

ROTATOR CUFF CALCIFIC TENDINOPATHY - ULTRASOUND APPEARANCES



A summary by Stuart Wildman & The Ultrasound Site team



1 WHAT DOES IT LOOK LIKE?

A calcific deposit is seen as a hyperechoic focus, with or without posterior acoustic shadowing (1)

2 WHAT IS IT?

The condition is characterised by the presence of carbonate hydroxyapatite deposits in the rotator cuff tendons and there appears to be a consensus that it is based upon tendinopathic changes (2)



3 IS IT COMMON?

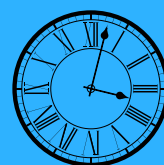
Calcification is present in approximately 2.7%-22% of shoulders whether painful or not (2). Its more common in painful shoulders (1,3)

4 DYNAMIC VISUALISATION USEFUL?

Anecdotally, dynamic visualisation of approximation of calcific deposits and tissues can be painful. There is no literature to support this.

5 OTHER FACTORS RELEVANT?

Body Mass Index and Age may be more relevant factors than intrinsic factors (3).



6 RADIOLOGICAL STAGES?

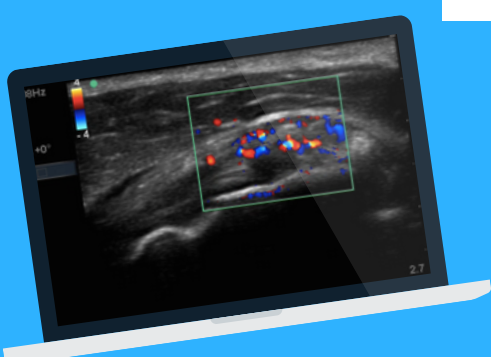
Proposed to be different radiological stages..uncertainty on clinical relevance (4)

7 SUGGESTED PAIN MECHANISMS?

Appears to be an inflammatory link to high severity of pain (5)

8 DOPPLER?

+ve Power Doppler has been found to be more common with nocturnal pain and in larger calcifications (6)



9 DOES SIZE MATTER?

Conflicting evidence, suggested greater than 1.5cm significant (1), others found no correlation between size and pain.

10 PROGNOSTIC FACTORS?

Conflicting evidence, potential that reduced acoustic shadowing is a positive predictor (8)

In summary... 'Determining if the calcific deposit in the rotator cuff in a patient with SAPS is the primary cause of symptoms remains a challenge' (1)

1) Louwerens, MD et al (2015) Prevalence of calcific deposits within the rotator cuff tendons in adults with and without subacromial pain syndrome: clinical and radiologic analysis of 1219 patients. Journal of Elbow and Shoulder Surgery, 1-6.

(2) Oliva, F. et al (2012) Physiopathology of intratendinous calcific deposition. BMC Medicine.

(3) Sansone, V. (2016). Calcific tendinopathy of the rotator cuff: the correlation between pain and imaging features in symptomatic and asymptomatic female shoulders, Skeletal Radiology.

(4) Bas De Witt, PB et al (2016) Calcific tendinitis: Natural history and association with endocrine disorders. European Radiology.

(5) Hackett, L et al (2016) 'Are the Symptoms of Calcific Tendinitis Due to Neoinnervation and/or Neovascularization?', The Journal of Bone and Joint Surgery

(6) Le Goff et al (2010) Assessment of calcific tendonitis of rotator cuff by ultrasonography: Comparison between symptomatic and asymptomatic shoulders, Joint Bone Spine

(7) Chiou et al (2001) The role of high-resolution ultrasonography in management of calcific tendonitis of the rotator cuff, Ultrasound in medicine and biology.

(8) Ogon et al (2009) Prognostic Factors in Nonoperative Therapy for Chronic Symptomatic Calcific Tendinitis of the Shoulder, Arthritis and Rheumatism.

