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Orthopedic 441 Team

MED441 KING SAUD UNIVERSITY

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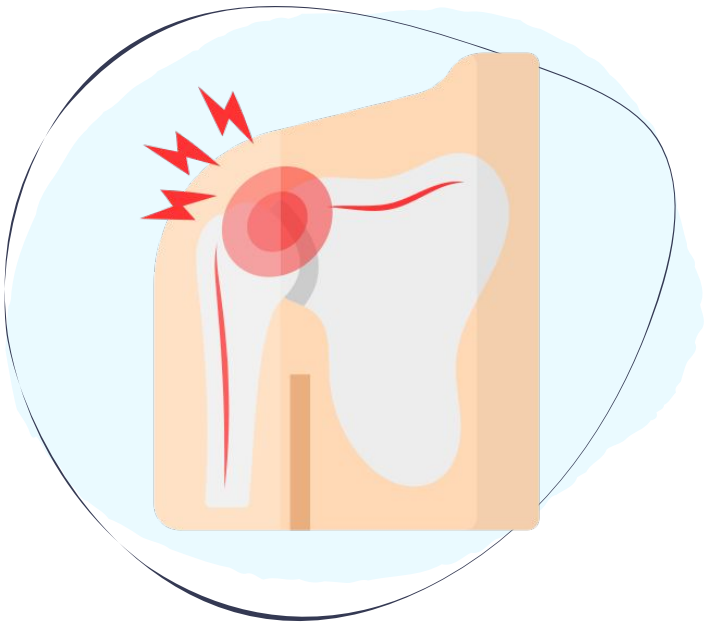
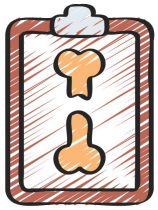


Common Shoulder Problems

Prof. Abdulaziz Alahaideb

Color Index:

- Main Text
- Important
- 441 Notes
- Old Notes
- Extra



Objectives

Specify the symptoms, signs and potential immediate complications of **common shoulder disorders.**

Outline the assessment and appropriate investigation and to outline the immediate and long term management of patients common shoulder disorders.

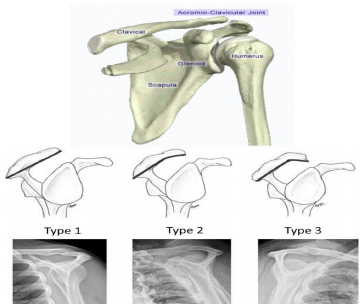
Demonstrate knowledge of indications for non-operative and operative treatment and to know the most common non-operative and operative measurements used for common shoulder disorders.

Resources

Shoulder Anatomy

Bones

- Humerus.
- Scapula (Glenoid, Coracoid, scapular body and acromion).
- The acromion has 3 different variations:
  Type I is Flat, type II is curved and type III is hooked.
  (Type I is the normal variation).
- Clavicle.
- Sternum.



Joints

all of them called the shoulder girdle but when we say shoulder joint we mean GHJ

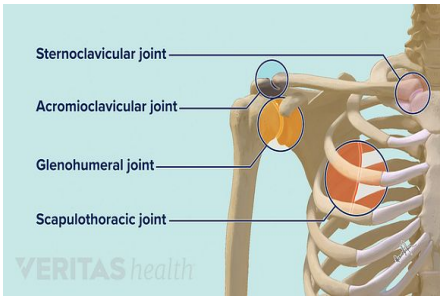
1- Glenohumeral joint (GHJ): The main joint, most common dislocated joint in the body, Why? Because it has the widest range of motion among all the joints and lacks bony stability.
Composed of:

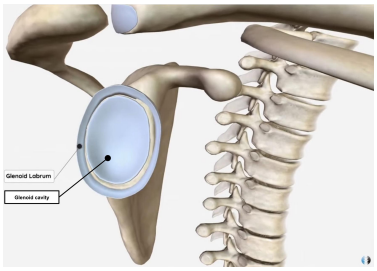
- Fibrous capsule.
- Ligaments.
- Surrounding muscles.
- Glenoid labrum. Anterior and posterior labrum which plays a very critical role in stability

2- Acromioclavicular (AC) joint.

3- Sternoclavicular (SC) joint.

4- Scapulothoracic joint is in the back.

