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CORR Insights®: A Randomized Trial Among Compression Plus Nonsteroidal Antiinflammatory Drugs, Aspiration, and Aspiration With Steroid Injection for Nonseptic Olecranon Bursitis Stephen Alan Kennedy MD, FRCSC **Where Are We Now?**

Nonseptic olecranon bursitis, or “student’s elbow,” is the most common superficial bursitis in the body [1]. Despite its prevalence, however, treatment remains largely based on provider preference [3]. Previously published studies [3, 4] suggest that corticosteroid injection can result in early

reduction in size and symptoms of olecranon bursitis, but most studies on the topic are retrospective, and there are few comparative or longitudinal data. A systematic review by Sayegh and Strauch [3] found that of a total of 29 studies, 25 were retrospective, three were prospective case series, and only one was a randomized controlled trial.

In the current study, Kim and colleagues focused on the nonoperative

management of olecranon bursitis, and were specifically interested in the immediate short-term reduction in size and pain provided by three interventions. They found no difference between the groups, but suggest that one may have been identified if a larger sample had been used for the study (Type II error). They suggest that the minimal clinically important difference (MCID) may be lower than they initially estimated and that multicenter studies likely are needed.

The current study attempts to clarify not only whether corticosteroid injection is beneficial, but also whether concomitant bursa aspiration contributes to the benefit. This is valuable information, because despite the anecdotal experience that olecranon bursitis resolves with avoidance of inciting activities in some patients and few patients experience severe complications like infection or open wounds, olecranon bursitis is a common occurrence that can interfere with

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quality of life and activities of daily living.

Where Do We Need To Go?

We need to know more about the disability associated with olecranon bursitis using joint-specific outcome tools and quality-of-life measures. The natural history of olecranon bursitis should be further clarified so that patients can have a reasonable expectation of how often it resolves spontaneously, and how long symptoms might be expected to last. Similar studies of corticosteroid injection for lateral epicondylitis have determined that there may be temporary benefit, but at 1-year postinjection the outcome is unchanged whether corticosteroid is injected or not [2]. Corticosteroid injection can result in complications such as infection, persistent drainage, and skin or fat atrophy [3]. Does it sufficiently alter the natural history of olecranon bursitis that a patient would reasonably accept the risks of injection?

How Do We Get There?

As suggested by Kim and colleagues, future studies in the nonoperative management of nonseptic olecranon bursitis should address the need for

larger prospective comparison studies. Olecranon bursitis is not a rare problem, but many different specialists—as well as general practitioners—take care of patients with this problem, so individual experience with the condition is often limited, and coordinating prospective research can be difficult. Multicenter and/or interspecialty trials may be needed to achieve adequate population samples to study and determine the best treatment.

Meaningful studies on the topic will also need to address the population-based natural history of olecranon bursitis, the longitudinal experience of the disease, and its treatments. Providing rapid relief for patients is helpful, but patients also need counseling about the expected differences in outcome at 1-year between treatments. Exposure to aspiration followed by corticosteroid injection may itself incur measurable risk. If a large, longitudinal study could demonstrate that symptoms are likely to resolve without invasive treatment, many patients might opt to wait it out; by contrast, if such a study showed that the swelling did not resolve spontaneously with time, many might choose to be treated. Unfortunately, no such study has yet been done.

Essential to any future studies on the topic will be the validation of outcome measurements for olecranon bursitis. Size of the olecranon bursa

and pain are certainly important contributing factors, but may not correlate well with the patient's reported function or general health status. This could be an existing fixed-length questionnaire (such as the DASH) or computerized adaptive testing (such as a PROMIS tool) [5]. A valid, reliable, and responsive tool for monitoring symptoms of olecranon bursitis will allow for determination of the MCID between treatments. These thresholds can help us design studies to help us construct better understanding of the impact of olecranon bursitis on upper extremity function, the correlation of bursa size with function and pain, and the MCID for a patient to consider a treatment successful (or not).

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