

# POEMs

## Patient-Oriented Evidence that Matters

*In the December selection of POEMs we have evidence that a widely used non-prescription treatment for osteoarthritis is effective, that spinal manipulation for low back pain is effective but not any better than traditional treatment and that amoxicillin-clavulanate is ineffective in the treatment of acute sinusitis. Editor.*

### Clinical question

Is either glucosamine or chondroitin effective in decreasing symptoms of osteoarthritis?

### Bottom line

Glucosamine and chondroitin produce a significant and similar effect on symptoms of osteoarthritis, will improve joint mobility for one in five patients, and also may slow joint-space narrowing. Onset of action is several weeks. (LOE = 1a)

### Reference

Richy F, Bruyere O, Ethgen O, Cucherat M, et al. Structural and symptomatic efficacy of glucosamine and chondroitin in knee osteoarthritis. A comprehensive meta-analysis. *Arch Intern Med* 2003; 163:1514–522.

### Study design

Meta-analysis (randomised controlled trials)

### Setting

Outpatient (any)

### Synopsis

The authors of this meta-analysis searched for all randomised, placebo-controlled, clinical trials of either glucosamine or chondroitin for hip or knee arthritis. They did a thorough search of several databases and citation lists of retrieved articles, and contacted pharmaceutical companies. They winnowed the 500 initially identified studies to 15 that met their inclusion criteria. These studies enrolled 1775 patients. Both drugs produced a pronounced effect on symptoms as identified by a visual analog scale (effect size = 0.49; 95% CI, 0.31–0.67) and the Western Ontario McMaster University Osteoarthritis Index, a commonly used measure of pain and physical functioning (effect size = 0.3; 95% CI, 0.11–0.49). Joint mobility also improved markedly (effect size = 0.59; 95% CI, 0.25–0.92) with one person responding for every five patients treated (number need to treat = 4.9). Adverse effect rates were similar between the drugs and placebo.

### Clinical question

Is spinal manipulation more effective than other treatments for acute or chronic low back pain?

### Bottom line

Spinal manipulation, whether chiropractic or osteopathic, is no more effective – and no less effective – than usual care (analgesics), physical therapy, exercises, or back school for both acute and chronic low back pain. It is more effective than sham (placebo) manipulation. There is not enough good research to support or refute the effectiveness of acupuncture. (LOE = 1a)

### Reference

Assendelft WJJ, Morton SC, Yu EI, Suttrop MJ, Shekelle PG. Spinal manipulative therapy for low back pain. A meta-analysis of effectiveness relative to other therapies. *Ann Intern Med* 2003; 138:871–81.

Cherkin DC, Sherman KJ, Deyo RA, Shekelle PG. A review of the evidence for the effectiveness, safety, and cost of acupuncture, massage therapy, and spinal ma-

nipulation for back pain. *Ann Intern Med* 2003; 138:898–906.

### Study design

Meta-analysis (randomised controlled trials)

### Setting

Outpatient (any)

### Synopsis

This meta-analysis evaluated all of the comparative studies of spinal manipulation for the treatment of either acute or chronic low back pain. The researchers performed a thorough search of the literature using the Cochrane Collaboration search strategy, identifying 39 randomised controlled trials comparing spinal manipulation with sham manipulation, usual care (analgesics), physical therapy, exercise programmes, or back school. They considered a 10-mm difference in pain scores on

a 100-mm visual analog scale to be clinically important, which is reasonable, if somewhat liberal. Compared with sham manipulation, spinal manipulation was more effective for acute back pain (improvement of short-term pain=10mm; 95% CI, 3–17mm) and long-term pain (19mm; 95% CI, 3–35mm). Function was also improved. They lumped osteopathic and chiropractic manipulation together although a recent study, not included in this review, found osteopathic manipulation effective (*Spine* 2003; 28:1355–62). Spinal manipulation was no more effective than usual care, physical therapy, exercise, or back school. In a separate systematic review of the overall effectiveness of various approaches to back pain, the results were similar for spinal manipulation. The quality of the literature evaluating acupuncture is poor, and conclusions cannot be drawn. Massage also has good evidence of benefit over placebo therapy. Massage may reduce the costs of care after the initial course of therapy.

### Clinical question

Is amoxicillin/clavulanate effective in the treatment of acute sinusitis diagnosed in general practice?

### Bottom line

A broad spectrum antibiotic was ineffective in relieving symptoms faster than placebo in patients diagnosed with acute sinusitis in general practice. Adverse effects, as expected, were higher in the antibiotic group. (LOE = 1c)

### Reference

Bucher HC, Tshudi P, Young J, et al. Effect of amoxicillin-clavulanate in clinically diagnosed acute rhinosinusitis. A placebo-controlled, double-blind, randomized trial in general practice. *Arch Intern Med* 2003; 163:1793–798.

### Study design

Randomised controlled trial (double-blinded)

### Setting

Outpatient (any)

### Synopsis

Sinusitis is a tricky diagnosis; just distinguishing sinus infection from rhinitis is difficult. Moreover, a good proportion of the patients who have sinusitis have a viral infection. This study evaluated the role of antibiotics in

252 adults with a clinical diagnosis of rhinosinusitis. The patients were diagnosed with a history of repeated purulent nasal discharge and maxillary or frontal sinus pain for at least 48 hours (but less than one month). In addition, all had pus documented under rhinoscopy. The patients were consecutively enrolled using central randomisation (allocation concealed). All patients received a topical nasal decongestant along with acetaminophen, in addition to placebo or amoxicillin/clavulanic acid 875mg/125mg (amoxiclav) twice daily for six days. The primary outcome, time to cure, was no different between amoxiclav and placebo (five days vs four days). Cure rates at one week (30%) and two weeks (75%) were similar between the two groups. There was no difference between the two treatments in the number of days of restricted activity. One niggling result: One patient died in the placebo group of a brain abscess. Diarrhoea was almost four times more likely in the amoxiclav group at one week (odds ratio [OR]=3.89; 95% CI, 2.09–7.25) and still higher at two weeks (OR=1.71; 95% CI, 0.91–3.23). The study was large enough to find a 50% increase in cure rate, assuming a spontaneous cure rate of 60%. Smaller differences may not have been identified.