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Usefulness of clinical ultrasound in the emergency department in a patient with shoulder pain.

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Brief clinical history:

Bedside ultrasound is being used with increasing frequency by emergency physicians as goal-directed examinations meant to answer specific questions. In patients with musculoskeletal problems, it can also provide us a lot of information. The use of ultrasound by emergency physicians in Spain is progressively rising, more and more emergency departments have ultrasound machines and more and more doctors are trained in its use in emergencies settings.

The aim of this case report is to demonstrate the utility of point of care ultrasound (POCUS) in a patient with shoulder pain.

Misleading elements:

We present the case of a patient who came to the emergency department with right shoulder pain, being diagnosed of a large calcification of the subscapular tendon quickly and accurately, due to the appropriate use of point of care ultrasound by the emergency doctor. We used a Sonosite M-Turbo, with linear probe HFL38x/13-6 MHz.

Helpful details:

57-year-old woman who came for pain in the right shoulder, for several weeks, but that for 24 hours has become much more intense and prevents her from performing her usual tasks, even requiring help to get dressed.

Helpful details:

The emergency doctor performed a clinical ultrasound. The shoulder was in a position of supination and external rotation. Subscapular tendón (SSC) and glenohumeral joint (GHJ) were compared with the transducer located just medial to the biceps tendon (for SSC) and just lateral to the coracoid process (for GHJ).

A transverse view of SSC with the transducer located just medial to the biceps tendon(BT) shows the following distinguishing features of the SSC: minor tuberositas, concave surface of the lower surgical neck, fibrillar structure of SSC, continuation of the lower bone margin without demonstration of the thickness of the labrum. In the thickness of the fibrillar structure of the SSC we observed a great calcification, which caused great pain to the patient when she performed the abduction and adduction of the right arm.

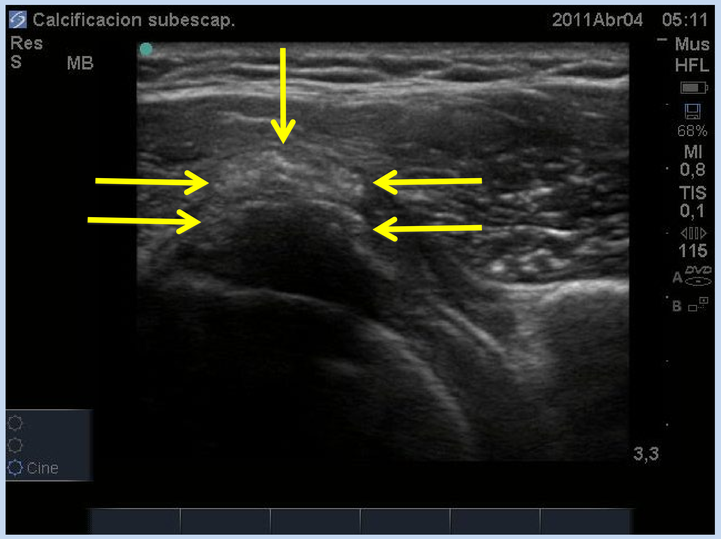

Figure 1: A transverse view of right shoulder. In the thickness of the fibrillar structure of the subscapular tendon we observed a great calcification.

Differential and actual diagnosis:

Rotator cuff tendinopathy may be a manifestation of shoulder impingement, but must be distinguished from other causes of shoulder pain like rotator cuff tear, adhesive capsulitis, glenohumeral ostheoarthritis, bíceps tendinopathy, acromioclavicular ostheoarthritis, subscapular bursitis, etc… The actual diagnosis is a subscapular tendinopathy, with a large calcification of the subscapular tendon.

Educational and/or clinical relevance:

As we can see in the case we present, ultrasound is rapid, painless and reliable in the diagnosis musculoskeletal pathology. We believe that the emergency physician must acquire new skills, such as musculoskeletal ultrasound, Musculoskeletal pathology is highly prevalent in emergency departments, and POCUS helps us to make an accurate diagnosis, in a short time which improves waiting times in emergencies, safety in diagnosis and above all results in a benefit for the patient. Thus, in the same way that emergency physicians have been learning and assuming responsibilities in training with ultrasound, now we must continue to expand our field of action in ultrasound and advance in the ultrasound of musculoskeletal pathology.