
October Meeting Summary

Anatomy of the Shoulder: Injury & Treatments

— with Dr. David Waldram, Health Cost Management, LLC

How do you treat a dislocated shoulder? According to *Dr. David Waldram's*, (Board Certified Orthopedic Surgeon) presentation on shoulder injuries, done at the OCAA lunch meeting on October 14, 2003, you should carefully follow these steps: Give the patient intravenous drugs until they are goofy, close the doors so nobody can see what you are doing, put your foot in the patient's armpit, and **YANK!**

Well, this isn't exactly how it's done...but the shoulder is a rather complicated joint, highly mobile and regularly involved in complex movements, and is susceptible to injuries such as fractures, dislocations, and muscle / tendon injuries.

The shoulder joint is made up of three bones: the upper arm bone (*humerus*), the shoulder blade (*scapula*), and the collar bone (*clavicle*) on the top. A pad of cartilage on top of the humerus fits into a pocket on the scapula called the *glenoid*, and where those two together make up the *glenohumeral joint*. Tendons form the attachments between the muscles and the bones, and there are four of these tendons in the shoulder joint that join together to form the *rotator cuff*. The function of the rotator cuff is to keep the *humerus* bone of the arm tightly tucked into the glenoid socket of the scapula.

Another important structure within the shoulder joint is the *bursa*, or lubricated sac of *synovial fluid* that protects the muscles and tendons as they move against each other. There is a bursa between the part of the scapula that makes up the roof of the shoulder (known as the *acromion*) and the rotator cuff tendons. The bursa simply allows the moving parts to slide against one another without too much friction.

When the space between the humerus and the acromion above it is narrowed, several of these structures get squeezed. Tissues in the body don't like to be squeezed, and in response, get inflamed. Bursitis, tendonitis, and arthritis, are all inflammatory conditions that arise from the squeezing, and are closely related to impingement syndrome, often occurring in combination with it. Impingement syndrome also contributes to the tearing of rotator cuff tendons, as it weakens the rotator cuff and makes it more susceptible to injury.

Another problem that may contribute to impingement is the development of bone spurs. Bone spurs can further reduce the space available for the rotator cuff and cause wear and tear of the *acromioclavicular* (AC) joint between the collarbone and the shoulder blade.

This joint sits directly above the bursa, and any bone spurs that develop beneath it irritate the bursa, making impingement worse.

If the rotator cuff is torn, it may heal with only physical therapy, or surgery might be required, depending on the size of the tear. If a tear of the rotator cuff is partial, the physician may recommend treatment with RICE...an acronym for rest, ice, compression and elevation.

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Fractures can occur to any of the three bones (humerus, scapula, clavicle) that make up the shoulder girdle. A shoulder fracture can be treated with immobilization and physical therapy, or may require surgical repair.

Dislocations may be repositioned back into place, and immobilized. This would be followed by physical therapy, surgery would most likely be needed after a third dislocation.

Topics covered in **Dr. Waldram's** presentation included: Anatomy of the shoulder, shoulder fractures, dislocated shoulders, partial dislocations, impingement syndrome, and torn rotator cuff.

For each of the above topics an educational binder was given to each attendee, which covered:

1. The diagnosis
2. How does it occur?
3. What are the symptoms?
4. How is it diagnosed?
5. What is the treatment?
6. What is the normal healing time?

Dr. Waldram then proceeded to do a shoulder examination on a patient, Tami Rockholt, which included all of the examination findings that you read about in an IME report as well as going through ranges of motion. Tami had a “crunchy” shoulder from playing racquetball the evening before and had collided with a concrete wall (the wall won).

To familiarize yourself with shoulder injuries and their treatments, one of which is not a foot in the armpit, contact Health Cost Management at 503/ 439-1338. ❖