Calcific Tendinitis

- A degenerative condition commonly affecting the supraspinatus tendon, at a critical zone of hypovascularity in the deeper portion of the tendon just proximal to its attachment.

- **Phase 1** = precalcification stage
  - Fibro-cartilaginous metaplasia in hypo-perfused area
  - Asymptomatic though disease has begun

- **Phase 2** = calcific stage
  - Formation phase – calcium deposited into matrix vesicles and excreted from cells as a dry, chalky deposit
  - Resting phase – minimal pain, with mature-appearing deposits on x-ray
  - Resorptive phase – vascular channels at periphery of deposit, and process is very painful. Most patients present during this phase. Calcium is paste-like and as it is resorbed the area is replaced with granulation tissue

- **Phase 3** = post calcific stage
  - Granulation tissue matures into collagen fibrils aligned along stress lines to reconstitute the tendon. Pain subsides.

- Treatment:
  - Non-operative with NSAIDs, physiotherapy ± steroid injections
  - Aspiration and needleling of calcium deposit, to reduce intra-tendinous pressure and allow escaped calcium to be resorbed.
    - Follow by pendular movements within a few hours, ice-packs at night and physiotherapy
  - Arthroscopic (90% successful) or open surgical evacuation rarely needed.