What Is the Right Timing for Arthroscopic Capsular Release of a Frozen Shoulder? Letter to the Editor

Dear Editor:

With special interest, we have read the publication of Rizvi and colleagues titled, “Factors Affecting the Outcomes of Arthroscopic Capsular Release for Idiopathic Adhesive Capsulitis.” This is a valuable contribution to gain more insight into the treatment of a frozen shoulder, especially with regard to the timing of operative treatment. The authors concluded that patients with a shorter duration of frozen shoulder symptoms made greater improvements in internal rotation and had similar results for flexion, abduction, and external rotation after arthroscopic capsular release compared with patients with a longer duration of symptoms. They also concluded that there is no reason to delay surgery. However, we have some comments on this study, and the second conclusion must be drawn in light of these comments.

This research group contributed in a great way to the knowledge about arthroscopic treatment of frozen shoulder. We do agree with the authors that it is very important that arthroscopic capsular release in the early stage (mean duration of symptoms, 4 months; range, 1-9 months) does not have inferior results compared with an arthroscopic release done after longer than 10 months. However, we do not agree that the early phase might be “ideal” in which to perform surgery. Early intervention in patients with frozen shoulder will most likely lead to a considerable amount of needless surgical procedures, given the natural course of this condition with spontaneous resolution of symptoms in the majority of patients. That is why it is so important to compare the outcomes of surgery versus nonoperative treatment or a “wait and see” protocol in a randomized controlled trial. The lack of a control group, treated nonoperatively, is then the main limitation of the current study. Most likely, there will be patients in the acute group who would have had a favorable course even without surgery. There are even some data from the study that may confirm this, because the restriction in range of motion in the acute group was larger than that in the group with complaints for a longer period. The conclusion of the article could have been completely different with a control group treated nonoperatively: “avoid surgery on the short term because a substantial number of patients will get a satisfactory outcome without surgery.”

As far as we know, there is no existing randomized trial comparing arthroscopic capsular release with nonoperative treatment. We have to await the upcoming results of the UK FroST study. However, the postsurgical results of Rizvi and colleagues are quite comparable with patients treated nonoperatively with physiotherapy-supervised training. In the study by Russell et al., a physiotherapy-supervised exercise class resulted in a mean increase in forward elevation from 95° (range, 85-125°) to 153° (range, 145-160°) and a mean increase from 15° (range, 10-20°) to 53° (range, 45-55°) external rotation at 6 months. Results were even better at 1 year. More recent studies also show promising results with regard to the increase of range of motion and function using nonoperative strategies with pain neuroscience education such as graded motor imagery and mirror therapy. Based on substantial evidence, we believe that a corticosteroid injection and a physiotherapy-supervised exercise program can be safely recommended in patients with frozen shoulder, with satisfying results. With this strategy, there will be only a small percentage of patients who truly need surgical intervention.

Although not discussed in the current article, there is also the issue of cost. Direct health care–related and indirect (mostly job-related) costs are also important nowadays. For midshaft clavicle fractures, we know that the advantage of operative treatment is the quicker return to sport and work. Despite this advantage, routine fixation of displaced midshaft clavicle fractures is not cost-effective. If there is no clear evidence that early arthroscopic capsular release is more effective than nonoperative treatment, how do we justify the additional health care–related costs?

Furthermore, one must also consider the risks of performing an arthroscopic capsular release. Complications are not mentioned in the current article. In the literature, the complication risk is considered fairly low, at 0.6% in a systematic review. However, we think this is an underestimation, because most studies do not have a proper design to register complications. Furthermore, we know that complications in (national) database studies are often higher compared with a single-center study with an expert in the field like Dr. Murrell. The most clinically relevant potential complication of arthroscopic capsular release is axillary nerve damage. The axillary nerve is in very close proximity to the inferior glenohumeral joint capsule, especially at the 5- and 7-o’clock positions. In our opinion, this must be taken into account in the decision-making process if arthroscopic capsular release is considered at an early stage. Are you, as a surgeon, willing to accept a small risk of a very serious complication for a procedure that might not be necessary?

In conclusion, we think that this study adds information for shared decision-making with our patients but should not be a plea for surgery for patients with a mean duration of symptoms of 4 months. We challenge Dr. Murrell and his...
team to identify predictors of patients who may need surgery in the long term. In this research, it is important to use a strict definition of “recalcitrant idiopathic frozen shoulder” to prevent unnecessary interventions.

Best regards,

Tim Kraal, MD
Karin Hekman, Msc
Michel P.J. van den Bekerom, MD, PhD
Amsterdam, the Netherlands

Address correspondence to Michel P.J. van den Bekerom, MD, PhD (email: m.p.j.vandenbekerom@olvg.nl).

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