COMPLICATIONS OF CAPSULAR SHRINKAGE IN A SWIMMER’S SHOULDER

Kelly, KM, Mazerolle SM University of Connecticut, Storrs, CT

Background: A 5’9”, 152 lb. 20-year-old, female long distance swimmer reported initially with complaints related to multi-directional instability, which she had surgically tightened. However, following surgery, the athlete continued to experience instability and pain in the posterosuperior aspect of the shoulder as well as at the medial border of the scapula. She reported pain and decreased range of motion with shoulder abduction, flexion over 90°, scaption, and internal rotation. The athlete, following failure of conservative management, had another capsular shift. Although the instability was reduced, the athlete began experiencing tingling, numbness, and a “cold” sensation from her shoulder down to her 4th and 5th phalanges. Also, the athlete still complained of pain and decrease in range of motion was noted. There was no muscle atrophy or deformity present, however point tenderness over long head of biceps brachii was noted. A trigger point located in her right latissimus dorsi directly under the axilla was determined to affect her ulnar nerve sensations in the hand. When pressure was applied and the trigger point was released, the athlete becomes asymptomatic and normal sensation, including warmth, returns to the hand. However, within a week or two, the trigger point returns along with the symptoms. Upon reading of the MRIs, biceps brachii, supraspinatus and rotator cuff tears were ruled out. EMG readings showed no brachial plexus injury nor showed thoracic outlet syndrome (neither neurologically nor vascularly). Although she was not “clinically” diagnosed with thoracic outlet syndrome, the athlete had a positive Adson’s, Military Brace, and Allan’s tests. Differential Diagnosis: Thoracic outlet syndrome, brachial plexus injury, supraspinatus injury, neuropraxia, biceps brachii tendonitis (long head) and rotator cuff tendonitis were all suspected to be possible causes. Treatment: Four months after surgery, rehabilitation began with the goals to improve ROM, decrease pain, increase strength to shoulder and back muscles, and return to play without pain. Strength was increased through use of body blade for scaption movements, rubber tubing and free weights for multi-planar shoulder movement. Shoulder flexion, extension, and internal and external rotation were achieved through high repetitions with low resistance through the first month. As strength increased, 2-4 lb. free weights were substituted. Also, secondary scapular dyskinesis began to develop, so scaption strengthening was implemented. Functional activities, such as reverse breaststroke and overhead “T” exercises, began once ROM increased. For pain relief, manual therapy had been used on the right shoulder. Effleurage at medial border of scapula and posterosuperior portion of shoulder was used to reduce spasm. Ischemic pressure was applied to the latissimus dorsi trigger point. The athlete was not removed completely from swimming, but she was limited to activity without pain. Uniqueness: Capsular shrinkage is a common surgical procedure utilized to treat chronic shoulder instability. Although it is not uncommon for the procedure to be repeated, the ensuing issues experienced by the athlete are uncharacteristic. Immobilization following the procedure may have contributed to the development of the trigger point which
caused the neurological symptoms in the hand. **Conclusion:** This case shows just how difficult it can be to pinpoint and diagnose a particular problem. It is important to recognize that all issues, injuries, and deficits may or may not be interrelated. Additionally, this particular case highlights the need for early mobilization, as recommended by post-surgical protocol to reduce the change for trigger point formation. Presently, pain reduction for full return to play is still the goal. The trigger point still produces sensations into the hand, but amount of time before symptoms returns has lengthened. The athlete has continued general shoulder strengthening. **Word Count:** 589