

IMAGING

Is it worth using ultrasonography to guide injections?

Intra-articular injections are administered more-accurately under the guidance of ultrasonography compared with conventional anatomical palpation. Many questions remain, however, regarding the value of ultrasonography given the acceptable levels of clinical response achieved with palpation. A new study adds to the debate by showing that the clinical outcome of ultrasound-guided injections is superior to that of palpation-guided methods.

Sibbitt *et al.* randomly assigned 148 patients with rheumatoid arthritis or osteoarthritis to receive intra-articular corticosteroid injections guided either by ultrasonography or by palpation. Levels of pain before, during and 2 weeks after the procedure were assessed on a 10-point visual analog scale (VAS); a clinical response was defined as >50% reduction in VAS scores at 2 weeks. Although the number

of responders in the palpation group was high (73%), this increased to more than 90% in the ultrasound guidance group. More importantly, the number of non-responders was 50% lower in the ultrasonography group than in the palpation group. Notably, ultrasound-guided injections were much less painful than palpation-guided procedures, with 60% fewer patients in the former group reporting significant procedural pain (defined as a score of >5 on the VAS). “This is quite a remarkable finding,” says Wilmer Sibbitt, the study’s lead investigator, “and has not been previously reported, despite clinical ultrasonography being available for 50 years.”

The study does not, however, address the issue of cost-effectiveness in the routine use of ultrasonographic needle guidance. As the investigators themselves acknowledge, “longer outcome studies



with extensive cost-benefit analysis are necessary to determine the ... long-term benefit of sonographic guidance.”

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Original article Sibbitt, W. L. *et al.* Does sonographic needle guidance affect the clinical outcome of intraarticular injections? *J. Rheumatol.* doi:10.3899/jrheum.090013