

If Prednisone Is Used in RA, Low Dose Is Optimal

BY DIANA MAHONEY

COPENHAGEN — Prednisone in initial dosages lower than 5 mg/day is as effective as higher doses in rheumatoid arthritis patients, a study has shown.

Although the use of glucocorticoids in RA remains controversial, the drugs continue to play a major role in the treatment of the disease, Dr. Theodore Pincus said at the annual European Congress of Rheumatology. “Textbooks suggest that glucocorticoids should be used in rheumatoid arthritis only for patients with life-threatening complications, or as a bridge therapy until [disease-modifying antirheumatic drug] treatment begins to work, yet estimates suggest that they are used by 20%-80% of patients in usual clinical practice.” Given this reality, he noted, determining the lowest effective dosage is important.

Dr. Pincus of the division of rheumatology at New York University and the Hospital for Joint Diseases, New York, and his colleagues retrospectively analyzed the efficacy of prednisone in the usual care of 308 RA patients treated over a 25-year period. Using a database of all patient visits to a weekly academic clinic during 1980-2004, the investigators analyzed all initial prednisone prescriptions and classified patients into one of two groups: those treated with an initial prednisone dosage of 5 mg/day or higher, and those treated with an initial dose lower than 5 mg/day. The 5-mg threshold was used because the efficacy of prednisone at 5 mg daily in rheumatoid arthritis has been documented, Dr. Pincus said.

Of 308 patients, 195 were treated with an initial prednisone dose of 5 mg or higher and 113 were treated with an initial dose less than 5 mg. Nearly all of the patients taking prednisone also took DMARDs, primarily methotrexate.

All of the patients in the study completed the MDHAQ-FN (Multidimensional Health Assessment Questionnaire including physical function measures, and a VAS (Visual Analog Scale) pain measure at each visit. The investigators compared the baseline, 12-month, and 24-month follow-up scores of patients in both dosage groups and used the change in scores from baseline to 12 and 24 months as outcome measures. They also analyzed the data based on 5-year subgroups to account for changes in prescribing practices over time. At baseline, patients in the higher-dose group had higher function and pain scores than did those in the lower-dose group.

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The mean improvements in MDHAQ-FN scores were statistically similar between both groups, said Dr. Pincus. At 12 and 24 months, respectively, the mean MDHAQ-FN improvement from baseline was 40% and 31% in patients in the higher-dose group, compared with 34% and 24% in patients in the lower-dose group. The mean improvements in pain scores were also similar between both groups. At 12 and 24 months, respectively, the mean improvement in pain from baseline was 37% and 42% in the higher-dose group and 37% and 35% in the lower-dose group, he said.

When analyzed by 5-year periods, the initial prednisone dose fell from a mean of 10.3 mg in 1980-1984 to 6.5 mg (in 1985-1989), 5.1 mg (in 1990-1994), 4.1 mg (in 1995-1999), and 3.6 mg (in 2000-2004), said Dr. Pincus. From 1980 to 2004, the median dosage fell from 5 mg/day to 3 mg/day. Before 1990, there were some differences in the pain and functions scores between the lower- and higher-dose groups, but the differences were not maintained in the analysis of the 25-year period, said Dr. Pincus, who reported no conflicts of interest. ■

Vertebroplasty Found No More Beneficial Than Sham Procedure

BY MARY ANN MOON

Vertebroplasty was no more beneficial than a sham procedure for painful osteoporotic vertebral fractures in the first two blinded, randomized, controlled trials ever to assess the technique, according to separate reports.

These findings are likely to transform percutaneous vertebroplasty—a widely accepted method of pain relief that has become routine therapy—from “a procedure that is virtually always considered to be successful” into one “considered no better than placebo,” James N. Weinstein, D.O., of Dartmouth-Hitchcock Medical Center, Hanover, N.H., said in an editorial accompanying the reports.

The Centers for Medicare and Medicaid Services and radiologic and neurologic surgery societies have recommended reimbursement of vertebroplasty—endorsements that have boosted a dramatic rise in its popularity. The number of vertebroplasties performed in the United States has more than doubled in the past 6 years, Dr. Weinstein noted (*N. Engl. J. Med.* 2009;361:619-21).

The procedure involves injecting medical cement directly into a vertebral fracture to stabilize it and relieve pain. Many case series and small, unblinded, nonrandomized, noncontrolled studies have suggested that it is effective, though the precise mechanism of action has never been delineated.

In one of the reports, Rachelle Buchbinder, Ph.D., of Monash University, Malvern, Australia, and her associates randomly assigned 38 patients with 1-2 recent vertebral fractures to vertebroplasty and 40 to a sham procedure.

The primary outcome measure, overall pain score, was no different between the two groups at 1-week, 1-month, 3-month, or 6-month assessments. Pain at rest, pain during the night, physical functioning, and quality of life measures also were not significantly different, nor was the use of opioid analgesics, they said (*N. Engl. J. Med.* 2009;361:557-68).

These results were consistent regard-

less of patients’ duration of symptoms and history of previous fractures.

One subject who underwent vertebroplasty and could not receive prophylactic cephalothin because of drug allergies developed an adjacent new fracture and osteomyelitis requiring surgery. Some studies have suggested that vertebroplasty raises the risk of subsequent fractures, particularly in vertebrae adjacent to treated areas, sometimes after the medical cement has leaked into those areas.

“Our results show ... the hazards of relying on the results of uncontrolled or poorly controlled studies to assess treatment efficacy,” Dr. Buchbinder and her colleagues noted.

Earlier studies may have overestimated the benefit of vertebroplasty “by failing to take into account the favorable natural history of the condition, the tendency of regression to the mean, and the placebo response to treatment, which may be amplified when the treatment is invasive,” they added.

In another study, Dr. David F. Kallmes of the Mayo Clinic, Rochester, Minn., and his associates enrolled patients at 11 medical centers in the United States, the United Kingdom, and Australia. A total of 68 were randomly assigned to vertebroplasty and 63 to a sham procedure.

At 1 month, the two groups did not differ significantly on the 2 primary outcomes, which were separate measures of pain and disability. Secondary outcomes of pain intensity, disability, and quality of life also were not significantly different, Dr. Kallmes and his colleagues said (*N. Engl. J. Med.* 2009;361:569-79).

One patient who underwent vertebroplasty sustained an injury to the thoracic sac during the procedure and required hospitalization, they added.

Dr. Buchbinder reports receiving grant support for the trial from Cook Australia, a manufacturer of medical products and devices. Dr. Kallmes reports receiving consulting fees from Zelos Therapeutics and grant support from ArthroCare, Stryker, Cardinal, and Cook and serving as an unpaid consultant to Bone Support. Dr. Weinstein reported no disclosures. ■

MRI May Spur Unnecessary Interventions for Low Back Pain

BY SUSAN BIRK

CHICAGO — Increases in the availability of magnetic resonance imaging are significantly associated with increases in utilization of lower back MRI and lower back pain surgery, a study of 832,000 episodes of treatment among Medicare recipients has shown.

Patients in geographic areas with the highest quartile of MRI availability were 15% more likely to receive lower back MRI within 30 days of an initial doctor visit and 10% more likely to receive lower back MRI within a year, compared

with patients living in areas with the lowest quartile of MRI availability, according to Jacqueline Baras Shreibati, a medical student at Stanford (Calif.) University, and Laurence C. Baker, Ph.D., professor of health research and policy at Stanford. These patients also were significantly more likely to undergo surgery for their ailments, they reported at the annual research meeting of AcademyHealth.

“These results raise concerns that the widespread expansion of MRI may adversely impact quality of care for low back pain patients,” they stated. “The rapid expansion in the number of MRI scanners

in the United States has enabled more patients to receive cutting-edge imaging that can produce valuable diagnostic information. However, for patients with low back pain, the use of MRI is controversial. Spinal abnormalities detected by MRI often do not correlate with symptoms and can lead to unnecessary interventions, including surgery, which in many patients is of uncertain efficacy.”

The researchers used claims from a 20% sample of Medicare beneficiaries from 1998-2005. Cohorts were developed of patients with a new episode of care for low back pain in 1999, 2002, and

2005, years for which data were available on the number of MRI units per million people in U.S. metropolitan statistical areas. Patients were assigned to an MRI quartile based on their metropolitan statistical area of residence. The researchers examined the impact of MRI availability on the receipt of low back pain MRI and surgery within 30, 90, 180, or 365 days of the initial visit.

Among all low back pain episodes of care, 18% resulted in MRI and 4% resulted in low back pain surgery within a year of the initial visit. The authors reported no conflicts of interest. ■