Chondroitin sulfate combo effective in moderate-to-severe pain

Joint swelling in GAIT decreased significantly after patients received chondroitin sulfate.

A combination of chondroitin sulfate and glucosamine significantly improved pain among patients with moderate-to-severe pain related to knee osteoarthritis, although an overall analysis found no significant differences between treatments and placebo.

Researchers, led by Daniel O. Clegg, MD, observed the improvement in a subgroup analysis of the Glucosamine/chondroitin Arthritis Intervention Trial (GAIT). GAIT results appeared in *The New England Journal of Medicine.*[1]

Analysis of secondary outcomes revealed a significant improvement in joint swelling among patients randomly assigned to receive chondroitin sulfate.

A subgroup analysis found glucosamine plus chondroitin sulfate improved moderate-to-severe pain.

GAIT

GAIT was a 24-week, randomized, double-blind, placebo- and positive-controlled, multicenter study. Clegg and colleagues undertook the study to evaluate the efficacy and safety of chondroitin sulfate, glucosamine and a combination of the two. Chondroitin sulfate used alone or with glucosamine was provided by Bioiberica. A previous meta-analysis evaluating chondroitin sulfate and glucosamine suggested a potential benefit for the supplements.[2]

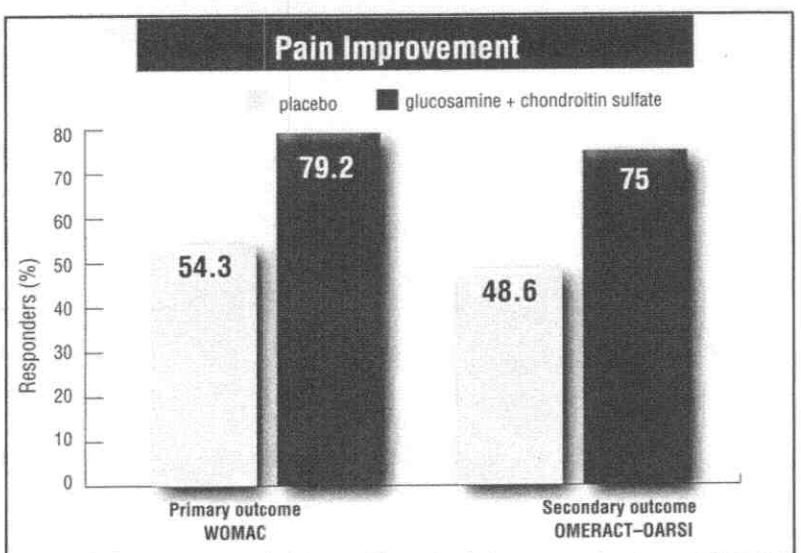

Figure 1. The percentage of patients with moderate-to-severe pain who experienced a decrease in pain was significantly better among those who received the combination treatment vs. placebo ($P = .002$ for WOMAC; $P = .001$ for OMERACT-OARSI).[1]

All patients in the study had clinical and radiographic evidence of knee osteoarthritis. Patients were randomly assigned to one of five treatments: 500 mg of oral glucosamine three times daily (n=317), 400 mg of oral chondroitin sulfate three times daily (n=318), 500 mg of oral glucosamine plus 400 mg of chondroitin sulfate three times daily (n=317), placebo (n=313), or 200 mg of celecoxib (Celebrex, Pfizer) daily as a positive control (n=318).

Patients were stratified according to baseline Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) scores. Pain scored as 125 to 300 was considered mild, and pain of 301 to 400 was considered moderate to severe. There were 354 patients with moderate-to-severe pain.

A 20% decrease in the summed WOMAC pain score from baseline to week 24 was considered a response to treatment. Clegg and colleagues also used response criteria from the Outcome Measures in Rheumatology Clinical Trials (OMERACT) and the Osteoarthritis Research Society International (OARSI) task force.[3] Secondary outcomes included the WOMAC stiffness and function scores and presence or absence of soft-tissue swelling in the more symptomatic knee.

Overall, however, differences between treatment and placebo were small for both WOMAC and OMERACT-OARSI response, according to the GAIT results. Among the entire patient popula-