

Hands-On Approach Helps Assess Shoulder Pain

BY DOUG BRUNK
San Diego Bureau

SAN DIEGO — When patients present to primary care clinics complaining of shoulder pain, the injury usually stems from secondary impingement, which results from mechanical dysfunction such as structural glenohumeral laxity or insufficiency of the shoulder's stabilizing muscles.

"It's usually a weak rotator cuff," Dr. Francis O'Connor said at the annual meeting of the American Academy of Family Physicians. Primary impingement occurs less often and is the result of a structural abnormality that implies bony or ligamentous encroachment on the subacromial space.

About a third of shoulder impingement cases stem from overhead work such as fruit picking, tree pruning, warehouse work, carpentry, and painting. Another third of cases occur in athletes who participate in throwing sports, racquet sports, skiing, or swimming. The remaining cases tend to affect people aged over 60 years.

Clinical workup for suspected shoulder impingement involves a careful examination for deltoid, supraspinatus, infraspinatus,



An MRI shows an increased signal in the rotator cuff, consistent with tendinopathy.

tus, and scapular stabilizer atrophy, which may result from disuse or neuropraxic injury. "Look for asymmetry, atrophy, and deformities," said Dr. O'Connor, medical director of the Consortium for Health and Military Performance (CHAMP) at the Uniformed Services University of the Health Sciences, Bethesda, Md.

To assess for shoulder impingement, he suggests the Neer impingement test, which is performed by internally rotating the arm with the elbow extended and then passively forward-flexing the arm, attempting to reach 180 degrees. "Positive results of pain are often evident well before 180 degrees of elevation."

Hawkin's sign or "pour can" test, performed with the shoulder at 90 degrees forward flexion and 45-90 degrees internal rotation, is also effective. The examiner then attempts to further internally rotate the shoulder, driving the greater tuberosity into the coracoacromial arch.

Key tests for anterior shoulder instability include the apprehension (fulcrum) and relocation tests, for which the patient is examined in the supine position, and the shoulder is placed in 90 degrees abduction and external rotation. The examiner's hand then creates an anteriorly directed force

across the glenohumeral joint and looks for patient signs of pain or apprehension.

"If there is pain or apprehension with the maneuver, a posteriorly directed force may then be applied to the glenohumeral joint," Dr. O'Connor said. "If the pain goes away with this maneuver, then it suggests that the patient may have anterior instability as the source of the pain."

An effective test for inferior or multidirectional shoulder instability is the sulcus sign, which is conducted with the patient

seated with the arm to the side. The examiner grabs the elbow and exerts a downward force. The area adjacent to the acromion is observed and dimpling of the skin may indicate inferior instability and/or multidirectional instability.

To test for tears in the labrum, use the crank test, which is performed with the patient in the seated or supine position. The arm is elevated to 160 degrees in the scapular plane and the examiner then applies a load along the axis of the humerus

while maximally rotating the humerus internally and externally. A positive test reproduces the patient's symptoms of pain or catching with or without a click.

Most patients don't need x-rays right away. If you do order a shoulder series, ask for a supraspinatus outlet view to rule out primary impingement, as well as internal and external rotation views. He refers to a surgeon if he can't determine the source of the pain or there is no response to therapy in 3 months. ■

