

FCP Case Study: Frozen Shoulder

Presenting Problem

Middle aged diabetic patient presented with a 3-month history of left shoulder pain and stiffness with no identifiable cause. The pain was worse at night and worse with movement of the left arm. No red flags present.

On examination, the patient had 150 degrees of flexion, 100 degrees of abduction, 30 degrees of external rotation. Active range was equal to passive range and limited by a stiff end feel. No pain or weakness on isometric contractions within comfortable range of motion.

The patient had some tension in the neck and headaches but no referred pain in the arm or neurological symptoms.

Neck ROM did not affect the shoulder and vice versa.



Differential Diagnoses & Clinical Reasoning

- Cervical radicular pain – less likely as pain started later than shoulder, and movement of each individual joint did not reproduce symptoms in the other.
- Frozen shoulder – capsular pattern of dysfunction with active=passive and stiff end feel. Coupled with age and Hx of diabetes, this seems the most likely diagnosis.
- Need to rule out arthritis so an x-ray was requested which came back clear.
- Cancer – x-ray clear and no red flags so no concern.
- Rotator cuff related pain – pain free isometrics and active=passive so less likely.

Discussed frozen shoulder as most likely diagnosis and provided appropriate advice and exercises for self-management. We discussed the possibility for a joint injection if struggling with conservative management.

Discussed pros for pain relief and movement and cons relating to soft tissue and joint destructive effects as well as invasive procedure and risk of infection, patient happy to try conservative management first.

Discussed the possibility of surgery – manipulation under anaesthetic or capsular release if unable to restore range conservatively, the patient was made aware the risks of surgery and that outcomes are usually no better than conservative management.



Summary

Following this consultation, research was sought after around the efficacy of injections in frozen shoulder.

Barman et al (2019) found that a single PRP injection was more effective than steroid injections, however they only had a small study group so further research may be required.

Hwan Ahn et al (2018) found that the earlier an injection is done, the greater the benefit at 1 month and 12 month follow ups. This challenged the perception that we should trial conservative management before using injections as a back-up.

Conservative management can still be trialled but may leave a shorter window (usually 3 months) to see improvement prior to recommending an injection.

The patient should be advised there are different types of injection and whether PRP may be a better alternative.

References

1. Apurba Barman 1, Somnath Mukherjee, Jagannatha Sahoo, Rituparna Maiti, Parnandi Bhaskar Rao, Mithilesh Kumar Sinha, Dibyajyoti Sahoo, Sujit Kumar Tripathy, Binod Kumar Patro, Nerbadywari Deep Bag (2019) Single Intra-articular Platelet-Rich Plasma Versus Corticosteroid Injections in the Treatment of Adhesive Capsulitis of the Shoulder: A Cohort Study
2. Jung Hwan Ahn 1, Doo-Hyung Lee 2, Hyuncheol Kang 3, Michael Y Lee 4, Dae Ryong Kang 5, Seung-Hyun Yoon 2(018). Early Intra-articular Corticosteroid Injection Improves Pain and Function in Adhesive Capsulitis of the Shoulder: 1-Year Retrospective Longitudinal Study