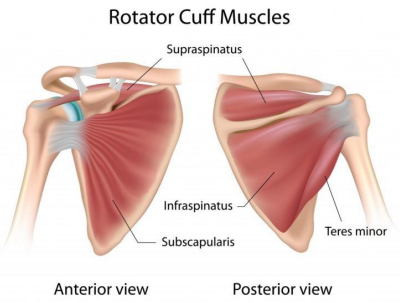


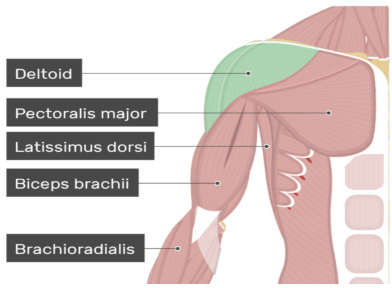


Muscles

- Rotator Cuff Muscles (SITS): depress humeral head against glenoid, it's main function is rotation hence the name
1- Supraspinatus: Initiation of abduction + external rotation.
2- Infraspinatus: External rotation.
3- Teres Minor not very important: External rotation.
4- Subscapularis: Internal rotation.

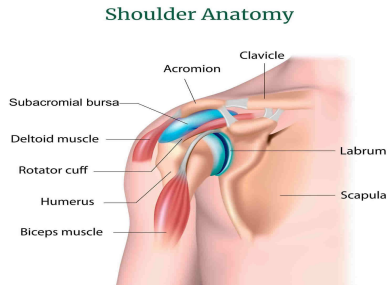
5- Deltoid: largest & strongest muscle of the shoulder. Most imp muscle of the shoulder, innervated by the axillary nerve. It has three attachments: from clavicle, acromion, scapular spine and attaches to the lateral aspect of the proximal humerus. It counteracts the action of the rotator cuff muscles and moves the humeral head upwards.
6- Pectoralis major.
7- Biceps.
- Posterior scapular muscles:
  8- Trapezius.
  9- Rhomboids (major & minor).
  10- Levator scapulae.
  11- Latissimus dorsi.
  12- Serratus anterior.



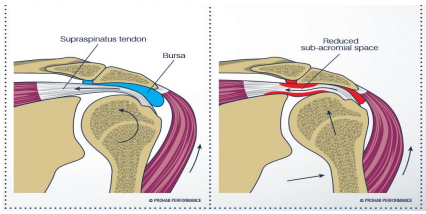


Subacromial bursa

- A bursa is a small fluid-filled sac that decreases the grinding between bones and muscle.
- Located between the acromion and the rotator cuff tendons.
- Protects rotator cuff tendons from grinding against acromion.
- Pathology → irritation → thickening → subacromial space narrowing → further impingement.



Impingement syndrome[1]



Definition

A condition in which the supraspinatus and bursa are pinched as they pass between the head of humerus (greater tuberosity) and the lateral aspect of the acromion usually happens with the proximal migration of humeral head. It is the most common disorder of shoulder, accounting for 44–65% of all complaints of shoulder pain during a physician's office visit.

-Mechanism: most of the time it is a combo between the 2

1- Subacromial contents gets bigger like in subacromial bursitis and supraspinatus tendonitis.

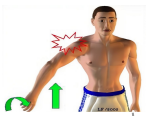
Or

2- The space gets smaller; e.g osteoarthritis (because of spurs/osteophytes), the acromion becomes curved or hypertrophy of greater tuberosity.

Risk Factors

1. Age: over 40y.
2. Overhead activity e.g. lifting, swimming, tennis, combing hair, wearing.
3. Bursitis and supraspinatus tendinitis: Inflammation—> swelling—-> space narrowing.
4. Acromial shape: type II (curved) & III (hooked).
5. AC joint arthritis or osteophytes may result in impingement and mechanical irritation to the rotator cuff tendons.

Symptoms



- **Pain in the acromial area** (may radiate to the neck) when the arm is flexed and internally rotated → Inability to use the **overhead position** (difficulty in taking clothes off, hair brushing, putting things in high places).
- Pain could be due to Subacromial bursitis or rotator cuff tendinitis.
- Worse at night as the subacromial bursa becomes hyperemic after a day of activity.
- Pain when sleeping on the affected side.
- After time, the pain decreases ROM especially abduction and forward flexion.
- Weakness.

DDx

- Rotator cuff tear: leads to proximal migration of the humerus. they have similar presentation.
- Calcific tendinitis: Unknown why it happens.
- Biceps tendinitis.
- Cervical radiculopathy.
- AC joint arthritis.
- Glenohumeral osteoarthritis.
- Glenohumeral instability: dislocation or subluxation, usually present as vague pain.

1-Means انحشار.

