



Clinical Guidelines: Shoulder Pain

Patients with shoulder pain can be generally divided into four groups:

1. Rotator cuff pathology / impingement syndrome
2. Osteoarthritis / adhesive capsulitis
3. Instability / labral tears
4. Acromioclavicular joint

In addition to history and physical exam, initial evaluation is always started with plain radiographs, which can show osteoarthritis (glenohumeral and acromioclavicular), calcific tendonitis, and subacromial spurs. Bony lesions and certain tumors can also be identified. MRI is usually indicated only in certain situations.

Also, remember that cervical spine pathology can mimic shoulder problems, and should be considered as a possible etiology.

Rotator cuff pathology

Rotator cuff problems can include subacromial impingement syndrome (bursitis and rotator cuff tendinitis, and a subacromial "spur"), rotator cuff tears (partial or full thickness) and calcific tendonitis. The symptoms can be confusing, since they all often have anterior-lateral shoulder pain with activity and at night. They can all have positive "impingement" signs. It can be difficult to differentiate between tendonitis / bursitis and rotator cuff tears with only history and physical exam.

Initial treatment of rotator cuff symptoms includes rest / activity modification, physical therapy, and NSAIDS. Occasionally, subacromial corticosteroid injections are utilized. If symptoms resolve, no additional intervention is necessary. If symptoms persist after 10-12 weeks, an MRI is warranted.

The MRI can show:

1. Rotator cuff tear: refer for possible surgical intervention
2. Rotator cuff tendinitis/bursitis/impingement: continue therapy, if no improvement, refer for possible surgical intervention
3. Rotator cuff calcific tendonitis: acute cases have severe pain. Treated with subacromial injection and narcotic pain medication, refer for possible surgery if not improved

Osteoarthritis / adhesive capsulitis

Both glenohumeral osteoarthritis and adhesive capsulitis (frozen shoulder) can cause significant shoulder stiffness and pain. They both cause significant pain at night. Active *and* passive range of motion is limited. However, osteoarthritis is easily diagnosed with plain radiographs, whereas adhesive capsulitis has normal radiographs and MRIs.

Glenohumeral joint osteoarthritis: Manage symptoms with glucosamine, NSAID's, activity modifications, occasional injections. Refer when symptoms are not controlled.

Adhesive capsulitis: Usually resolves after 6-12 months without surgery. Pain control and activity modification until symptoms resolve. May require referral for manipulation under anesthesia if symptoms don't improve.

Shoulder instability / labral pathology

Anterior shoulder dislocations can cause an anterior-inferior labral tear (Bankart tear), but other labral pathology also exists. A superior labral tear (SLAP tear) can be caused by acute trauma or repetitive microtrauma, and typically causes pain, not instability. Degenerative SLAP tears occur in older patients and do not require surgery. A posterior-inferior labral tear can be traumatic or can occur in weight-lifters/football lineman. MRI arthrogram is best test to delineate labral pathology.

1. First-time dislocator: Radiographs to ensure there is no fracture; physical therapy and return to activity. Avoid sling immobilization. MRI is not typically indicated. Higher recurrence rate in younger patients.
2. Recurrent instability: if a second or third dislocation occurs, MRI arthrogram should be obtained and referral for surgical stabilization.
3. Superior labral tear: not related to dislocations, difficult to diagnose. Treated with 10-12 weeks of physical therapy/activity modifications. If not improved, refer for possible surgery.

Acromioclavicular joint

In contrast to rotator cuff pathology, acromioclavicular joint (AC joint) pathology can be diagnosed with history and clinical exam. AC joint arthrosis causes point tenderness at the AC joint, and patients complain of superior shoulder pain. AC joint osteoarthritis can be confirmed with plain radiographs. However, AC joint separations are almost always post-traumatic, with symptoms specific to the AC joint. The degree of separation is delineated with plain radiographs; MRI's are rarely indicated.

1. AC arthrosis: trial of activity modifications and injections into AC joint. If this is not successful, consider referral for distal clavicle excision.
2. AC separations: for moderate separations (Grade I, II, III—elevation of clavicle up to 100% of the joint), conservative care is the mainstay of treatment (physical therapy and activity modifications). Grade V separations (>100% elevation) require surgical treatment.

Concerning findings / red flags:

Positive drop-arm test (patient can't hold arm up).

Highly sensitive for large rotator cuff tear. Obtain MRI in timely fashion, especially after trauma.

Inability to move arm after trauma, with negative films.

Concern for posterior dislocation. Posterior dislocation can have normal appearing radiographs, if axillary lateral is not obtained.

Axillary lateral is recommended for all patients, especially after trauma. If axillary lateral is negative (not dislocated), recommend MRI to evaluate rotator cuff.