

Arthritis of the shoulder

Rheumatoid arthritis

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The glenohumeral joint is commonly involved in rheumatoid arthritis (Figure 38.14). As is typical of this condition, there is osteoporosis, destruction of the articular cartilage and synovial proliferation with pannus formation. The rotator cuff is weakened and frequently tears. Arthroscopic synovectomy may slow the progress of the joint destruction and lead to a reduction in pain and improvement in range of movement but has been effectively superseded, in many locations, by the introduction of biological therapies for rheumatoid disease. -

Figure 38.13 Radiograph demonstrating calcific tendinitis.

Intra-articular steroid injections may be helpful. Shoulder replacement is complicated by poor bone stock and anatomical shoulder replacement is further compromised by damage to the stabilising structures around the shoulder, especially the rotator cuff. In these patients reverse shoulder replacement may be an option if bone stock is preserved, although the patient should only expect a reduction in pain. Any increase in range of movement is a bonus, though is more likely with reverse shoulder replacement. Summary box 38.5 Shoulder problems in rheumatoid arthritis

Osteoarthritis of the shoulder Glenohumeral joint osteoarthritis is either primary (Figure 38.15), secondary to trauma (Figure 38.16) or end-stage rotator cuff disease, i.e. cuff arthropathy (Figure 38.17). Treatment If medical treatment has failed, the surgical options are arthroscopic debridement or joint arthroplasty. Debridement is not predictable and is often reserved for young, active patients to delay the need for arthroplasty. Both total shoulder replacement (Figure 38.18) and hemiarthroplasty (Figure 38.19) good reported results in appropriate patients, although pain relief is better with total arthroplasty, with the rate of hemiarthroplasty falling as the rate of total arthroplasty increases. An anatomical total shoulder arthroplasty can be performed if the rotator cuff is intact. However, in most patients with rheumatoid arthritis, and all patients with cuff tear arthropathy, -) have - eases. -

Figure 38.14 Rheumatoid arthritis of the shoulder. Arthroscopic synovectomy may be effective but rarely needed Rotator cuff tears are common Glenohumeral joint replacement improves pain, but motion depends on rotator cuff involvement Figure 38.15 Osteoarthritis of the glenohumeral joint. Figure 38.16 Post-traumatic arthritis with malunion of the proximal humerus, collapse of the humeral head, subchondral sclerosis and osteophytes. Figure 38.17 A massive cuff tear that has led to superior migration of the humeral head and secondary osteoarthritis of the glenohumeral joint.

the cuff is deficient and either a hemiarthroplasty or a reverse polarity total shoulder arthroplasty (Figure 38.12) should be used. Shoulder arthroplasty is an effective pain-relieving procedure, but less predictable in restoring motion, especially above shoulder level. Arthrodesis of the joint is an alternative in younger patients with a history of sepsis or neurological problems (Figure 38.20). It is also used after brachial plexus injury , when nerve repair restores hand and elbow function but the shoulder remains flail because of loss of the C5 supply . Good scapulothoracic control, tested by the ability to shrug the shoulder powerfully , is a prerequisite to successful arthrodesis. Patients retain a moderate range of movement at the shoulder girdle as a result of scapulothoracic motion, which normally makes up approximately one-third of apparent shoulder elevation, the remaining two-thirds being glenohumeral movement, which is lost in arthrodesis. Summary box 38.6 Arthritis of the shoulder

Figure 38.18 Anatomical total shoulder replacement performed for osteoarthritis. An intact rotator cuff is essential. Figure 38.19 Shoulder hemiarthroplasty can be performed for arthritis, particularly if there is a deficient rotator cuff or in very young, active patients with a well-preserved glenoid. Figure 38.20 Arthrodesis of the shoulder. Severe cases are treated with hemiarthroplasty or total shoulder arthroplasty Anatomical total shoulder replacement should not be performed if the rotator cuff is deficient but reverse shoulder replacement is appropriate Pain relief is good following arthroplasty, although improvement in range of motion is less predictable Glenohumeral arthrodesis is an option in the young or those with a history of sepsis Post arthrodesis, motion is fair but is entirely scapulothoracic

Acromioclavicular joint (ACJ) arthritis is common and is often asymptomatic, noted as an incidental finding on radiographs (Figure 38.4b). Symptoms typically arise in males aged 20–50 years. Inferior osteophytes can impinge on the underlying rotator cuff . History and examination There may be a history of trauma to the ACJ. Pain is activity related and worse when using the arm overhead. There is prominence of the lateral end of the clavicle. The joint line is tender. Flexing and adducting the arm to place the hand around the opposite shoulder reproduces pain. There is a high painful arc, pain being worst for the last 20–30° of elevation. If symptoms are related to inferior osteophytes, impingement symptoms and signs can also be present. Treatment An intra-articular corticosteroid injection will usually help; even if the effect is short-lived it localises the problem accurately . Surgery involves arthroscopic or open excision of the lateral 0.5–1 cm of the clavicle (Figure 38.21). This gives good pain relief. In patients with symptoms that are predominantly those of impingement, arthroscopic removal of the inferior osteophytes with subacromial decompression should be performed. Summary box 38.7 ACJ problems

ACJ arthritis is common and is often asymptomatic It may become symptomatic secondary to trauma or repetitive overload Intra-articular steroid and local anaesthetic injection may relieve symptoms Excision of the lateral end of the clavicle gives good results

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Figure 38.20 Arthrodesis of the shoulder. Severe cases are treated with hemiarthroplasty or total shoulder arthroplasty. Anatomical total shoulder replacement should not be performed if the rotator cuff is deficient but reverse shoulder replacement is appropriate. Pain relief is good following arthroplasty, although improvement in range of motion is less predictable. Glenohumeral arthrodesis is an option in the young or those with a history of sepsis. Post arthrodesis, motion is fair but is entirely scapulothoracic.

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