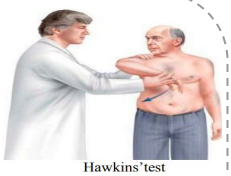
Diagnosis

- History: Pt comes with pain upon doing overhead activities and pain in lateral aspect of arm.
- Physical Examination.
- Imaging.

Physical examination

- ↓ ROM in Internal rotation "IR" & Abduction "ABD".
- Weakness in flexion and external rotation.
- Pain on resisted abduction and external rotation.
- Pain on "Impingement tests".


Neer's test


Hawkins'test

➔ ***Impingement tests:*** negative results doesn't rule out it and positive doesn't specify it

- **Neer's impingement test:** (not specific because it can be positive with other) passive elevation of the internally rotated arm in the sagittal plane (shoulder forward flexion). Test is positive if he felt pain.
- **Hawkins' impingement test:** (more sensitive) with the elbow flexed to 90 degrees, the shoulder passively flexed to 90 degrees and internally rotated. Test is positive if he felt pain.

Radiological Findings

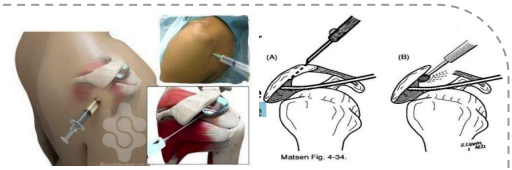
Plain x-ray, mostly normal but you may find:

- Acromial spurs: small osteophytes due to stress.
- AC joint osteophytes.
- Subacromial sclerosis.
- Greater tuberosity cyst is common (clear on MRI).
- Greater tuberosity hypertrophy.
- There is a special view on x-ray called **supraspinatus outlet view,** it gives exactly the shape of acromion but we don't use it very often with the presence of MRI.

Supraspinatus outlet view

MRI (Best test): To confirm dx and rule out rotator cuff tear.

Management



Conservative treatment: Always start with it.

- Avoid painful activities → especially overhead activities.
- NSAIDs: To decrease the inflammation.
- Physiotherapy: if doesn't work we give steroid injections
  1- Stretching and range of motion exercises. 2- Strengthening exercises.
- Subacromial space steroid injection: very potent but should be under aseptic technique to avoid infections. May increase blood sugar for 2-3 days in diabetics. May cause pain for 2-3 days. If injected multiple times it will weaken the tendons which might lead to rotator cuff tears so we maximally inject it twice.

Operative treatment: Indicated if there is no improvement **after 6 months** of conservative treatment

- Goal → remove the impingement and create more subacromial space for rotator cuff.
- Open (Called: Acromioplasty) or arthroscopic technique (Called: subacromial decompression).
- The anterolateral edge of the acromion is removed.
- At the same time we do bursectomy.
- Success rate 70-90%.

Rotator Cuff Pathology

Functions Of Rotator Cuff Muscles

- Keep the humeral head centered on the glenoid regardless of the arm's position in space.
- Generally work to depress the humeral head while powerful deltoid contracts.

Rotator Cuff (RC) Tear

- A large tear in the tendon of one or more muscles in the rotator cuff. Often results from progression of smaller tears and inflammation; may be degenerative or traumatic in nature.

Causes of rotator cuff tear

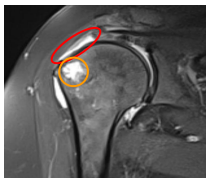
Intrinsic factors	Extrinsic factors	Traumatic
- Vascular : Musculotendinous junction has poor vascularity 15:15 - Degenerative : (wear and tear) Age-related and overuse	1- Repetitive use. 2- Impingement : • Acromial spurs. • AC joint osteophytes. not treated > chronic impingement > cuff tear	-e.g. a simple fall (FOOSH) or trying to catch or lift a heavy object. -If a patient >40 presents with shoulder dislocations DO MRI!!, labrum in elderly is often stronger than rotator cuff muscles. (important in life and exam). -Hx of trauma + not able to move >> high suspicion of rotator cuff injury
Presentaion		
similar to impingement; mild progressive pain, pain when sleeping on the affected side, decrease range of motion. There is no specific incident after which the symptoms started.		Acute or sudden symptoms and can specify an incident, after which, the symptoms started such as falling

Diagnosis

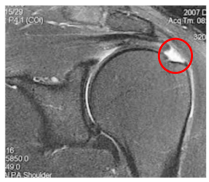
- History (Wide range of symptoms: range from inability to lift the arm to minimal pain) and Physical Exam (Do first impingement tests bc it's more common, then test rotator cuff muscles).
- X-rays to check if there is any impingement signs (acromial spurs....etc). Findings could be normal.
- Ultrasound; Highly operator dependent, Does not provide information regarding concomitant pathologies.
- MRI (Sensitivity of 84% and a specificity of 96%): Best for RC evaluation, **MODALITY of choice**. (CI in claustrophobic, metals in sensitive locations or pacemakers and its relatively CI in pregnancy).

