Effect of glucosamine sulfate with or without omega-3 fatty acids in patients with osteoarthritis.

INTRODUCTION: A total of 177 patients with moderate-to-severe hip or knee osteoarthritis (OA) were tested over a period of 26 weeks in a two-center, two-armed, randomized, double-blind, comparison study. The aim was to see if a combination of glucosamine sulfate (1500 mg/day) and the omega-3 polyunsaturated fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) (group A), showed equivalence (noninferiority) or superiority as opposed to glucosamine sulfate alone (group B). METHODS: The primary therapy evaluation was performed using the Western Ontario and McMaster Universities Arthrosis index (WOMAC) score. At the end of the study, a reduction in the pain score of \( \geq 20\% \) was required (primary target criterion) and the quantitative difference in the WOMAC subscores pain, stiffness, and function were analyzed (secondary target criteria). RESULTS AND CONCLUSION: When a minimal pain reduction of \( \geq 20\% \) was chosen, there was no statistically significant difference in the number of responders between the two groups (92.2\% group A, 94.3\% group B). A higher responder criterion (\( > \text{or } = 80\% \) reduction in the WOMAC pain score) was chosen. Therefore, the frequency of responders showed a therapeutic and statistical superiority for the combination product of glucosamine sulfate and the omega-3 polyunsaturated fatty acids in patients who complied with the study protocol (group A 44\%, group B 32\%);
P=0.044). OA symptoms (morning stiffness, pain in hips and knees) were reduced at the end of the study: by 48.5%-55.6% in group A and by 41.7%-55.3% in group B. The reduction was greater in group A than in group B. There was a tendency toward superiority shown in the secondary target criteria and concurrent variables. In the global safety evaluation, both products have been demonstrated to be very safe in long-term treatment over 26 weeks. To our knowledge, this is the first clinical trial in which glucosamine was given in combination with omega-3 fatty acids to patients with OA.