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CORR Insights®: Open Surgical Treatment for Snapping Scapula Provides Durable Pain Relief, but so Does Nonsurgical Treatment

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Where Are We Now?

Vastamäki and colleagues are to be congratulated for their long-term followup study on the treatment of snapping scapula that demonstrates clinical equipoise at 16 years between open superomedial

corner resection and observation. Is this condition analogous to the natural history of intervertebral disk herniations, which seem to end up in a similar spot in 10 years, with or without discectomy? [2] Perhaps we need to reflect on what in fact is—and is not—known about this clinical entity.

In the classic article by Henry Milch, snapping scapula syndrome was described as “a tactile-acoustic phenomenon” likened to “the muffled sound of a stick being drawn across a picket fence” [4]. Encountering a patient with this condition in the clinic is intimidating, as the snapping is often loud and the scapular dyskinesis can be dramatic. It follows that there must be a straightforward and easily treatable cause for this aberration. In Milch’s case series, he concluded, “simple removal of portions of the

scapula will result in prompt and permanent cure” [4]. With that admonition, it is not surprising that superomedial corner resections gained popularity for patients with persistent symptoms, and Vastamäki and colleagues quoted several papers [3, 5] demonstrating good short-term results.

As is often the case with relatively rare conditions, any given orthopaedist is unlikely to have a wealth of experience managing patients with these findings, and most of the evidence we have derives from small case series. Given that the precise origin of the snapping is often unknown, “specific treatments that are effective for some patients may not be effective for others” and that “many patients experience continued shoulder disability even after surgical intervention” [7]. Surgeons have not had uniformly good results with this procedure, so careful patient selection is paramount to obtaining a good result. For example, resection of the superomedial corner would be unlikely to help a baseball pitcher who is predisposed to develop bursitis at the inferior angle [6].

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In their recent critical review, which included 81 relevant original articles, Warth et al. confirmed that most of what we know comes from Level 4 studies, and so the evidence base is “inadequate to perform a formal systematic review or meta-analysis” [8]. Working with what they had, Warth et al. concluded that snapping scapula syndrome was an underdiagnosed condition capable of producing substantial shoulder dysfunction. Gaskill and Millett noted potential causes of painful snapping include “anatomic scapular or thoracic variations, muscle abnormalities, and bony or soft-tissue masses” [1].

Physical exam and advanced imaging typically are not helpful unless they reveal an underlying bony deformity like an osteochondroma. In an effort to alleviate suffering, surgeons often attempt open or endoscopic bursectomies or superomedial resections in recalcitrant cases.

Where Do We Need To Go?

Good news for inquiring young minds: There remain puzzles to be solved, and snapping scapula syndrome is one of them. Superomedial resection is not the golden bullet, but may alleviate pain in some patients more quickly and more effectively than tincture of time, as the article detailed. There are many unanswered questions: What are the

proper work ups, imaging, nonoperative management, and length of time to monitor patients before considering an intervention? Which patients are good candidates for surgery, and what are the distinguishing features that portend a satisfactory outcome without surgery? When indicated, what surgical intervention is best—endoscopic, open bursectomy, or open resection? How much bone should be resected? Should muscles be released?

How Do We Get There?

As is the case with rarely seen clinical entities, a multicenter approach is needed to accrue enough patients with this problem, and to study them in a prospective manner. Ideally, a randomized trial could follow with clear inclusion and exclusion criteria, and validated outcome measures. But given the rarity of this condition, it would take five busy shoulder-referral practices something in the neighborhood of 10 years to achieve 50 patients in each arm. Perhaps the American Shoulder and Elbow Surgeons, along with their sister international societies, could tackle this problem?

Since long-term statistical comparisons may fail to account for the improved quality of life, increased productivity, and decreased disability that patients experience after successful

surgical interventions, these data should be collected. Eventually we will need to be able to justify our treatment choices to payers as well as to patients, so a look at cost-effectiveness also is needed.

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