Wide Spectrum

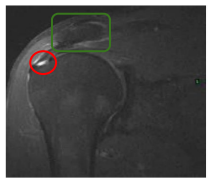
- Partial thickness about 3mm.
- Full thickness:
  - Small about 1cm.
  - Medium 1-3 cm.
  - Large about 4cm.
  - Massive.


Full thickness large with a cyst


Full thickness large


Full thickness small

Tendinitis


Partial[1]

1- Partial thickness RC tears has 3 types based on location: articular side, bursal side, and intratendinous. The one in the pic is articular side.

Treatment: Non-Operative

➢ **Indications:**
- All partial thickness tears.
- Full thickness tear esp small type:
  - Chronic + degenerative.
  - Elderly low demanding + not active.

Degenerative & Young ??? **OPERATIVE**

➢ **Modalities**: same as impingement
- Activity modification.
- NSAIDs.
- Physical Therapy:
  1- Range of motion.
  2- Strengthening of the rotator cuff and periscapular musculature.
- Steroid injections.

Treatment: Operative

- Indications:
- ❖ **All Acute** traumatic tears regardless of the age. It has to be treated urgently, why? with time, the muscle will shrink and retract (it might reach the level of glenoid if left long enough) so you won't be able to pull it back and reattach it, also there will be fatty infiltration (the muscle would have fatty texture making it hard to anchor a suture in it). This happens only in the traumatic type.
- ❖ Failed non-operative treatment within 6 months.
- ❖ Full thickness tear:
  - ➢ Active, young, painful. if young regardless of the cause do surgery.
  - ➢ Old but active.

-Options:
- ❖ Rotator cuff repair (Arthroscopic or open).
- ❖ +/- Subacromial decompression (SAD) (done especially with the degenerative type).

-Complications of surgery:
- ❖ Not improving, stiffness, and re-rupture (esp if we repair a retracted muscle or pt lifted heavy object within recovery period).

Natural History

- **If not treated** → rotator cuff muscles retract progressively further and further → chronic pain and loss of motion and with time becomes irreparable → deltoid will pull the humerus up to the acromion (called proximal migration of humerus) → rotator cuff arthropathy which is arthritis between humeral head and acromion (unusual place) due the tear. Treated by reverse shoulder replacement الكتف الصناعي المقلوب.

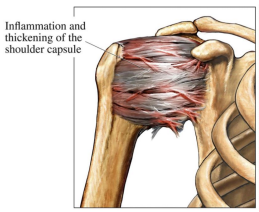
Deltoid pulls humeral head and causes arthritis in an unusual position called rotator cuff arthropathy.

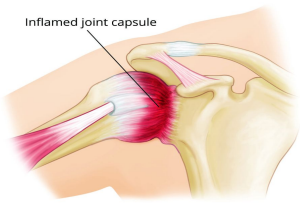
Adhesive Capsulitis

مقطع سواه الدكتور عن الموضوع

Scenario : DM pt with severe shoulder pain and limited range of motion in all directions.

- Inflammation of capsules with adhesion.
- Also called "frozen shoulder" which is not specific term and should not be used.
- Usually self-limiting (typically begins gradually, worsens over time and then resolves but may take 2-4 years to resolve).
- 10 % is bilateral.
- More common in females.
- The cause is unknown.





Risk Factors

1. **DM** (esp. insulin dependent) (Most common RF by far) (أول سؤال يطلع ببالك للمريض : "عندك سكر؟").
2. Hypo and Hyperthyroidism.
3. Following injury or surgery to the shoulder (Called secondary adhesive capsulitis).
4. Hyperlipidemia.

Mechanism (Extra)

- ❖ Primary adhesive capsulitis: Idiopathic, usually associated with DM. Usually resolves spontaneously in 9-18 months.
- ❖ Secondary adhesive capsulitis → Due to prolonged immobilization or previous shoulder surgery, poorer outcomes.
- ❖ Shoulder-hand syndrome: CRPS/RSD14 characterized by arm and shoulder pain, decreased motion, and diffuse swelling → following MI, stroke, shoulder trauma.

