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Letter to the Editor/ Editöre Mektup

Ultrasound-guided Barbotage in the Treatment of Calcific Tendinitis

Kalsifik Tendinit Tedavisinde Ultrason Eşliğinde Barbotaj

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Dear Editor,

Calcific tendinopathy is one of the most common causes of shoulder pain. Deposition of calcium hydroxyapatite crystals in the rotator cuff tendons is seen.[1] Studies have shown that 7.5–20% of people without symptoms and 6.8% of those with shoulder pain have radiologically visible calcification.[1] It is more common in women and usually observed between the ages of 30 and 60.[1] It has been suggested that the pathology is caused by poor blood perfusion, which causes tenocytes to metaplastically change into chondrocytes and produce calcium hydroxyapatite. Three stages have been described to characterize the development of pathology: precalcific, calcific, and postcalcific.[2]

In this report, the approach to infraspinatus calcific tendinitis diagnosed by ultrasound (US) in a patient complaining of shoulder pain is presented.

A 51-year-old female patient presented with a four-month history of left shoulder pain. She previously used nonsteroidal anti-inflammatory drugs (NSAIDs), but her complaints increased, and the pain level was rated as 9/10 on the Visual Analogue Scale (VAS). The movements of the left shoulder joint were painful and limited in all directions. Neurologic evaluation of the upper limb was normal. Calcific deposits were visualized around the shoulder joint in plain radiograph. US showed a large calcification in the infraspinatus tendon. Laboratory tests were unremarkable. After that, the patient was diagnosed with calcific tendinitis, and was planned for barbotage under US guidance. After skin antisepsis, 1% lidocaine was used to provide local anesthetic. The 18G needle was advanced to the site of the calcifications by US-guided in-plane approach. A needle was used to penetrate the calcific region, and aspiration was tried. After that, 10 ml of an isotonic solution were injected gradually and aspirated. Calcium deposits were seen inside the syringe. Then, 1 mL triamcinolone acetonide (40 mg/1 mL) and 2 mL 1% lidocaine were injected in the subacromial/subdeltoid bursa. The procedure was completed without any complications. The patient's shoulder range of motion was complete in all directions at four weeks following the treatment, and her VAS pain score was a 2/10. US revealed a significant decrease in calcification in the infraspinatus muscle.

The use of US in the diagnosis of calcific tendinopathy of the shoulder has been shown to be reliable. It provides assessment of the rotator cuff and the long head of the biceps tendon and can also be used as a guide for interventional treatment.[3] Since the disease is usually self-limiting, it can be treated conservatively with rest, NSAIDs, and physical therapy. In patients who have severe or persistent symptoms, more invasive procedures such as calcium deposit needling and lavage (barbotage), subacromial corticosteroid injections, and extracorporeal shock wave therapy are recommended. However, if these approaches fail, surgical intervention can be required.[4]

Although calcific tendinitis is usually self-limiting, in cases of severe and long-term pain, it should be kept in mind that US-guided barbotage is a safe method with a high success rate. The limitation of the article is the lack of long-term follow-up of the patient.

Keywords: Calcific, shoulder, ınjection, ultrasound

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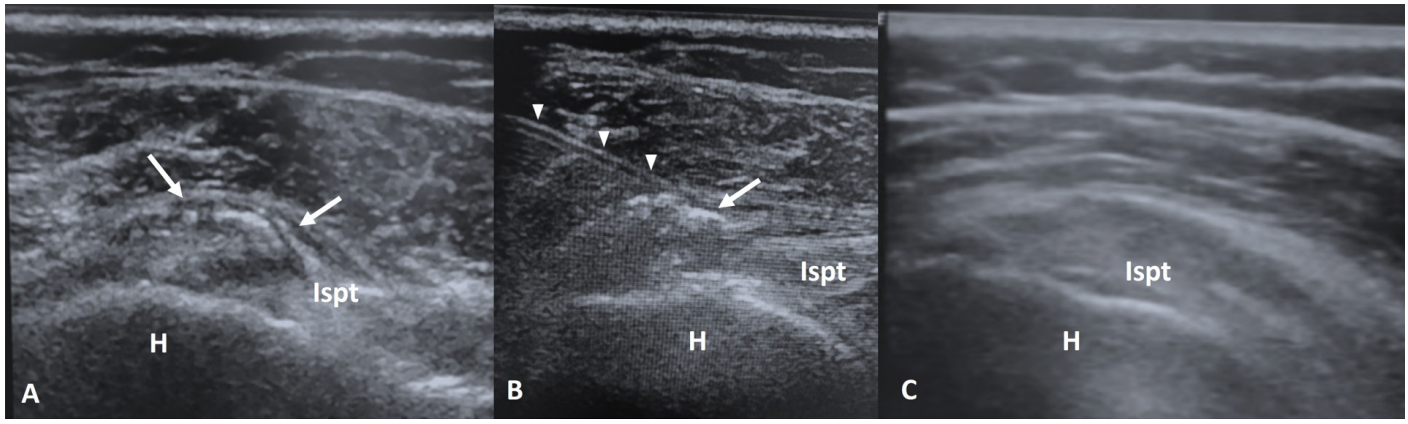

Figure. Axial US image shows calcification (arrows) within the infraspinatus tendon (Ispt) (A). The calcification is reached with a needle (arrowheads) for barbotage during an in-plane approach under US guidance. (B). Control image of the infraspinatus tendon (Ispt) after four weeks. H; humerus

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