Frozen shoulder

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Clinical condition with restricted active and passive range of motion (ROM) in all directions, including flexion, abduction, and rotation

Pathogenesis

- Basic pathology – scarring and contracture of capsuloligamentous structures

Epidemiology

- 50-60 y.o.
- No racial predilection
- Women slightly more common
- prevalence 2 % in general population
- Type I DM – 40%
- Hyperthyroidism and hypertryglyceridemia

Clinical presentation

- insidious onset of pain, then loss of motion
- Early, pain at end range of motion
- Loss of active and passive ROM
- Thyroid hormone, blood sugar and lipid level
- Plain x-ray usually normal
- MRI for diagnosing other disease but should not be routinely used Manton et al Utility of MRarthrography in the diagnosis of adhesive capsulitis. Skelet Radiol. 2001;30:6

Pathology

- decreased volume of the glenohumeral joint
- restricted ROM
- Tight capsule
- chronic fibrosis of the capsule

Treatment

- Mainly non-operative
- physical therapy, NSAIDs
- intra-articular steroid injections
  - Posterior
- Intra-articular joint distention

Surgical treatment - Indication

- not respond to at least 6 months of appropriate nonoperative treatment

MUA

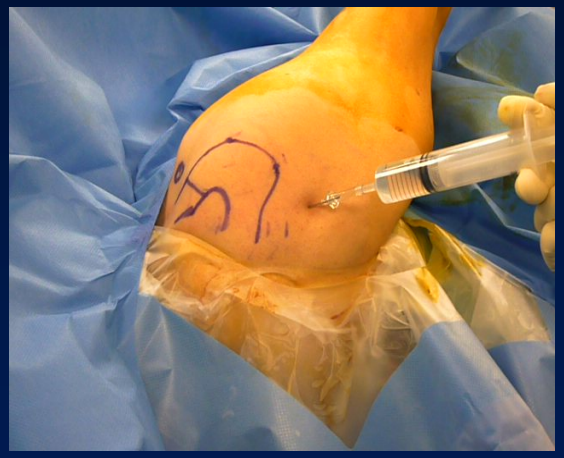
- Manipulation alone does not allow for controlled release and increased risk of humeral shaft fracture
- relative contraindications to manipulation (i) no improvement after previous manipulation and (ii) patients with significant osteopenia, a rotator cuff tear, or long-term insulin-dependent diabetes
- an average of 70% improve after 6 months

capsular release

- Open release – morbidity, posterior capsule release difficult
- Arthroscopic capsular release
  - Conti 1979

Surgical technique

- EUA both shoulders free passive range
- Lateral decubitus
- 10 lb traction-suspension
- Pump 40-60mm Hg
- Systolic pressure <100mm Hg

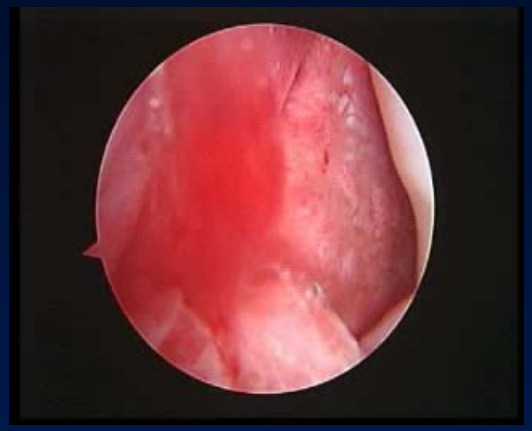


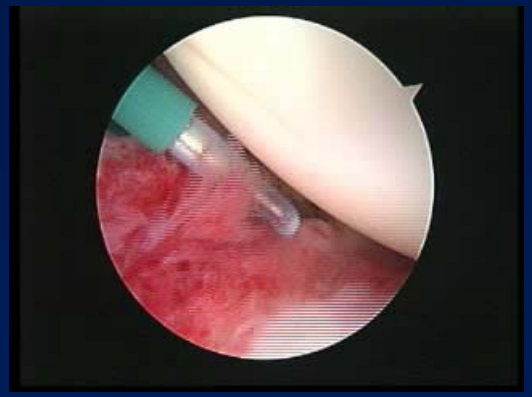
Surgical technique

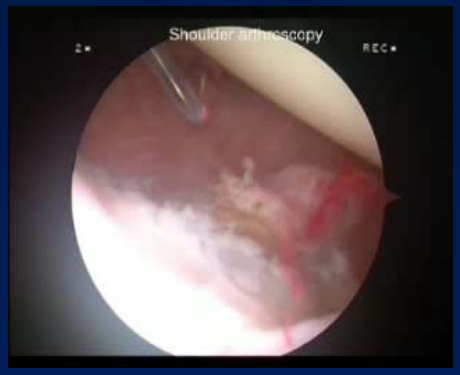
- Posterior portal
- Anterior portal
  - Inside out sometimes possible
  - Outside in

Surgical technique

- Release rotator interval
- Anterior capsule MGHL, AIGHL release close to labrum
- Careful with axillary nerve at about 5 O’clock

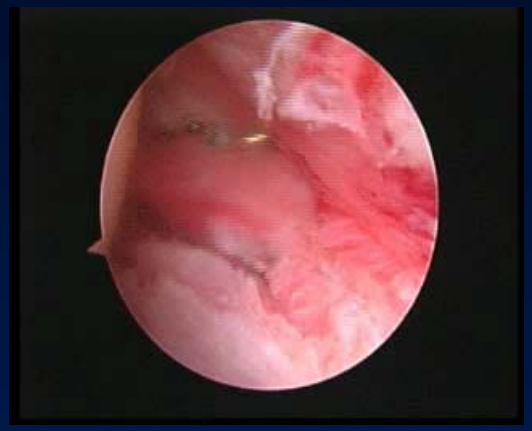


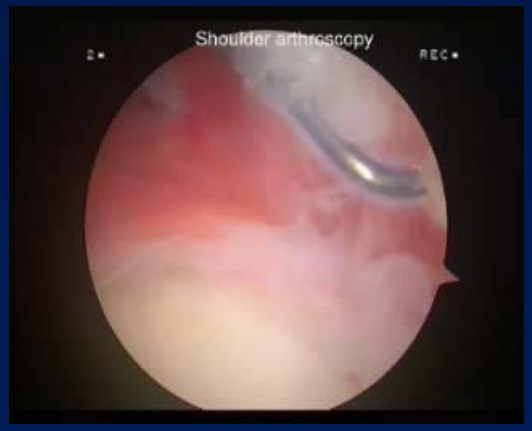




Surgical technique

- Switch portals
- Posterior release
- From 11 o’clock to 7 o’clock
- Subacromial bursa viewing





Surgical technique

- Complete MUA
- Forward elevation
- External and internal rotation with arm by side
- Extension
- External and internal rotation with Ab90
- Abduction

Pain relief

- Subacromial infusion catheter Ropivacaine 0.2%
- Adequate analgesia
- Encourage active and passive movement
- Physiotherapy

Summary

- Frozen shoulder common
- Recovery expected in 24 months
- Main stay treatment non-operative
- Severe cases capsular release and MUA