Symptoms

- It is characterized by pain and restriction of **all** shoulder movements (ROM) **actively AND passively** "global stiffness" due to fibrosis and contracture of the capsule. (impingement syndrome has restricted IR & ABD).
- Pain so severe, worse at night and often prevents sleeping on affected side.

Stages

1. Pain (**freezing stage**):
   The hardest stage because it's very painful.
   Pain+++/ Hot++, ROM mildly limited, duration: 3-9 Months.
2. Stiffness (**frozen stage**):
   Pain decreases, ROM more restricted, duration: 4-12 Months.
3. Resolution (**thawing stage**):
   Slow improvement in ROM, duration: 12-42 Months.

Investigations

- The diagnosis of adhesive capsulitis is often one of **exclusion;** we have to rule out other pathologies.
- **Mainly clinical diagnosis:** all movements are restricted both actively and passively.
- Most of the time **normal investigations:**
  - X-rays: b/c pt can't use shoulder there will be disuse osteopenia or mainly no findings.
  - MRI: thickening of the joint capsule and diminished filling of the axillary pouch.
  - There are the findings of adhesive capsulitis. However, not always seen.

Treatment

- If untreated, it would resolve spontaneously over 2-4 years.
- Pain relief and anti-inflammatory medications: it breaks the adhesions.
- Aggressive Physiotherapy (most imp).
- Steroid injections.

❖ If not improved:

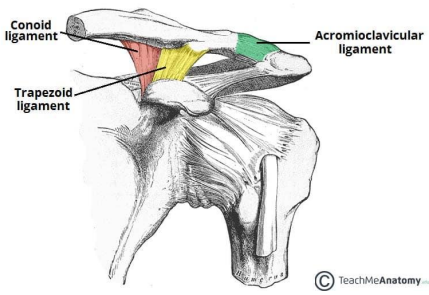
- Manipulation under anesthesia (MUA): you break the adhesions by manipulation, but there's risk of bone fractures.
- Arthroscopic capsular release: Best treatment (if 6 months of physiotherapy and steroid injection failed).

Summary: Physiotherapy for 3m if not improved give steroids injection not improved so go to surgery

Acromioclavicular Pathology

Anatomy

➢ The AC joint is different from joints like the knee or ankle, because it doesn't need to move very much (it has minimal motion). The AC joint only needs to be flexible enough for the shoulder to move freely. The AC joint just shifts a bit as the shoulder moves.
➢ The joint is stabilized by the AC ligament and the 2 coracoclavicular (CC) ligaments: Coracoid ligament and Trapezius ligament.

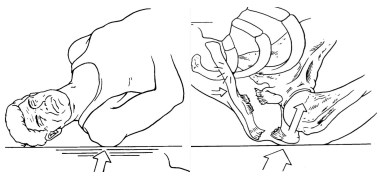
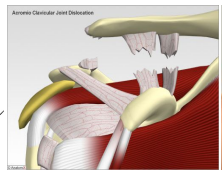


AC Joint Common Conditions

- Traumatic AC joint separation/dislocation.
- Osteoarthritis.
- Osteolysis of distal clavicle.

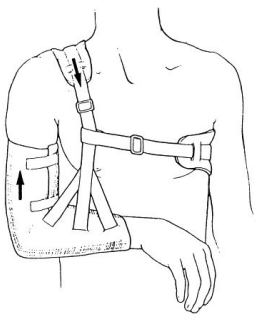
Traumatic AC Joint Separation/Dislocation

Mechanism: Almost always a direct blow or fall onto acromion (so FOOSH can't cause it)
يكثر في الدول اللي تستخدم السيكل
The patient will complain of pain and something protruding (deformity)

Treatment

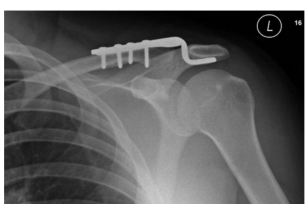
- Partial dislocation: Conservative.



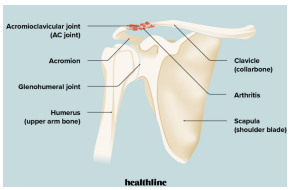

- Complete dislocation: Surgery.
  - Number of different approaches involving AC/CC ligament reconstruction (tightrope) or screw/hook plate insertion.

Tightrope

Hook plate



AC Joint Arthritis



- Arthritis is a condition characterized by loss of cartilage in the joint, which is essentially wear and tear of the smooth cartilage which allows the bones to move smoothly.
- Motions which aggravate arthritis at the AC joint include reaching across the body toward the other arm.

