

News In Brief

CHONDROITIN IMPROVES SIGNS AND SYMPTOMS OF KNEE OSTEOARTHRITIS

A randomised controlled trial report from the University of Paris Descartes and Cochin Hospital suggests that chondroitins 4 and 6 sulphate relieved pain faster than placebo ($P=0.01$). Radiographic joint space loss was significantly reduced compared to placebo ($P=0.0001$). This suggests that chondroitins 4 and 6 sulphate might be a disease-modifying agent.

However, the findings cannot be generalised to other chondroitin sulphate dietary supplements (including those paired with glucosamine) available over the counter.

The chondroitin source in the study was a component of bovine cartilage, available by prescription for the treatment of osteoarthritis in many European countries. It apparently works by inhibiting cartilage breakdown.

The randomised, double-blind, intent-to-treat study was the multi-national Study on Osteoarthritis Progression Prevention (STOPP). There were 622 patients with knee osteoarthritis. Subjects received either 800 mg of chondroitins 4 and 6 sulphate (gel mixed with water) or a placebo, once a day over two years.

The chondroitin-treated group had less joint space width loss from a baseline radiograph at month 24, as compared to the placebo group (mean -0.07 , versus -0.31 mm), with a median reduction of 0.14 mm ($P=0.0001$). The effects of chondroitin appeared to increase over time.

Radiographic progression (minimum joint space width reduction of 0.25 mm or more) occurred in fewer chondroitin-treated patients than in those given placebo (28% versus 41%, $P=0.0005$), for a relative risk reduction of 33%.

Knee osteoarthritis symptoms improved with chondroitins 4 and 6 sulphate. Knee pain improved faster in the target knee, in the chondroitin-treated group ($P=0.01$).

Patients treated with the chondroitin agent were more likely to have pain reduction of at least 40% or 60% at six months compared to placebo-treated patients (53% versus 45% with $P=0.04$, and 41% versus 32%, with $P=0.03$, respectively). Thereafter, there was a lack of difference, which the researchers attributed to the natural history of the disease.

The treatment and placebo groups did not differ significantly in stiffness and physical function, cumulative dose of paracetamol or non steroidal anti-inflammatory drugs.

The researchers stated that longer follow-up is now needed for the use of chondroitins 4 and 6

sulphate in improving osteoarthritis outcomes, for example the need for joint surgery.

Source: Kahan A, et al. Long-Term Effects of Chondroitins 4 and 6 Sulfate on knee osteoarthritis. *Arthritis & Rheumatism* 2009; 60: 524-533.

FOR PAIN TREATMENT, ACUPUNCTURE HAS ONLY A SMALL ANALGESIC EFFECT THAT MAY NOT BE CLINICALLY RELEVANT

A meta-analysis from the Nordic Cochrane Center found that there was only a minimal difference in reported pain between acupuncture and placebo acupuncture, and the difference seemed to lack clinical relevance and could not be clearly distinguished from bias.

The analgesic effects of acupuncture remain unclear. Some studies indicate that sham acupuncture leads to pain reduction, thought to be due to the release of endogenous opioids. Other studies have found no difference between acupuncture and sham treatment, or mixed difference between placebo acupuncture and no acupuncture.

The researchers reviewed acupuncture trials that had two control groups: placebo acupuncture and no acupuncture. The meta-analysis included 13 trials with 3,025 patients.

There was a small statistically significant difference between acupuncture and placebo acupuncture (standardised mean difference -0.17 , 95% CI -0.26 to -0.07 , $P=0.001$), which translated to a reduction of 4 mm on a 100 mm visual analog scale. There was a moderate statistically significant difference between placebo acupuncture and no acupuncture (standardised mean difference -0.42 , 95% CI -0.60 to -0.23 , $P=0.001$). However, the researchers said that pain reduction was minimal, and that the apparent analgesic effect of acupuncture did not seem to be clinically relevant. Also, there was no association between effect and type of placebo acupuncture used, for example the use of non-penetrating needles or insertion at non-acupuncture points.

The main limitation of the meta-analysis was the trials studied different types of pain (for example migraine, tension headache, knee osteoarthritis, low back pain, fibromyalgia, post-operative pain). Also, clinicians were not blinded to treatment allocation in the trials. An accompanying editorial indicates that the review suggests acupuncture may be clinically relevant for musculo-skeletal conditions. ■

Source: Madsen MV, et al. Acupuncture treatment for pain: systematic review of randomised clinical trials with acupuncture, placebo acupuncture, and no acupuncture groups. *BMJ* 2009; DOI: 10.1136/bmj.a3115.