Frozen Shoulder? Remote Medical Management of a Field Guide in Antarctica

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Case Details

- A female Field Guide aged 50 years presented to the Rothera station medic with right shoulder pain and prescribed oral analgesics.
- Following advice from the British Antarctic Survey's medical unit in the UK a tear in the rotator cuff was hypothesised
- Injection of dexamethasone did not relieve pain
- Further deterioration in pain and function precipitated a second opinion from a Physiotherapist specialising in climbing related injuries (GJ).
- A consultation via Skype video was planned but poor internet connectivity meant that only audio telecommunication was possible.

Key Assessment Findings

- No history of gross instability
- There was no report of referred pain or paraesthesia.
- Pain abated or reduced with rest
- Pain was present when sleeping on the right side and evoked by unguarded movements.
- A 'painful arc' between 80–100 degrees abduction.
- Significant internal rotation deficit.
- Visceral pathology and cervical radiculopathy were 'ruled out'
- Clinical presentation suggested a subacromial pain syndrome due to a partial tear of the supraspinatus and likely bursal hypertrophy..
- The Field Guide was advised return to the UK for orthopaedic consultation.

Image 1: British Antarctic Survey's Rothera Science Research Station, Adelaide Island

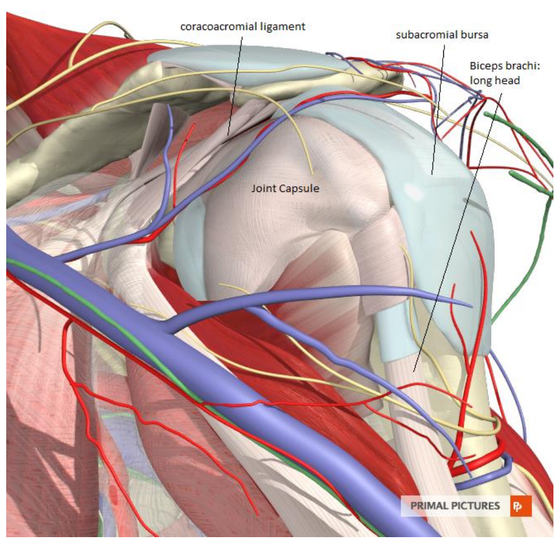

Figure 1: Subacromial Anatomy

Following Repatriation to UK

- Plain radiographs confirmed no bony lesions and no calcific tendonitis.
- Ultrasound revealed a tense effusion within the long head of biceps tendon sheath, no macrocalcification, a thickened subacromial bursa, gross focal tendinosis, and a partial thickness tear with fissuring within the critical zone of the supraspinatus tendon which measured ~8mm deep and ~15mm wide.
- Injection of bursa with a 10cc mixture of triamcinolone acetonide 40mg and local anaesthetic to alleviate pain and swelling.
- Conservative rehabilitation & review

Matters Arising

- Pre-deployment screening failed to detect risk.
- There was a paucity of diagnostic equipment and expertise to carry out further investigations
- A requirement to monitor load and risk of injury in the field in a similar manner to that for elite athletes
- There is an on-going debate about the diagnostic accuracy of symptom report, physical tests and medical imaging as systematic reviews have found insufficient evidence to support their use to detect lesions of the bursa, rotator cuff or labrum
- A tool to monitor risk of overuse injuries associated with chronic loading in extreme environments is clearly needed.

References

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