Causes

- Degenerative osteoarthritis; wear and tear in old aged people (the most common).
- Rheumatoid Arthritis.
- Gouty Arthritis.
- Septic Arthritis.
- Atraumatic distal clavicle osteolysis in weight lifters; result of repeated movements that wear away the cartilage.
- Post-traumatic osteolysis of lateral end of clavicle such as like dislocation or a fracture.

Signs and Symptoms

- Progressive pain, Which worsens with movement.
- The patient may suffer a night pain which is a sign of arthritis.
- It is commonly associated with impingement syndrome.

Diagnosis

- Clinical: tenderness over the AC joint.
- X-rays: Since it is rare to have isolated AC joint arthritis, sometimes we do MRI to rule out other diseases, except in the distal clavicle osteolysis will be isolated.

ACJ osteoarthritis with osteophyte

Distal clavicle osteolysis

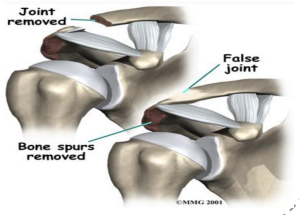
Treatment

Non-Surgical treatment (start)**:**

- Modify activities: rest, avoid weightlifting and push-up.
- Pain medications and NSAID to reduce pain and inflammation.
- Physiotherapy.
- Steroid injection.

Surgical treatment: if conservative fails

- We excise 1cm from the lateral clavicle, can be done open or arthroscopic. Do not exceed 1cm bc you will reach the CC ligaments and cause separation/dislocation.



Distal Clavicle Osteolysis

- This disease only affect **weight lifters**, but it doesn't mean every weight lifter will get it, only a small portion.
- Normally stress causes arthritis, but here the body reacted by causing resorption (osteolysis) as you can see in the pic.
- What is the treatment?
  - Stop weight lifting.
- What if they didn't stop? They will come back due to pain and we would give steroid injection but they will come back again, what do we do? The lateral part of clavicle is being actively resorbed, so we excise this part and even a bit further to the non-active area in order to stop it. This procedure has 50% success rate.

Shoulder dislocation

Acute dislocation is a surgical emergency and demands urgent relocation. (While RC tear is urgent).

- The shoulder joint has the greatest ROM among the body's joints.
- It relies on soft-tissue restraints (including the capsule, ligaments, and musculature) for stability (lacks bony stability).
- Therefore, it is the most frequently dislocated joint followed by elbow.

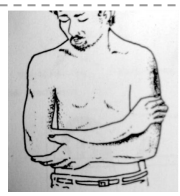
Classification

Atraumatic (AMBRI)	Traumatic (TUBS) — We are going to talk about this type in the lecture
- Multidirectional instability. - Generalized ligamentous laxity, they would live normally but have higher risk of shoulder and knee dislocation. more common in girls. - Bilateral. - Habitual. - Responds well to nonsurgical management (physiotherapy, we rarely operate on them).	- 96%. - Such as FOOSH injury. - Unidirectional. - Further classified by the direction of the humeral head dislocation: 1- Anterior. {commonest >95%} 2- posterior < 4%, caused by 3 Es: A- Electrical shock. B- Epilepsy. C- Ethanol (alcohol). 3-inferior. < 1%

Anterior Shoulder Dislocation

- Actually it is anterior inferior.
- **Mechanism:**
  a. Usually Indirect fall on Abducted and extended shoulder (external rotation).
  b. May be direct when there is a blow on the shoulder from behind humerus pushed anteriorly.
- Maybe associated with: explained in slide 14
  a. **Bankart's lesion.**
  b. **Bony bankart lesion.**
  c. Hill-sachs lesion.

Clinical Picture


- Patient is in severe pain they come screaming.
- Holds the injured limb with other hand close to the trunk.
- The shoulder is abducted and the elbow is kept flexed.
- There is loss of the normal shoulder contour may appear as a step, very clear when pt is exposed.
- Anterior bulge of head of humerus may be visible or palpable If pt thin.
- A gap can be palpated above the dislocated head of the humerus.

