Minimally Invasive Treatments for Shoulder Pain

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Shoulder Arthroscopy

- The shoulder joint is prone to injury since it is very mobile.

- Frequent overhead movements and sudden trauma can damage the tissues inside the shoulder.

- This can cause pain, tenderness, weakness, instability, and limitation of movement in the shoulder joint.
Shoulder Arthroscopy

- Arthroscopy has been one of the major advancements in Orthopaedic Surgery.

- Now the vast majority of elective shoulder surgery can be performed arthroscopically, with significant advantages to the patient and surgeon.

- However the skills and equipment are completely different to traditional open surgery.
Special Table
Shoulder Arthroscopy
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Shoulder Arthroscopy

- The types of disorders that can be diagnosed and treated with arthroscopy include:
  - tears,
  - abnormal formations,
  - detachments,
  - loose fragments (loose bodies),
  - and arthritis
Shoulder Impingement

- **Impingement** is one of the most common causes of pain in the adult shoulder.

- It results from **pressure** on the rotator cuff from part of the shoulder blade (scapula) as the arm is lifted.
Shoulder Impingement

- The **pain** may be due to a "bursitis," or inflammation, of the **bursa** overlying the rotator cuff or a "**tendonitis**" of the cuff itself.

- In some circumstances, a **partial tear** of the rotator cuff may cause impingement pain.
Partial Rotator Cuff Tear
Impingement Syndrome
Shoulder Impingement
Impingement Syndrome
Shoulder Impingement

- Treatment:
  - Nonsurgical: Rest, Physical Therapy, and Injections
  - Surgical: Arthroscopic removal of the bone spur at the front of the shoulder
Impingement Syndrome
Impingement Syndrome
Impingement Syndrome
Shoulder Impingement

- Rehabilitation:
  - Discontinue sling on 2\textsuperscript{nd} or 3\textsuperscript{rd} day
  - Physical Therapy
  - Normal physical activity at 4 to 6 weeks.
Rotator Cuff Tears

- A tear of one of the 4 small muscles that keep the ball of the shoulder centered over the socket.
- A tear may result suddenly from a single traumatic event or develop gradually.
- No longer able to lift or rotate his or her arm with the same range of motion.
- The pain is also very common, often radiating down the arm.
- Pain at night.
Rotator Cuff Tears
Rotator Cuff Tears

**CAUSES:**

1. Injury
2. Overuse
3. Poor blood
4. A fall on an outstretched arm
5. Impingement
Rotator Cuff Tears
Rotator Cuff Tears
Rotator Cuff Tears
Rotator Cuff Tears

TREATMENT:

1. Painkillers and anti-inflammatory medications
2. Physical therapy
3. Cortisone steroid
Rotator Cuff Tears

- **TREATMENT**: Surgery

  4. Surgery is required –

    a. If the tear follows an injury

    b. When pain and weakness is not improved with injections and physiotherapy
Rotator Cuff Tears

- Repair:
  - Most tears can be repaired by arthroscopy.
  - The worn tissues and bone are cleaned.
  - The torn tendon is then reattached to bone using special anchors.
Rotator Cuff Tears

- Rehabilitation:
  - Sling must be worn for 4-6 weeks
  - Physical therapy
  - Avoid strenuous activity for at least 3 months
Partial Rotator Cuff Tear
Rotator Cuff Repair
Rotator Cuff Tears
Rotator Cuff Tears
Biceps Tendon Tears

- Detachment of the portion of the biceps that attaches to the socket of the shoulder
- Often associated with a tear of the labrum and rotator cuff
- Gives pain to the front of the shoulder going down the arm
Biceps Tendon Tears

- **Treatment:**
  - Initial: cortisone injection and therapy
  - Surgery: tenodesis (attachment to the arm bone)
    - if the tear is extensive or if the tendon has moved out of its groove
Biceps Tendon Tears
Biceps Tendon Tear
Biceps Tendon Tear
Shoulder Dislocations

- Over 90% of young adults with a dislocated shoulder will have recurrent dislocations.

- Dislocations are most often anterior, where the ball escapes to the front of the socket.

- They are frequently the result of forceful trauma.
Shoulder Dislocations

Treatment:

1. sling
2. rest
3. rehab
4. arthroscopic reconstruction
5. open repair
SLAP LESIONS
SLAP LESIONS
Slap Lesion
SLAP REPAIR
Frozen Shoulder

- Shrinkage involving the inner envelope (capsule) of the shoulder ball and socket joint
- Results in painful loss of motion
- Many causes: Tendonitis, trauma, diabetes....
Normal joint capsule

Adhesions/scarring of joint capsule

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Frozen Shoulder

Treatment:
- 1. Physical therapy to stretch the stiff capsule
- 2. Cortisone injections to slow the inflammation

Arthroscopic release if:
- 1. No improvement with therapy
- 2. Very stiff diabetic patient
Frozen Shoulder

Treatment:

- Arthroscopic release involves 2 small portals to release the front and back of the shoulder.
Adhesive Capsulitis
Shoulder Arthroscopy

- Arthroscopy is surgery with small incisions.
- Objects are seen indirectly through the use of very small lenses and magnification.
- Damaged tissues can be trimmed, repaired, or replaced.
- Avoid injury to normal tissues.
- Faster recovery with better outcomes.
- No hospital stay is necessary.
Shoulder Arthroscopy

Preparing For Arthroscopy:

- **Routine pre-op test**
- **Shower with antibacterial soap before coming to the hospital**
- **Do not eat or drink anything after midnight the night of surgery**
- **Blood thinners should be stopped prior to surgery**
- **Certain medications can be taken on the morning of surgery**
Shoulder Arthroscopy

Preparing for surgery (2):

- I will see my patient before the surgery to answer last minute questions
- Correct operative site will be marked
- General anesthesia and a regional block will be given prior to the surgery
Shoulder Arthroscopy

After Surgery:

- Once fully awake you will be ok to go home.
- Someone needs to drive you home as you may be drowsy.
- Ice may be applied to the shoulder to help with pain and swelling.
- A prescription for a pain pill and in some cases an antibiotic will be given.
Shoulder Arthroscopy

- INCISION: keep dry, remove dressings after 24 hours and shower, do not remove Steristrips. Cover if oozing persists.

- SLING: duration of the use of the sling will depend on the type of procedure.

- HOME EXERCISES and PHYSICAL THERAPY
Shoulder Arthroscopy

- RETURN TO WORK and Play: depends on type of work /sport and operation
- Sedentary: usually at 5 to 7 days
- Light to medium duty
- Heavy labor
- Golf
- Tennis
Shoulder Arthroscopy

Arthroscopic surgery has the following advantages over open surgery:

1. Recovery is usually quicker after arthroscopic surgery
2. Post-operative pain is usually less.
3. The operations can be done outpatient
4. There less complications than open surgery