Dynamic Chiropractic

SOFT TISSUE / TRIGGER POINTS

Is Tenderness of the Long Head of the Biceps Important?

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When evaluating a shoulder problem, how often have you found the long head of the biceps tender and painful? Frequently, functional testing of the biceps using Speed's test, Yergason's test, resisted forearm supination, or simply resisted elbow flexion does not demonstrate real pain or weakness - yet the patient complains of sharp painexactly over the long head. Unfortunately, based on tenderness, concentrating your treatment over the long head does not seem to help. Conditions such as shoulder bursitis, impingement, instability, and labral pathology often include bicipital tenderness to direct digital palpation.[1]

There is still disagreement regarding the functions of the long head of the biceps brachii muscle. It has been described as a stabilizer of the humeral head in the glenoid, preventing superior translation during abduction;[2] an anterior and posterior stabilizer; a limiter of external rotation; a lifter of the glenoid labrum; and a shoulder head compressor, among other things.[1] Perry stated that in the throwing position, the biceps was more important as an elbow muscle than as a significant stabilizing force at the glenohumeral joint.[3] In throwing, the biceps functions principally as an elbow decelerator. The problem with some of these studies is that when these functions were tested, bicipital activity at the elbow was allowed and shoulder activity was not isolated. So, was the activity of the long head due to the elbow or the shoulder movement?

The actual function of the long head of the biceps remains debatable. Pure traction overload tendinitis of the biceps tendon has not been identified, although few investigators have performed actual biopsy studies of the bicipital tendon at the time of treatment.[4] Some surgeons even regard it as a vestigial structure and when symptomatic, have excised it or anchored the tendon to prevent it from moving (tenodesis). Actually, the brachialis is the prime elbow flexor. Yamaguchi, et al.,[5], braced the elbow at 100 degrees, and in checking shoulder motion, found no isolated bicipital activity in weighted and rapid shoulder motions. More recently, Levy, et al.,[1] demonstrated that the long head of the biceps was not active in isolated shoulder motion when the elbow and forearm were controlled, and that bicipital function correlated with motion at the elbow, not the shoulder. They stated, "Any function attributed to the long head of the biceps is achieved by either a passive role (i.e., proprioception) of the tendon or an active role that achieves tension in association with elbow and forearm activity."

As I think now about shoulder cases, I realize that I rarely treat the long head.

References

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