Investigations

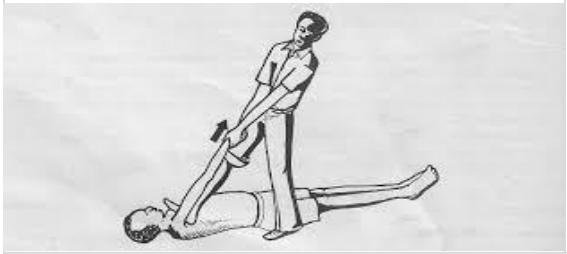
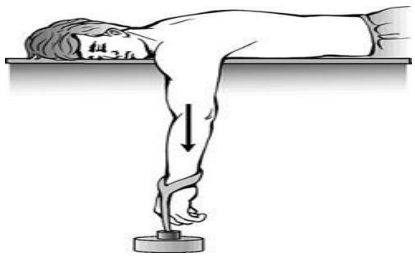
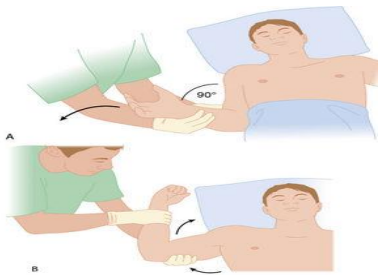
- It is hard to do physical examination when the patient in pain.
- You must obtain AP, Lateral (we have 2 lateral views: trans-scapular (right pic) & more importantly axillary view).

Management of Anterior Shoulder Dislocation

- Is an Emergency.
- It should be reduced in less than 24 hours or there may be Avascular Necrosis of head of humerus.
- If you try in the ER and you cannot do it, take the patient to OR under GA.
- Following reduction, the shoulder should be immobilized strapped (sling) to the trunk for 3-4 weeks and rested in a collar and cuff. (sling then physiotherapy)
- In ER N/V exam → closed reduction (traction and counter traction) → NVE → X-ray to make sure it is in place → immobilization → ortho clinic → MRI (can wait few weeks but if patient >40y/o we have to be urgent about it to rule out RC tear).
- If 1st time then we immobilize with sling for 3-4 weeks then physiotherapy, unless pt is under 20y/o and active we have to do surgery due to high recurrence rate (90%). The older they get the less likely they redislocate.
- If patient dislocated 2nd time we do surgery.

most common way is traction/counter traction

★ Methods of reduction of Anterior Shoulder Dislocation:

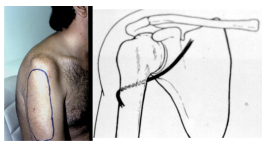
Hippocrates Method	Stimpson's technique	Kocher's technique
A form of anesthesia or pain abolishing is required	Some sedation and analgesia are used but No anesthesia is required	It is the method used in hospitals under general anesthesia and muscle relaxation. This is what we nowadays do with conscious sedation.
- Put your foot in axilla to counteract and pull the elbow. - An old way used now by soldiers in wars. -الطريقة هذي تنفع في الزنقات.	- There is a lot of spasm in muscles after dislocation bc of pain which makes the reduction harder. - This technique need strong analgesia (midazolam..). - Put pt in Prone position and put Axillary pad to prevent brachial plexus strain put traction (3-4 kg or less) leave him (15-20 min) until muscles relaxes, most of the time it reduces by itself.	- Efficient and quick technique. - The dislocation in this case is inferior internal. - We need good muscle relaxation and good analgesia. -How to reduce? Exaggerate the deformity by Applying traction 'pull the arm down' then hold arm and do external rotation then push up and internal rotation. (Need someone to support the axilla)
		

❖ Post-reduction rehabilitation:
- ➢ The goal of rehabilitation is to regain maximum ROM while retaining stability.
- ➢ The affected arm can be immobilized for 3 weeks, and limited physical rehabilitation is recommended.

Complications of Anterior Shoulder Dislocation

Early:

1. Injury to the neurovascular bundle in axilla, the most common is Axillary Nerve Injury:
   - It is a branch from posterior cord of Brachial plexus, It is sensory and motor so, you have to examine both, sometimes only the sensory part is affected or only the motor part is !!!!
   - It hooks close round neck of humerus from posterior to anterior.
   - It pierces the deep surface of deltoid (abduct the shoulder) and supply it and the part of skin over it.
   - Mostly "Neuropraxia" and usually resolves with time.

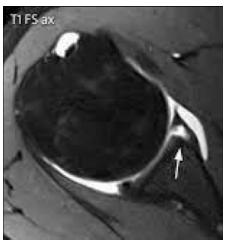
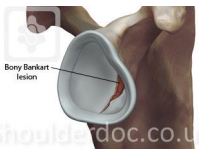
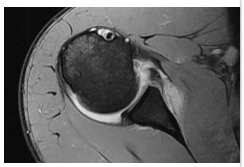


2. Associated Fracture such as humeral neck or LT or GT (the one in the pic).
3. Rotator cuff rupture: If a patient >40 presents with shoulder dislocations DO MRI!!, labrum in elderly is often stronger than rotator cuff muscles. (important in life and exam).

