



LEEDS
BECKETT
UNIVERSITY

Citation:

Jones, G and Johnson, M (2018) Frozen Shoulder? Remote Medical Management of a Field Guide in Antarctica. In: 4th Congress International Rock Climbing Research Association, 08 July 2018 - 14 July 2018, Chamonix. (Unpublished)

Link to Leeds Beckett Repository record:

<https://eprints.leedsbeckett.ac.uk/id/eprint/5200/>

Document Version:

Conference or Workshop Item (Accepted Version)

The aim of the Leeds Beckett Repository is to provide open access to our research, as required by funder policies and permitted by publishers and copyright law.

The Leeds Beckett repository holds a wide range of publications, each of which has been checked for copyright and the relevant embargo period has been applied by the Research Services team.

We operate on a standard take-down policy. If you are the author or publisher of an output and you would like it removed from the repository, please [contact us](#) and we will investigate on a case-by-case basis.

Each thesis in the repository has been cleared where necessary by the author for third party copyright. If you would like a thesis to be removed from the repository or believe there is an issue with copyright, please contact us on openaccess@leedsbeckett.ac.uk and we will investigate on a case-by-case basis.

Gareth Jones & Mark I. Johnson

School of Clinical & Applied Sciences, Leeds Beckett University, Leeds, UK, LS1 3HE

Email: g.j.jones@leedsbeckett.ac.uk

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

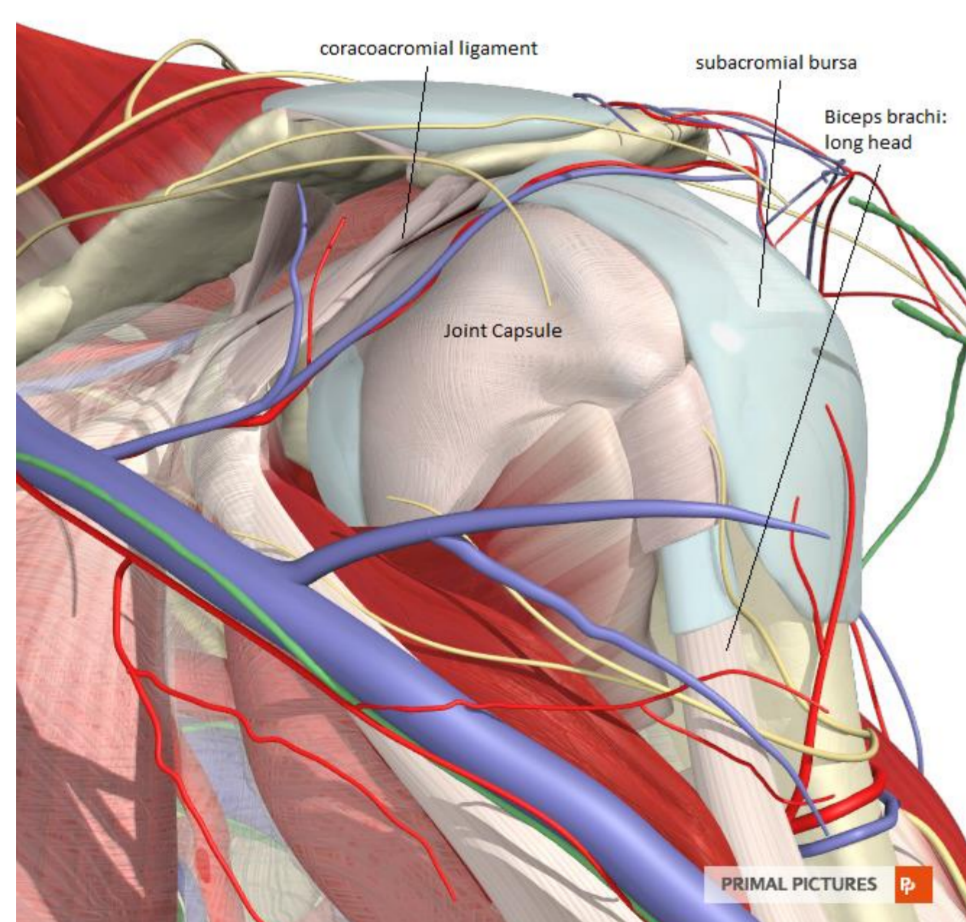


Figure 1: Subacromial Anatomy

References

1. Hanchard et al. Physical tests for shoulder impingements and local lesions of bursa, tendon or labrum that may accompany impingement. Cochrane Database of Systematic Reviews. 2013.
2. Soligard et al. How much is too much? (Part 1) International Olympic Committee consensus statement on load in sport and risk of injury. British Journal of Sports Medicine. 2016;50:1030-1041.
3. Clarsen et al. The Oslo Sports Trauma Research Center questionnaire on health problems: a new approach to prospective monitoring of illness and injury in elite athletes. Br J Sports Med. 2014;48(9):754-60.

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.