

# Role of Myofascial Trigger Points of the Anterior Part of the Deltoid Muscle in the Anterior Shoulder Pain: A Deeper Look Beyond Bicipital Tendinitis

## Deltoid Kasının Ön Kısımındaki Miyofasyal Tetik Noktalarının Ön Omuz Ağrısındaki Rolü: Bisipital Tendinitin Ötesine Derinlemesine Bir Bakış

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Shoulder pain poses a substantial health concern, with a lifetime prevalence of approximately 67% and a point prevalence varying from 7% to 26%.<sup>1</sup> Among the myriad factors contributing to shoulder discomfort, bicipital tendinitis is a frequent culprit. It is defined by the inflammation of the long head of the biceps tendon within the bicipital groove, commonly resulting from chronic tendon wear and tear.<sup>2</sup> Although bicipital tendinitis may induce pain in the anterior shoulder area, it is important to consider multiple potential diagnoses in the differential diagnosis process. Among these, conditions such as shoulder instability, bursitis in the surrounding tissue, rotator cuff injuries, and “impingement” syn-

dromes are commonly considered. However, it is worth noting that myofascial pain syndrome (MPS) of the anterior part of the deltoid muscle is a frequently overlooked yet prevalent pathology that can mimic the findings and pain pattern of bicipital tendinitis.<sup>3</sup>

The primary function of the anterior part of the deltoid muscle is to facilitate forearm flexion and internal rotation. During heavy lifting, it prevents subluxation and dislocation of the shoulder. Myofascial trigger points (MTrPs), a hyperirritable nodule within a taut band that is responsible for MPS, can be activated within the anterior part of the deltoid muscle due to factors such as impact trauma in contact sports,

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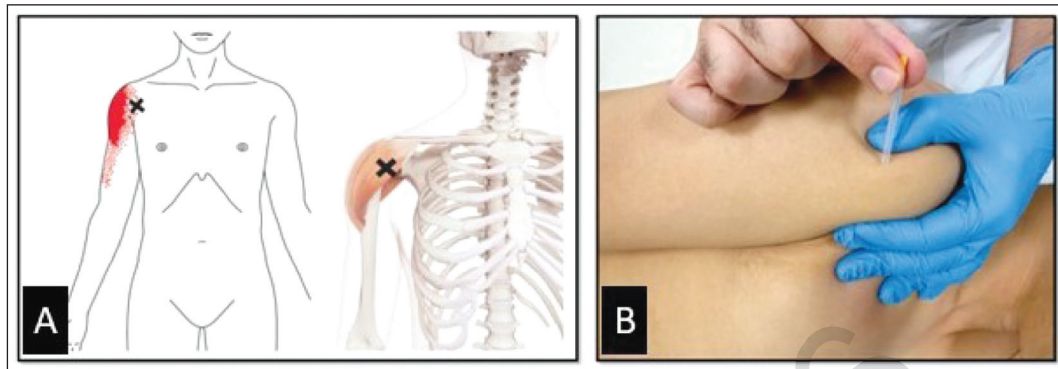
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**FIGURE 1:** Pain referral pattern and dry needling procedure of the anterior part of the deltoid muscle. **A)** Pain referral pattern of the MTrPs of the anterior part of the deltoid muscle; **B)** Dry needling of the anterior part of the deltoid muscle using pincer palpation technique

abrupt muscle overloading when trying to prevent falls, inadequate workstation ergonomics, and repetitive tasks. Individuals with MTrPs of the anterior part of the deltoid often describe experiencing profound shoulder discomfort in the anterior aspect of the shoulder (Figure 1A).<sup>4</sup> MTrPs located in the anterior deltoid muscle can elicit tenderness upon superficial palpation. This examination method, involving palpation-induced pain, is also employed in the diagnostic evaluation of bicipital tendinitis.<sup>2</sup> In light of this comprehensive evidence, it is imperative to consider MTrPs within the anterior deltoid muscle during clinical practice. This is particularly relevant for patients who present with anterior shoulder pain during palpation, especially when imaging methods fail to reveal any underlying tendinitis or tendinosis.

MTrPs of the anterior part of the deltoid muscle can be treated with dry needling, a safe and cost-effective method with good efficacy. Intervention was performed when the patient was in the side-lying position (Figure 1B). Needling is performed using the

pincer palpation technique. 0.30x30 mm needles are sufficient.<sup>5</sup>

In conclusion, it is crucial to maintain awareness of MTrPs of the anterior deltoid muscle when differentiating anterior shoulder pain. The resemblances in pain patterns and the MTrPs location over the bicipital tendon can create the potential for misdiagnosis of MPS as bicipital tendinitis, leading to prolonged treatment and increased healthcare demands. Elevating our understanding of MTrPs within the anterior deltoid muscle can lead to more precise diagnoses and effective treatments, ultimately improving the quality of life for individuals experiencing anterior shoulder pain.

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