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The "MESACA" study: methylsulfonylmethane and boswellic acids in the treatment of gonarthrosis.

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Abstract

INTRODUCTION: Osteoarthritis is a chronic rheumatoid disease mediated by metalloproteinases and inflammatory cytokines. Methylsulfonylmethane (MSM) and boswellic acids (BA) each show promise in the treatment of inflammatory processes, but the efficacy of combined treatment with these substances in the treatment of arthritis has not yet been studied.

METHODS: In this prospective randomized clinical trial, MESACA (for "methylsulfonylmethane and boswellic acids in the treatment of knee arthritis"), 60 subjects affected by arthritis of the knee were randomly assigned to an experimental group treated for 60 days with 5 g of MSM and 7.2 mg of BA daily, or a control group which was administered a placebo. At 2 and 6 months follow-up (FU), the efficacy of combined treatment with these two dietary supplements was assessed using the visual analog pain scale (VAS) and the Lequesne index (LI) for joint function, as well as monitoring the use of anti-inflammatory drugs (nonsteroidal anti-inflammatory drugs and anti-cyclooxygenase-2).

RESULTS: Pain, assessed with the VAS scale, was worse in the group treated with MSM and BA as compared with the placebo group at 2 months FU (3.8 vs. 2.7; $P=0.04$), whereas no difference between the two groups was observed at 6 months FU (2.7 vs. 3.6; $P=0.2$). No statistically significant differences were found in the LI between the two groups at either FU (2 months: 4.8 vs. 4.2; $P=0.51$; 6 months: 4.4 vs. 4.5; $P=0.91$). By contrast, a statistically significant difference in patients need for anti-inflammatory drugs was seen in the experimental as compared to the placebo group, even by 2 months FU (0.2 vs. 0.6 tablets/day; $P<0.0001$), that persisted up to the end of the study (0.1 vs. 0.6 tablets/day; $P<0.0001$).

CONCLUSIONS: Although the combined administration of MSM and BA in the treatment of gonarthrosis was not shown to be more efficacious than placebo in the management of the clinical and functional picture, it significantly reduced patients need for anti-inflammatory drugs.

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