

# Orthopedic Surgeon Compares Two Surgical Techniques for AC Joint Pain

Dr. William J. Robertson of Massachusetts General Hospital in Boston offers the results of his own study of surgery for acromioclavicular (AC) joint pain. Comparisons were made in terms of results (shoulder function, patient satisfaction, pain) between two groups. One group had an open incision approach for this procedure. The second group had all arthroscopic approach with very small incisions to insert the arthroscope rather than full sized incisions.

The acromioclavicular joint is located in the front of the shoulder where the acromion meets the clavicle (collar bone). It is a curved piece of bone that comes from the back of the scapula (shoulder blade). It forms a little bony "roof" over the shoulder.

Sometimes the end of the clavicle that meets the acromion becomes degenerated and very painful. Conservative (nonoperative) treatment usually takes care of the problem. The patient takes antiinflammatory medications and works with a Physical Therapist over a period of three to six months. The goal is to reduce pain, restore normal posture and alignment, and improve motion.

If the patient does not achieve a satisfactory response from this approach, steroid injections (up to three spread out over time) may be tried. When all else fails, then surgery becomes a consideration.

In the case of the 48 patients in this study, all had failed at least six months of conservative care. Surgery to remove the tip of the clavicle was performed by Dr. Robertson. In 32 of the shoulders, arthroscopic surgery was performed. In 17 shoulders, an open incision method was used. Dr. Robertson describes both of these procedures in detail in this article.

The pros and cons of both approaches are discussed. Briefly, open incision allows for direct visual inspection of the joint and removes exactly the amount of bone necessary to take care of the problem. But in order to do so, the surgeon must cut through soft tissues, joint capsule, and ligaments supporting the acromioclavicular (AC) joint.

As you might guess, the arthroscopic procedure has just the opposite advantages and disadvantages. The surgeon does not have to make a large incision and therefore does not have a wide direct view of all the anatomic structures. But at the same time, none of the structures are cut and therefore do not lose their integrity. Stability of the joint is maintained. And the surgeon can look around inside the joint to see if there are other areas of damage that need repair. That is a big advantage over the open incision approach.

So, how did the results of these two groups compare? The group who had arthroscopic surgery to remove the tip of the clavicle reported less pain than the open incision group. But all other areas measured (satisfaction, shoulder function, willingness to have the procedure again) were pretty much the same between the two groups. Patients in both groups had other damage that was repaired (e.g., rotator cuff tendinopathy, labral tears).

Dr. Robertson concluded that for chronic acromioclavicular (AC) joint arthritic pain, either surgical method (arthroscopic or open) is equally effective in alleviating painful symptoms and restoring normal motion and function. Open incision is more invasive and patients report greater reports of pain after the procedure. But four to five years later, the final outcomes are the same.

Surgeons who are less experienced with arthroscopy may want to continue with open incision procedures. Patients with shoulder bursitis or shoulder cysts may also need the open incision approach. For the experienced surgeon (like Dr. Robertson), operative time is equivalent for the two techniques so there isn't an advantage of one over the other from that perspective.

There were two caveats ("yes buts") to this study. The first was the small size. With only 48 patients (a total of 49 procedures), the results may not apply to everyone. A larger sample size should be studied and compared.

The second point is that patients weren't randomly assigned to one group or the other. They were given the choice of which procedure they would prefer. The equal success between the two groups may be linked to the patient's positive feelings about the technique. Future studies should include not only a larger number of patients but also random selection of treatment for each one.

Reference: William J. Robertson, MD, et al. Arthroscopic Versus Open Distal Clavicle Excision. In The American Journal of Medicine. November 2011. Vol. 39. No. 11. Pp. 2415-2420.