 16 patients at follow-up, with approximately one-third of these reporting pain only upon exertion.

Microdiskectomy was more likely to eliminate radiculopathies than conservative management (100% vs. 89%), according to reports in the literature.

Objective neurologic deficits found at presentation in 12 patients in the surgical group and 6 in the control group persisted in the control patients at follow-up but had cleared in the surgical group. Dr. Stevenson noted that the modern surgical cohort had fewer symptoms and were more likely to show improved function, according to the findings of an informal comparison with patients in the literature who were treated prior to the era of microsurgery and MRI.

Children in the current study were more likely to present with low back pain, compared with those in the literature (92% vs. 86%). The modern surgery was more successful at eliminating radiculopathies, compared with reports of conservative management outcomes in the literature (100% vs. 89%). The average hospitalization stay after surgery fell from 4 days for cases in the literature to 2 days for the modern cohort.

Patients in the modern cohort had fewer complications, returned to school quicker, and were less likely to need reoperation, compared with patients in the literature, Dr. Stevenson added.

"The existing literature does not appear to accurately reflect modern surgical outcomes after pediatric diskectomy. In carefully selected patients, it's a safe and effective treatment for pediatric disk disease after failed conservative management," he said. ■