

STERIOD INJECTION IN THE TREATMENT OF FOREIGN BODY-ASSOCIATED CHRONIC FLEXOR TENOSYNOVITIS: NEVER WITHOUT ULTRASOUND

Hasan Ocak, MD, and Alp Cetin, MD

- Background:** Although cases of tenosynovitis associated with foreign bodies are documented in the literature, there is no reported instance of the treatment of foreign body-associated tenosynovitis with ultrasound (US)-guided steroid injection. The use of corticosteroid injection under US guidance for flexor tenosynovitis associated with foreign bodies is a noteworthy subject.
- Case Report:** In this case report, we present the contribution of US-guided targeted steroid injection to the treatment of flexor tenosynovitis of the third finger of the left hand associated with a foreign body.
- Discussion:** The popularity of injections guided by US has increased in recent years. The success of injections performed under US guidance, including in small structures such as flexor tendons of the hand, cannot be overlooked. The functional use of US, including in small structures, presents a significant advantage for clinicians.
- Key words:** Ultrasound, tenosynovitis, hand pain, traumatic tenosynovitis, steroid injection

BACKGROUND

Tendon sheaths are fibrous structures enveloping tendons. Tenosynovitis is a broad term indicating inflammation of the tendon sheath (1). Tenosynovitis commonly affects tendons in the hands and feet. The synovial fluid within the tendon sheath assists in tendon gliding function. Tenosynovitis can have various causes, including infection, trauma, or overuse. Inflammation and swelling of the synovial membrane can disrupt tendon dynamics and often accompany pain, hindering functionality. Clinical significance is attributed to flexor tenosynovitis diagnosis. Important findings include palpable pain, particularly leading to the appearance of a swollen finger, and painful joint movement range (2). Additionally, ultrasound (US) plays a significant role in diagnosing flexor tenosynovitis cases (3). Treatment options for tenosynovitis vary and depend on the causative agent, including nonsteroidal anti-inflammatory

drugs (NSAIDs), antibiotics, steroid injections, and, if necessary, surgery (4).

CASE REPORT

A 39-year-old male patient presented to our outpatient clinic with swelling of the third finger of the left hand persisting for 4 months (Fig. 1). The swelling had been ongoing for approximately 4 months. The swelling occurred approximately 2 days after a rose thorn prick on the lateral aspect of the left third finger during gardening. Following the incident, the patient removed the rose thorn that had become embedded on the radial side of his left third finger. Approximately 2 months ago, when the patient applied to an external center, he used 1,000 mg of amoxicillin-clavulanic acid twice a day for 10 days due to high sedimentation and C-reactive protein (CRP) values. However, when he applied to our outpatient

From: Hacettepe University Faculty of Medicine, Department of Physical Medicine and Rehabilitation, Ankara, Turkey

Corresponding Author: Hasan Ocak, MD, E-mail: hasanocak4767@gmail.com

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Fig. 1. Swelling in the third finger of the left hand, prick mark from a rose thorn (white arrow).

clinic, sedimentation and CRP values were normal. Additionally, NSAIDs were administered twice daily for 2 weeks. However, this treatment did not produce satisfactory results. During this process, the patient was consulted to the infectious diseases department to investigate the use of antibiotics and the presence of infection. The infectious diseases department informed us that an infective cause was not considered and did not find the use of antibiotics appropriate. The patient had no known medical conditions or regular medications. Upon detailed physical examination, marked swelling was evident in the third finger of the left hand. Furthermore, the joint movement range of the third finger of the left hand was notably painful. Subsequently, US examination of the swollen finger was performed. The flexor tendons of the third finger of the left hand appeared significantly swollen compared to the right side, with fluid accumulation in the tendon sheath observed (Figs. 2 and 3). During the injection, the patient was seated, and after sterile covering and dressing, a total of 7 mg betamethasone in a volume of 1 mL was applied under US guidance from the ulnar side near the palmar surface of the third middle phalanx of the left hand. Although there was edema around the tendon, fluid could not be aspirated. Additionally, the patient was advised to

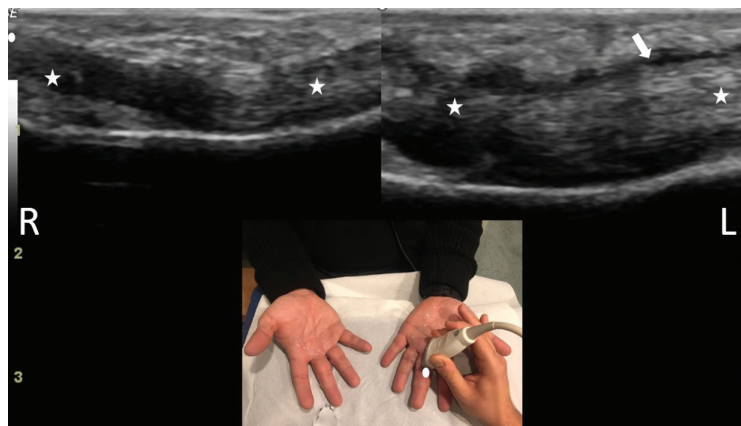


Fig. 2. Longitudinal imaging of the flexor tendons of the third finger, flexor tendons (asterisks), significant swelling of the tendon and edema of the tendon sheath on the left side, injection site (white arrow), white dot (distal side).

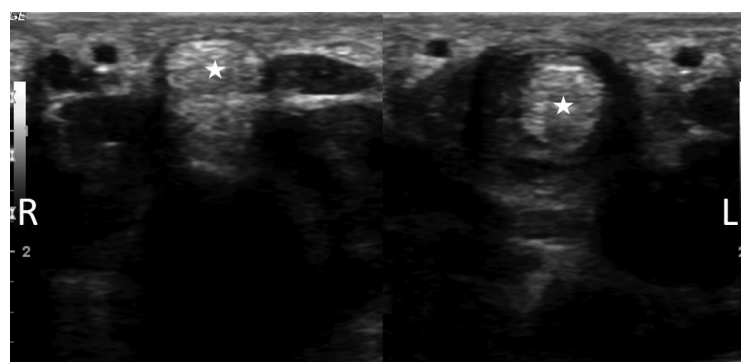


Fig. 3. On axial imaging, flexor tendons (asterisks), swollen flexor tendons and swollen tendon sheath on the left side.

apply cold packs and rest. On the fifth day of follow-up, significant reduction in swelling of the finger and notable improvement in joint movement range were observed.

CONCLUSION

In our case, we aimed to show how effective steroid injections for chronic tenosynovitis can be when performed under US guidance. There is no consensus on the management of tenosynovitis, especially in cases of uncertain etiology. Targeted steroid injections under US guidance are lifesaving, especially in cases of long-term tenosynovitis, as in our case. Although steroid injection into the small space between the tendon and the tendon sheath is very difficult without US, it is quite simple, practical, and effective under US guidance (5). Finally, the efficiency of injections under US guidance in such small areas may be higher compared to blind injections.

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