

Revisiting Lateral Epicondylitis: A Sonographic Approach to the Myofascial Component

Lateral Epikondilitin Yeniden Ele Alınması: Miyofasiyal Bileşene Yönelik Sonografik Bir Öncü Yaklaşım

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The forearm extensor muscle group plays a critical role in the extension of the wrist and fingers. These muscles are particularly concentrated around the lateral epicondyle and are associated with various clinical conditions.¹ Conditions such as lateral epicondylitis (tennis elbow) are the most common issues seen in this region, resulting from repetitive, forceful movements or overuse.² Additionally, the extensor muscles of the forearm are known to play a significant role in tendinopathy, myofascial pain syndrome, and chronic painful conditions.

Myofascial pain syndrome (MPS) is a common yet often overlooked clinical presentation in this muscle group. MPS is characterized by trigger points within the muscle, which exhibit specific, predictable referred pain patterns.³ The presence of a unique myofascial pain pattern in each forearm extensor muscle

makes the diagnosis and targeting of the correct muscle critical for clinical success. Considering these differences is of great importance for targeted treatment, especially in physical therapy and interventional applications.

During clinical examination, it can be challenging to distinguish and correctly identify these muscles. In particular, structures such as the *m. extensor carpi radialis longus* and *m. extensor carpi radialis brevis* can be confused when palpated despite their superficial location.⁴ At this point, sonographic imaging provides a significant advantage.⁵ During sonographic evaluation, the *extensor carpi radialis brevis* tendon exhibits a distinct “Scorpion Tail”. This characteristic shape is easily distinguishable on sonography because of its superficial location and serves as an anatomical landmark on the lateral aspect of the

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forearm. At the muscle-tendon junction level, this structure can be used as a guide for distinguishing other muscle groups and determining the injection sites.

During myofascial trigger point injections, dry needling, or other interventional techniques, targeting the correct muscle is crucial for treatment efficacy. Blind techniques may have a high error rate, especially when the muscles are closely positioned. In ultrasound-guided procedures, the “Scorpion Tail” image provides a practical reference point not only for identifying the *extensor carpi radialis brevis* tendon but also for localizing other forearm extensor muscles (e.g., *extensor digitorum communis*, *extensor carpi ulnaris*) located immediately medial or deep to this tendon.

Thanks to this landmark:

- The practitioner can more easily identify the target muscle, regardless of the anatomical variations.

- Treatment time is reduced and patient comfort is increased.

- More targeted treatment is possible, especially in cases of chronic pain in the extensor region.

The “Scorpion Tail” appearance described in this study is not only an anatomical reference but also provides the clinician with a dynamic orientation tool. By enabling the simultaneous assessment and targeting of both the muscle itself and its tendon in the case of lateral epicondylitis, where the *extensor carpi radialis brevis* muscle is the most commonly implicated muscle, it lays the groundwork for a more comprehensive treatment approach that also considers the myofascial component.

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