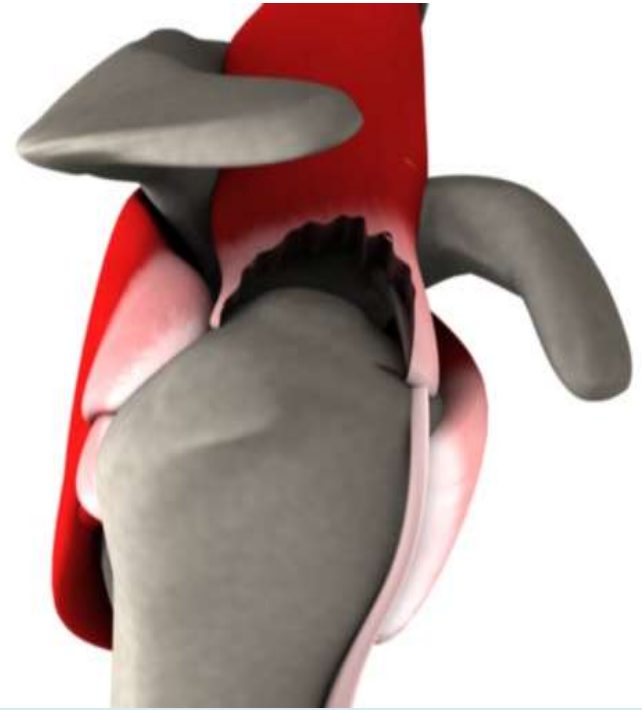


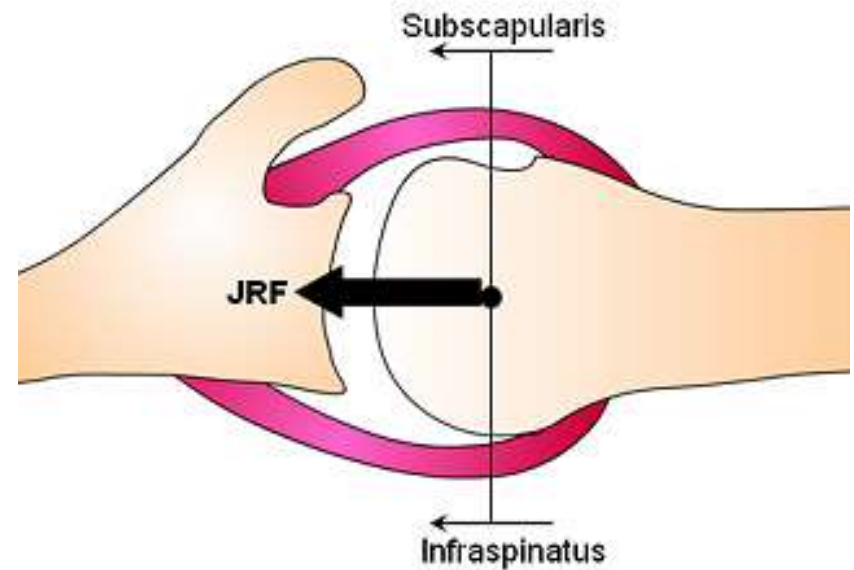
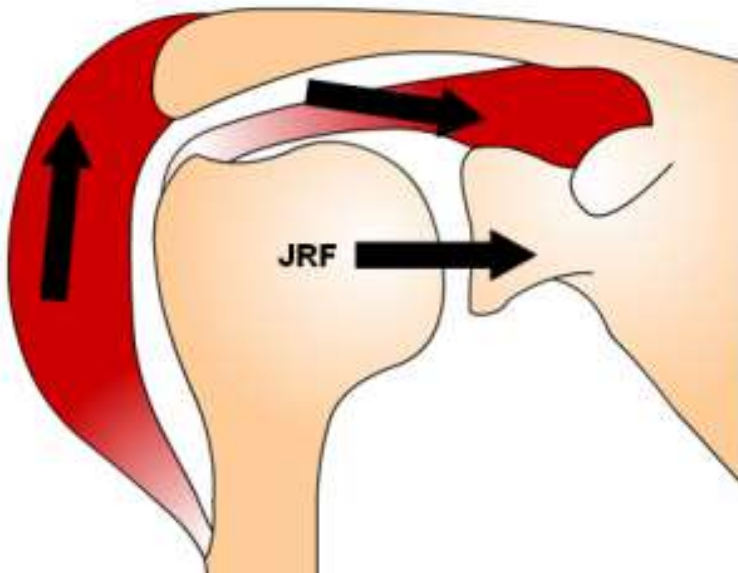
Mistakes in Surgical Treatment of Rotator cuff Tear

Mohammad nasir Naderi , MD

Fellowship in shoulder and
arthroscopic surgery



Inman's concept of "Force couples"



Inman VT, Saunders JBdM, Abbott LC. Observations on the Function of the Shoulder Joint. J Bone Joint Surg Am 1944;26:3.

Mistakes in diagnosis ?

- ▶ Physical exam
- ▶ X-ray
- ▶ MRI
- ▶ Sonography
- ▶ Arthrography



70 year female following cuff tear



70 year female following cuff tear



70 year female following cuff tear



Missed diagnosis? → **Bad result**

Surgery necessary?

- ▶ The presence of a rotator cuff tear is not necessarily an indication for surgery
- ▶ MRI and cadaver studies have shown asymptomatic patients to have cuff tears



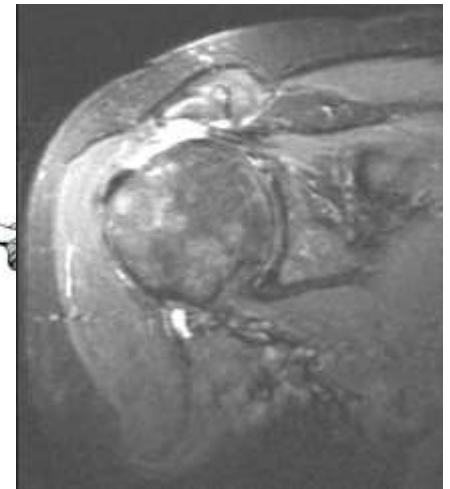
Nonoperative treatment possible?

- ▶ chronic rotator cuff tear
- ▶ Tear limited to one tendon (supraspinatus)
- ▶ Non- traumatic
- ▶ Age > 70 y
- ▶ less active , low demanding patients



Evaluation of a patient with RC tear ?

- ▶ general health status & comorbidities
- ▶ current & desired functional level
- ▶ chronicity of the tear
- ▶ size of tear
- ▶ history of a traumatic event
- ▶ previous treatments



Factors that decrease satisfactory result :

- ▶ **Poor tendon/tissue quality**
- ▶ **Large or massive tears**
- ▶ **Poor patient compliance with rehabilitation after surgery**
- ▶ **Patient age (older than 70 years)**
- ▶ **Smoking and use of other nicotine products**
- ▶ **Workers' compensation claims**
- ▶ **Surgeon experience**



Complications of rotator cuff surgery?

Rate \approx 10%

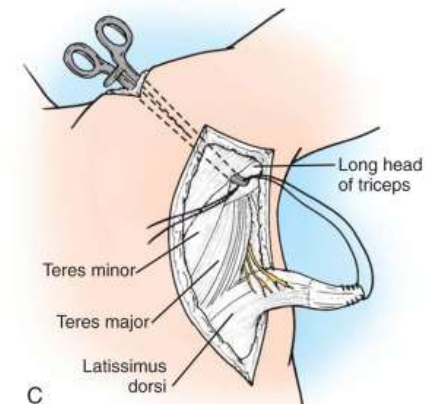
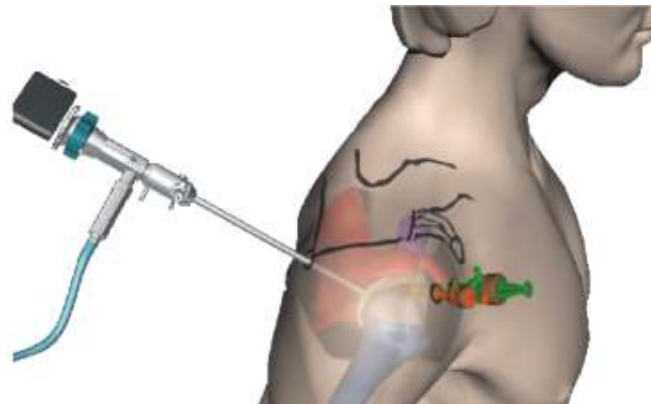
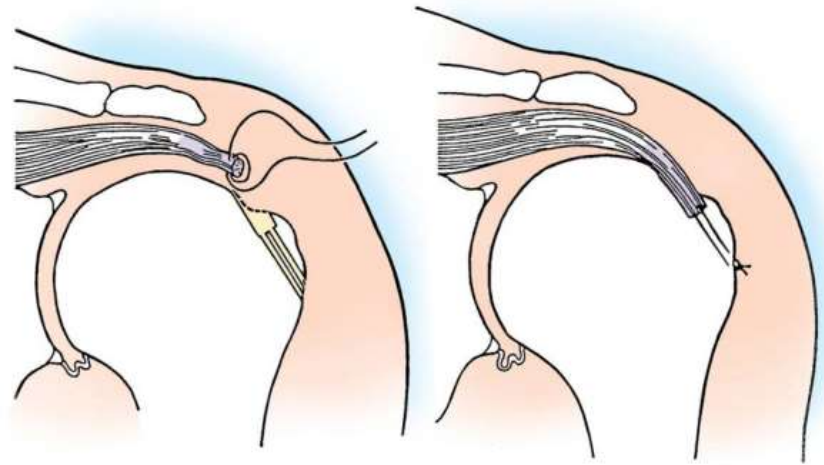
- ▶ Stiffness (most common)
- ▶ Failing of healing of the rotator cuff
- ▶ Retear (larger the tear \rightarrow higher the risk)
- ▶ Detachment of deltoid (in open repair)
- ▶ Nerve injury (axillary N.)
- ▶ DVT
- ▶ reflex sympathetic dystrophy
- ▶ persistent pain
- ▶ Infection (rare – more in open)



**Unsatisfactory
results**

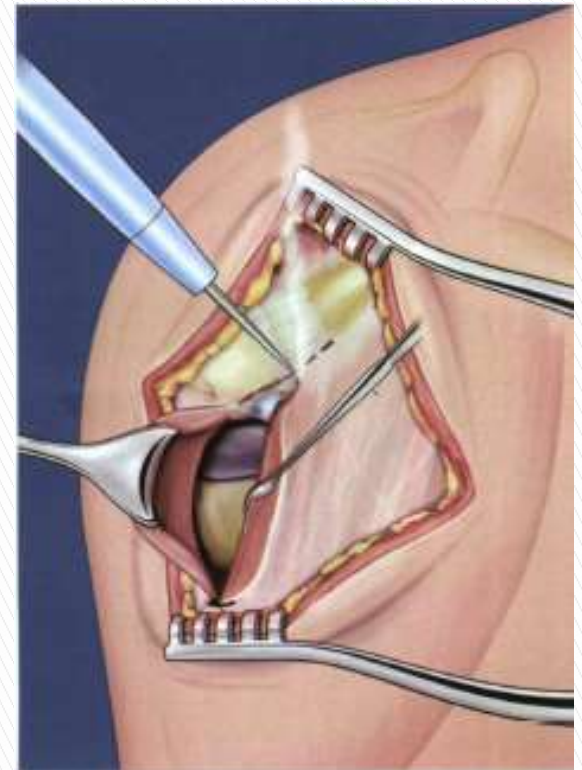
Surgical treatments?

- ▶ Open repair
- ▶ Arthroscopic
- ▶ Muscle transfer
 - Subscapularis
 - Latissimus dorsi



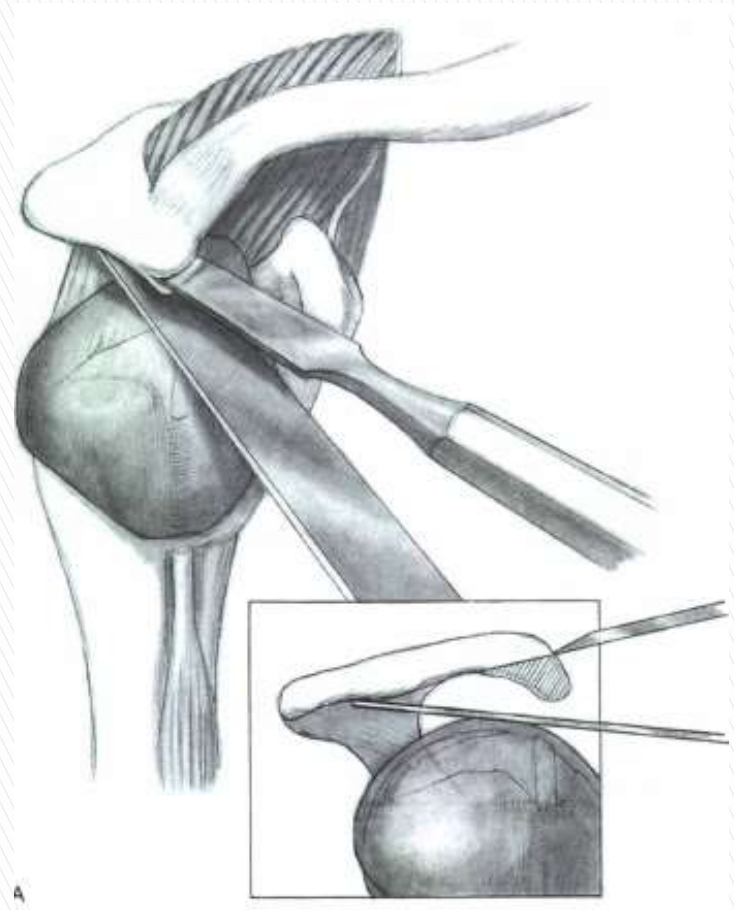
Mistakes in open repair?

- ▶ **Axillary n. injury**
- ