Lower dose of corticosteroids just as effective as higher for shoulder pain

October 27 2011

Although corticosteroid injections are one of the most common treatments for shoulder pain, there have been relatively few high-quality investigations of their efficacy and duration of action. In a study scheduled for publication in the December issue of the *Archives of Physical Medicine and Rehabilitation*, researchers report on the first comparative study of the two most commonly corticosteroid doses administered for shoulder pain. They found that lower doses were just as effective as higher doses in terms of reduction of pain, improved range of motion and duration of efficacy.

"There has been no guidance for adequate corticosteroid doses during subacromial injection. Physicians have depended mainly on their experience for the selection of dose", commented lead investigator Seung-Hyun Yoon, MD, PhD, Assistant Professor, Department of Physical Medicine and Rehabilitation, Ajou University School of Medicine, Suwon, Republic of Korea. "This is the first study to assess the efficacy of corticosteroid according to two different doses, which are the most widely used in subacromial injection for participants with periarticular shoulder disorders. Initial use of a low dose is encouraged because there was no difference in efficacy according to dose, and the effect of corticosteroid lasted up to 8 weeks."

Investigators conducted a randomized, triple-blind, placebo-controlled clinical trial in which 79 patients with at least one month's duration of pain were enrolled. Subjects were randomly assigned to three groups with 27 participants receiving a 40 mg dose of triamcinolone acetonide;

25 a 20 mg dose and 27 a placebo injection. All were followed up at 2, 4, and 8 weeks after treatment. All injections were performed using ultrasound guidance to insure proper placement of the therapeutic agent in the bursa.

Participants were asked to rate their degree of shoulder pain on a 0 to 10 scale and to answer a Shoulder Disability Questionnaire. They also were asked to move their shoulders slowly until they experienced pain, and evaluators measured the Active Range of Motion (AROM) in 4 different directions (forward flexion, abduction, internal rotation, and external rotation of the shoulder in a standing position).

Compared with pretreatment (within-group comparisons), the high- (40 mg) and low-dose corticosteroid (20 mg) groups both showed improvement in pain, disability, and AROM, while the placebo group showed no difference. Importantly, this study showed no significant inter-group differences between the high- and low-dose corticosteroid groups. Because a higher dose may increase the incidence of local and general complications, a lower dose is indicated at the initial treatment stage.

More information: The article is "Comparison of High- and Low-Dose Corticosteroid in Subacromial Injection for Periarticular Shoulder Disorder: A Randomized, Triple-Blind, Placebo-Controlled Trial" by Ji Yeon Hong, MD, Seung-Hyun Yoon, MD, PhD, Do Jun Moon, MD, Kyu-Sung Kwack, MD, PhD, Bohyun Joen, MD, and Hyun Young Lee, MS. It will appear in the *Archives of Physical Medicine and Rehabilitation*, Volume 92, Issue 12 (December 2011), published by Elsevier. doi:10.1016/j.apmr.2011.06.033

Provided by Elsevier