Serum Shots Show Promise for Knee Osteoarthritis

BY KATE JOHNSON
Montreal Bureau

PRAGUE — Intra-articular injections of autologous conditioned serum reduced the symptoms of knee osteoarthritis significantly more than did either saline or hyaluronan injections in the first controlled clinical trial of the therapy, Dr. Carsten Moser reported at the 2006 World Congress on Osteoarthritis.

"This is a completely different approach to the treatment of osteoarthritis," said Dr. Moser, a physician at University Hospital Düsseldorf, Germany, and also an advisor to the company that markets Orthokine, the product used to condition the serum.

ORTHOGEN AG

Conditioned serum injections, found to ease knee OA pain, involve the incubation of patients' venous blood with medical glass beads.

The therapy, originally marketed as IRAP to treat lameness in racehorses, is used by more than 400 physicians in Europe to enhance muscle healing in humans, he said at the meeting, which was sponsored by the Osteoarthritis Research Society International. "It does not require approval in Europe because it involves autologous serum, which is drawn and prepared by the physician," he said in an interview. The company is currently facing distribution problems in the United States, and it is unclear if the therapy will require FDA approval, he added.

Serum conditioning involves incubation of patients' venous blood with medical grade glass beads, Dr. Moser said. Previously published work has shown that this incubation procedure elicits a rapid increase in the serum's synthesis of several anti-inflammatory cytokines (Inflamm. Res. 2003;52:404-7).

"Peripheral blood leukocytes produce elevated amounts of endogenous anti-inflammatory cytokines such as interleukin-1 receptor antagonist," he said. The conditioned serum is then injected into the affected joint.

The trial involved 345 patients, average age 57 years, with radiological evidence of knee osteoarthritis and pain greater than 50 points on a 100-point visual analog scale. After blood was drawn from all patients, they were randomized, to ensure blinding, to intra-articular injections of either autologous conditioned serum (ACS), hyaluronan (HA), or saline twice a week for 3 weeks.

The outcomes were assessed at 7, 13, and 26 weeks after the last injection, using patient-administered outcome instruments of pain measurement including the Western Ontario and McMaster Osteoarthritis index (WOMAC), the Visual Analog Scale (VAS), and a health-related quality-of-life measure (SF-8).

"Pain was significantly reduced in all three groups and quality of life was increased. However, the positive therapeutic responses to ACS were stronger, compared to the other treatment modalities," he said. "The magnitude of improvement in the ACS group was significantly higher and persisted for months after the last injection. Compared with ACS, the mean reduction in pain was half in the other treatment groups."

Adverse events were minor in all groups and were confined to localized pain and swelling from the injection. This occurred in 23% of the ACS group, compared with 28% of the saline group and 38% of the HA group, Dr. Moser noted. ■

Nonpharmacologic Agents Underprescribed for OA Pain

BY KATE JOHNSON
Montreal Bureau

PRAGUE — Nonpharmacologic therapies remain less commonly prescribed than are pharmacologic therapies for the treatment of knee and hand osteoarthritis—and this trend has been noted both for primary care physicians and rheumatologists, according to two studies presented at the 2006 World Congress on Osteoarthritis.

When it comes to primary care physicians (PCPs) treating knee osteoarthritis (OA), nonpharmacologic treatments are "insufficiently prescribed and, when initiated, are rarely continued over the long term," reported Dr. Bernard Mazières of Rangueil University Hospital, in Toulouse, France.

However, first-line pharmacologic treatment with acetaminophen was initiated in 96% of patients and was well followed, Dr. Mazières said at the meeting, which was sponsored by the Osteoarthritis Research Society International.

Recommendations recently approved by the European League Against Rheumatism (EULAR) suggest that the optimal treatment of both knee and hand OA involves a combination of pharmacologic and nonpharmacologic therapy (Ann. Rheum. Dis. 2006 [Epub doi:10.1136/ard.2006.062091] and Ann. Rheum. Dis. 2003;62:1145-55).

