Acupuncture’s Benefits in Knee OA Are Sham

BY MICHELE G. SULLIVAN Mid-Atlantic Bureau

The placebo effect appears to account for most of the improvements associated with acupuncture for osteoarthritis of the knee, according to an analysis of nine trials.

But Eric Manheimer of the Center for Integrative Medicine at University of Maryland, Baltimore, and his associates also appeared to identify at least a small biologic effect of the procedure, since patients who received genuine acupuncture in sham-controlled trials experienced some short-term improvements in both pain and function.

Still, Mr. Manheimer, field administrator in the complementary medicine program concluded, “It is too soon to recommend acupuncture as a routine part of care for knee osteoarthritis.”

The analysis included 11 randomized controlled trials conducted from 1999 to 2003 and comprised more than 1,000 patients with knee osteoarthritis. Four studies compared acupuncture with wait list. The other seven studies included a sham treatment. Nine of the 11 studies included enough outcomes data to be included in the pooled analysis (Ann. Intern. Med. 2007;146:868-77).

Acupuncture, as compared with the sham control, provided some improvement in pain and function, both in the short term and at 6 months, but these were deemed clinically irrelevant.

Compared with wait-listed patients, those who received acupuncture reported clinically relevant improvements in pain and function, which were sustained at 6 months.

The sham-controlled trials all used different sham procedures, including a combination of penetrating and nonpenetrating needles; needles inserted away from acupuncture points; and patch electrodes delivering current.

This made it difficult to decipher the treatment response, since it was impossible to tell how many patients receiving the various sham treatments truly believed they could be getting real acupuncture. Additionally, two sham protocols involving the use of penetrating needles placed away from acupuncture points were judged possibly to have exerted some biologically active effect.

Care must be taken in the evaluation of any improvement, however clinically irrelevant, suggested that acupuncture might be a biologically active procedure, according to the authors. They cautioned, however, that the placebo response probably plays a large role. “The fact that both the acupuncture and sham groups reported greater improvements than [did] those of the usual care control groups suggests that acupuncture may elicit a greater placebo effect... than usual care therapies.”

The study may have been limited by the possibility that wait-listed patients were given inaccurate assessments of their actual response to care.

Patient expectations that acupuncture will work may also affect those on a waiting list. By having to wait for a treatment that they believe is effective, patients waiting for acupuncture may have been disappointed by the delay, which may influence their ratings of subjective outcomes while waiting.

Several large controlled trials are still ongoing, and at least one additional trial has been completed but remains unpublished. The results of these studies may further elucidate what role, if any, acupuncture may have in the treatment of knee osteoarthritis, the researchers noted.

Cartilage Damage in Knee OA Is Not a Given

Smoking appears to contribute to the development of knee osteoarthritis, but the mechanisms are not well understood. New evidence supports the role of smoking in changes to the cartilage, the primary load-bearing tissue in the knee joint.

The findings, published in the American Journal of Physical Anthropology, provide the first evidence that smoking may contribute to the development of cartilage lesions in young adults. The study, conducted at the Arthritis Research and Treatment Center in Baltimore, found that smokers were more likely to have cartilage lesions than non-smokers.

Smoking has been linked to a number of health problems, including lung cancer, heart disease, and stroke. However, the exact mechanisms by which smoking contributes to cartilage damage are not well understood.

The researchers suggest that smoking might contribute to cartilage damage by reducing blood flow to the joint, which could lead to tissue degeneration. They also speculate that smoking might cause inflammation, which could contribute to cartilage damage.

Further research is needed to determine the exact mechanisms by which smoking contributes to cartilage damage. However, these findings suggest that smoking may play a role in the development of cartilage lesions in young adults, and suggest that smoking cessation may be beneficial for individuals with knee pain.