Dynamic Chiropractic

SPORTS / EXERCISE / FITNESS

Sports Medicine 101: Surgery or No Surgery?

TREATING OVERUSE INJURIES CONSERVATIVELY – A GOLFER'S CASE REPORT.

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In the world of sports medicine, many careers are saved by surgeries that correct traumatic damage to the body. Muscle tears, ligament damage, fractures, spinal disc herniations, and joint instabilities are a few of the issues frequently addressed with surgical intervention.

However, although surgeries are performed regularly in all sports, overuse injuries may not always benefit from surgical intervention, at least not as a first choice. Golf, tennis, and track and field often require such repetitive stress and strain that musculoskeletal breakdown assessment can take on a much broader scope.

There are primary overuse injuries whereby one body part simply gets "beaten up" from the direct stress of the sport. Think of the lower back with golf or the rotator cuff with tennis. When injuries of this nature present, the athlete and clinician must ask if the injury is at a level to require surgery – and would it provide the best response to healing. These decisions are difficult to make for the professional athlete and their sports medicine specialist.

Often in overuse sports, the source of pain is not where the primary dysfunction exists. A problem frequently exists elsewhere in the body that is promoting damage in the area of pain. If that painful area becomes severe enough that clinical dysfunction is evident, what is the best choice of treatment? Anti-inflammatory injections to hasten recovery? Surgery to clean debris from overuse breakdown of tissue? Comprehensive conservative care? Let's examine a case study that helps answer this question.

Case Study: Shoulder Pain

A successful amateur golfer aspiring to play on the PGA Tour presents with right shoulder pain. Pain is of a constant, dull nature and has been present for 3-4 weeks with no specific cause. The golfer has been practicing hard for upcoming qualifying events for PGA tournaments, hitting 250-350 balls daily for six months. Over the past 2-3 weeks, his pain has become periodically sharp while hitting balls. When it becomes sharp, he will stop hitting balls for 2-3 days and it feels better. However, when he resumes hitting balls, within a couple of days the pain recurs.

Due to a lack of response to Alleve over a two-week period, the golfer saw an orthopedic surgeon. An MRI was performed and revealed two partial (approximately 1/4th-inch-width) tears in the biceps and one in the supraspinatus tendons. Surgical repair was advised since the golfer aspires to play golf at a highly competitive level. The repair was successful and after six weeks of physical therapy, he was released.

The golfer gradually reinstituted his golf demands over the ensuing six months, despite never really feeling pain free and comfortable around his right shoulder area. Six months post-surgery, he came in to be assessed for dull, intermittent pain in his right shoulder of a localized nature.

Presentation: Dull right shoulder pain, localized (globally) and into the right upper lateral arm.

Assessment: Golfer is left handed, golfs left.

Swing concerns: Sway; hands break down at impact.

Orthopedic evaluation:

- Cervical: All cervical ranges of motion normal; foraminal compression, maximal rotary compression, depression tests negative; neurological findings in the upper extremities unremarkable to motor and sensory testing.
- Shoulder: Left shoulder – all ranges of motion, orthopedic tests, and muscle testing unremarkable and normal; right shoulder – all ranges of motion normal (F, E, ADD, ABD, ER, IR).
- AP Drawer, Dugas, Sulcus sign negative. Labral and rotator-cuff testing negative, but patient reports soreness. Manual muscle tests WNL.
- Scapular mobility: Right – limited protraction; left – WNL.
- Tenderness: +1/+3, scapular attachment, right rhomboid. Left: 0/+3.

Functional Movement Assessment:

- Shoulder: ABD/ER right DN, left FN. ADD/IR right DN, left FN.
- Lumbopelvic-hip: Pelvic tilt test DN with flexion. Shoulder rotation test (one-legged) – right DN, left FN. Pelvic rotation test (one-legged) – right FN, left DN. Seated, supine, prone hip rotation – left 10o, right 20o. Overhead squat test – FN.

Left quadratus lumborum tenderness: 2/+3; right – not tender.

Lower rib mobility: Decreased left posterior rotation at T10-12 relative to right.

Movement patterns: Side posture – gluteus medius DN on left, FN on right; prone – left gluteus maximus DN, right FN.

Assessment Summary

Right glenohumeral and scapulothoracic mobility was compromised and deactivation of the right interscapular, right posterior deltoid, and right subscapularis was present. Dysfunction of this nature was expressing itself as discomfort in the right shoulder / scapular area with his backswing. Since this area had already been treated with physical therapy in the past, these findings were addressed with passive and active release techniques, and muscular activation.

The primary dysfunction was felt to be with the golfer's lack of left hip internal rotation and thoracic spine mobility. During the backswing, right shoulder stress will be a response if the golfer cannot rotate over his left hip, thereby overstretching his right shoulder to get there. Since thoracic spine rotation is limited due to muscular tightness and costovertebral restriction, the movement will put enhanced stress on the right shoulder. The glenohumeral and scapulothoracic areas will now bear the burden of left torso rotation during the backswing. The lack of mobility in these areas will cause clinical dysfunction in the shoulder over time.

Treatment Summary

- Soft tissue: Passive and active release techniques for: left hip internal rotators; left gluteus medius; right thoracic spine multifidi; right serratus posterior inferior; erector spinae; right subscapularis; and right pectoralis major / minor.
- Joint: costovertebral articulation T8, T9, T10; right sacroiliac joint; right scapular mobilization.
- Rehabilitation: Left gluteus medius; right subscapularis; multifidi; erector spinae.

After three weeks of having the lumbopelvic-hip region treated at a frequency of three times per week, the golfer began to feel less right shoulder discomfort. His coach stated that the golfer's sway was not present and his hands were less active.

The golfer's treatment frequency was then reduced progressively, from two times per week for two weeks, to one time per week for four weeks, as symptoms, mobility and stability improved. Supportive care was then instituted due to the future repetitive demands he must perform in preparation for competitive golf.

Case Review / Clinical Takeaway

Time is extremely important to this and any aspiring professional golfer. Days lost are opportunities lost. Whether it be practice or competition, the process of becoming highly competitive is disrupted. It certainly would have been more time efficient for him to have had a comprehensive assessment by a sports medicine specialist first.

Two courses of action would have then followed. First, the significance of the thoracic spine and hip dysfunction would have been detected right away and addressed. This may have eliminated or at least minimized the need for surgical intervention due to its direct impact on the right shoulder. Second, if shoulder pain had progressed to the extent of prohibiting pain-free golfing, despite correcting thoracic and hip dysfunction, at least the areas necessary for expedient recovery would have already been addressed prior to surgery. This could only have hastened recovery and allowed the golfer a more efficient return to golf.

Chiropractors who aspire to be involved with professional sports must be aware of global body function – prior to surgery and post-surgery. Whether you chose to handle the findings yourself or refer to other specialists makes no difference. Your awareness and capability make a difference. They will add to your ability to integrate into any health care program and earn the respect you deserve.

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