Late:

1. Avascular necrosis of the head of the Humerus (high risk with delayed reduction).
2. Recurrent shoulder dislocations (most imp one), the younger the pt the more common.

Associated lesions

Bankart's lesions	Bony Bankart's lesions	Hill-Sachs lesion
- Detachment/avulsion of the anteroinferior labrum from the glenoid, **seen on MRI**. present in 80-90%. - We reattach it with surgery. - If it was posterior shoulder dislocation we call it reverse bankart.	Avulsion of the anterior rim of the glenoid bone. present in up to 49%	An impaction injury in the posterosuperior humeral head secondary to forceful contact with the glenoid rim during the acute dislocation. Present in 80%
 	  	 

If there is a big bony Bankart and big Hill-Sachs lesion, the patient needs Latarjet procedure (transfer of the coracoid into the glenoid rim)

Important questions read them!

45y lady with Shoulder Pain with overhead activity and limited abduction = rotator cuff and impingement

Q: a 20y old male who was involved in car accident and was unable to abduct- MRI shows tear of supraspinatus? SURGERY

Q: What is the treatment for 50y old have chronic pain for long time and unable to abduct? Conservative

Q: Overhead activity? limited abduction? think about impingement and rotator cuff tear

Extra

-The anatomy in the shoulder is very special. In joints we have two things to consider: Range of motion and Stability, you have to sacrifice one to gain the other. E.g. the ROM in the knee is limited only in one axis: flexion and extension (although it's not very accurate to say one axis), but the shoulder has many axes: abduction, adduction, forward flexion, extension, internal rotation, external rotation and circumduction (basically all kind of ROM).

-Stability is either by static structure (always there, always acting the same way) or dynamic:
Stability by static structures can be due to:

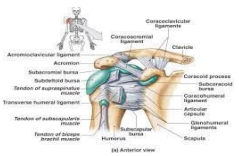
1-Bony structures:

- ➢ Humerus: humeral head is big, glenoid is wide (humerus head is much bigger than glenoid) which can give you some stability but not the best, unlike the femoral head which is more like spherical in shape and the acetabulum is covering most of it (Ball in socket) → more stability, It typically takes a major force or trauma to dislocate the hip (It's a big issue to have someone with hip dislocation!)
- ➢ Scapula (Glenoid, Acromion, Coracoid, scapular body)
- ➢ Clavicle.
- ➢ Sternum.

Shoulder injury can be caused by low energy trauma; certain movements can get your shoulder out.

2-Ligaments:
The shoulders' ligaments are not as big and strong as the knees' ligaments, why? The ligaments in the shoulder are just thickening of the capsule.
There are 3 anterior ligaments which prevent anterior dislocations: superior, middle and inferior Glenohumeral ligaments. You have to keep in mind! 95 % of the dislocations are anterior (commonly anterior- inferior), while the posterior is extremely rare and only certain traumas will cause the inferior, posterior or superior dislocations.
The anterior dislocation happens when the shoulder is abducted in 90 degree and externally rotated, So in this position Which one of the three ligaments has more chance to get strained and also **affected in the anterior dislocation? inferior glenohumeral ligaments.**
↪ How? While abducting and externally rotating the shoulder → the inferior ligament will be more stretched, but the ligaments are stronger than any structures although they are only thickening but still they are the strongest → they will not tear but they will detach the labrum from the bone when there is dislocation. Very IMP I WILL ASK YOU ABOUT IT!! (What is called? What will you see in MRI? **BANKART LESION;** There is detachment of the anteroinferior labrum from the underlying glenoid.
Labrum is fibrocartilage that gives the depth for accommodating the head also the ligaments attach to it.

○ Acromion is very important, it's a landmark for almost everything you do around the shoulder, and it's supporting the rotator cuff and acts like a roof over the glenohumeral joint. In case of abduction if there was a proximal migration what will happen? The GT will hit the acromion → supraspinatus impingement.
○ Coracoid is attached to the conjoint tendon (tendons of short head of biceps and coracobrachialis).
○ Long head of biceps is a trouble maker passes through the bicipital groove and attached to superior labrum (doesn't attach to bone which is unusual) with age there will be pulling out and detachment of labrum which is called (superior labrum anterior posterior (SLAP) lesion) or becomes inflamed in old people, very common problem in the West (white ethnicity) but here it is not bad as in the West, what do we do for them? (Shoulder arthroscopy).
In women base of thumb is usually affected by instability then arthritis in the West, here is not that common.



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