Dr. Mazières' observational, prospective, multicenter, 1-year cohort study included a total of 933 knee OA patients from 383 randomly selected PCPs in France and Spain. Information on the EULAR recommendations for treating knee OA was provided to the PCPs at the start of the study.

Although 99% of the patients were prescribed acetaminophen during the study period, only 47% (437) were prescribed a treatment strictly following the EULAR recommendations—namely acetaminophen in conjunction with nonpharmacologic therapy. Among those who received nonpharmacologic therapy, the most common prescription was rehabilitation (40%), followed by weight loss (24%), and education (20%).

The study concluded that under these therapeutic conditions patients were satisfied with their OA treatment and "improvement in pain, stiffness, and clinical signs of inflammation was clinically relevant."

In a separate oral presentation at the meeting, Dr. Emmanuel Maheu reported that, when compared with PCPs, rheumatologists are no better at prescribing nonpharmacologic therapy—at least when it comes to the treatment of hand osteoarthritis.

His prospective cross-sectional study included 169 French rheumatologists and PCPs treating 316 hand OA patients. The study found that, when compared with rheumatologists, PCPs prescribed more analgesics (93% vs. 73%), more nonsteroidal anti-inflammatories (62% vs. 43%), and "surprisingly" more physical therapy (19% vs. 3%), said Dr. Maheu, of St. Antoine Hospital, Paris. Rheumatologists prescribed more splints (30% vs. 13%) and more intra-articular steroid injections (16% vs. 5%). ■

New Guidelines Focus on Prompt Management of Early Arthritis

BY NANCY WALSH
New York Bureau

The availability of more effective arthritis drugs and monitoring techniques has created a critical window of opportunity when joint destruction can be averted and function maintained. To help clinicians make the most of this crucial period in management of the disease, an expert committee of the European League Against Rheumatism has written new guidelines on optimal management of early arthritis.

Among the issues addressed by the guidelines are the need for accurate, prompt diagnosis and the early institution of disease-modifying antirheumatic drug (DMARD) therapy and, if appropriate, nonsteroidal anti-inflammatory agents and corticosteroids (Ann. Rheum. Dis. 2007;66:34-45). They also provide guidance on monitoring and nonpharmaceutic adjuncts to treatment, and set out an agenda for further research.

The recommendations, which are based on evidence in the literature as well as expert consensus, are as follows:

► Patients presenting with arthritis of more than one joint should be referred to a rheumatologist, if possible within 6 weeks of symptom onset.

► Clinical examination is the method of choice for diagnosis, although imaging studies with ultrasound and MRI can be helpful when there is uncertainty.

► A careful history is needed to rule out other diagnoses, along with laboratory tests including complete blood cell count, urinalysis, measurement of transaminases, and detection of antinuclear antibodies.

► All patients with early arthritis should be evaluated for factors that are predictive of persistent and erosive disease, including number of swollen and tender joints, erythrocyte sedimentation rate or C-reactive protein, rheumatoid factor, anticyclic citrullinated peptide antibodies, and radiographic erosions.

► Patients at risk for persistent or erosive disease should begin therapy with DMARDs even if their arthritis remains undifferentiated.

► Educational measures may be employed adjunctively to help patients deal with pain and disability.

► Nonsteroidal anti-inflammatory drugs can be considered for symptomatic relief, with consideration given to potential adverse gastrointestinal, renal, and cardiovascular effects.

► Systemic corticosteroids can be used in addition to DMARDs, generally in a temporary fashion, and intra-articular corticosteroid injections should be considered for local symptomatic inflammation.

► Methotrexate is considered the "anchor" DMARD, with leflunomide and sulfasalazine as alternatives when necessary.

► The goal of DMARD therapy is remission, and monitoring should guide treatment decisions and strategy changes as needed.

► Nonpharmaceutic interventions such as exercise can be helpful in improving strength and physical function in patients with early arthritis.

► Routine monitoring during early disease should include tender and swollen joint counts, patient and physician global assessment, and measurement of erythrocyte sedimentation rate and C-reactive protein, and structural damage should be monitored by x-rays every 6-12 months. ■