SHOULDER ARTHRITIS AND JOINT REPLACEMENT

Indications

1.Primary osteoarthritis: Through wear and tear.

2. Secondary Osteoarthritis

a. Post traumatic arthritis

b. Multiple recurrent dislocation

c.Post Putti Platt surgery for dislocation

c. Avascular necrosis

d. Rotator cuff arthropathy

e. Rheumatoid arthritis

f. Gout and chondrocalcinosis

Pathogenesis

In primary osteoarthritis there is an asymmetrical wear. Usually there is inferior osteophytes formation.

In primary osteoarthritis, the rotator cuff is usually intact

Clinical

Pain on movement

Limitation of all movements

Crepitus on movement

Radiological examination

X ray

Decrease joint space

Sclerosis

Inferior osteophytosis

Treatment

Non-operative

1.Anti-inflammatory medications such as aspirin or ibuprofen.

2.Glucosamine and chondroitin sulfate are more commonly prescribed today.

3.Physical therapy may be suggested to help you regain as much of the motion

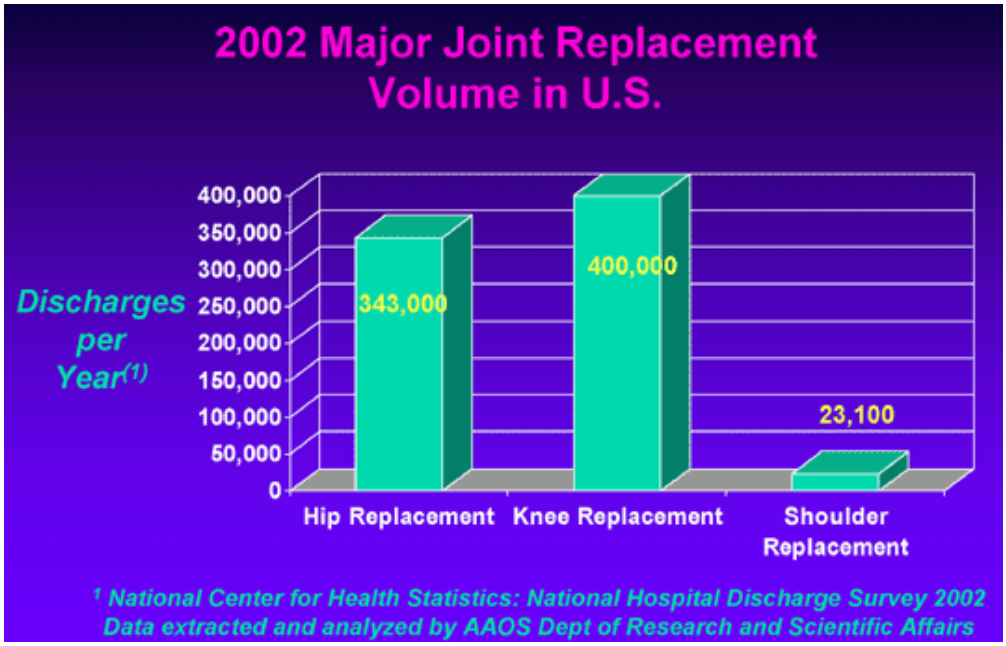
4.An injection of cortisone into the shoulder joint may give temporary relief.

Operative

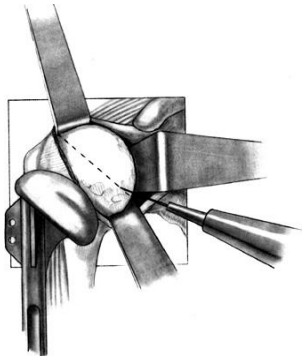
1. Hemi arthroplasty
2. Total shoulder arthroplasty: These could be cemented or uncemented
3. Resurface arthroplasty

Hemiarthroplasty for rotator cuff deficient [Cuff tear arthroplasty, CT head]

Reverse shoulder



TSR technique



Patient in a beach-chair position

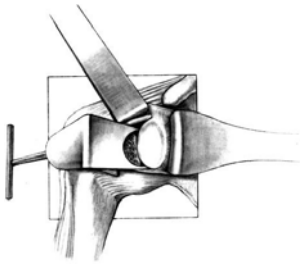
Fasten the head securely with tape to either a horseshoe head-rest.

Prophylactic antibiotics: 1 g IV cephalosporin antibiotic

The long delto-pectoral approach

Incise the clavipectoral fascia to expose the conjoint tendon

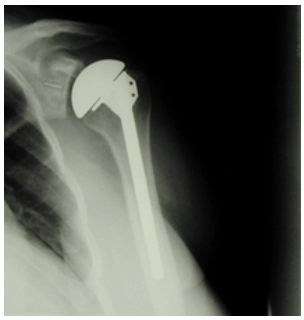
Protect the brachial plexus and the musculocutaneous nerve



Release of the coracoacromial ligament facilitates exposure and allows more room for the subscapularis repair at the end of the procedure. However, if the rotator cuff is deficient, do not release this ligament because it may diminish antero-superior stability

Divide the subscapularis tendon and capsule laterally, near the bicipital groove, and mobilize them as a single flap. Complete capsulotomy is essential part of the surgery.

Dislocate the humeral head by gently extension and external rotation the arm. A blunt elevator between the humeral head and the glenoid.



Identification of the circumferential osteophytes enables more accurate identification of the amount of humeral head normally covered by articula cartilage. To remove osteophytes,

Begin the osteotomy just inside the supraspinatus insertion

Once the correct angle has been marked using the trial component as a guide, use an oscillating saw

Insert the trial humerus prosthesis into the intramedullary canal in about 30º of retroversion

Selection of the appropriate humeral head implant is critical. Determine the correct head size from the size of the humeral head that has been removed

The glenoid slot must be made along the exact axis of the glenoid.

With excessive asymmetric glenoid wear, there is danger of cortical perforation if the drill bit is oriented perpendicular to the glenoid rather than perpendicular to the glenoid neck.

Complications

1. Glenoid loosening

   30%-80% radiolucency around glenoid. But they are not loose.

2. Humeral component loosening

   49% at 12 yrs of which more than 50% stable

3. Gleno-humeral instability

   0 to 35%. Dislocation or subluxation

4. Anterior instability is due to avulsion of the Subscapularis

   Superior instability is due to rotator cuff dysfunction

   Posterior instability is due to excessive retroversion of the glenoid or Humeral head

4. Rotator cuff tears: 2% following replacement
5. Periprosthetic fractures: 2%. Intra-operative is treated by encirclage wires
6. Infection: 1%
7. Nerve injury : Axillary nerve, musculocutaneous nerve
8. Deltoid dysfunction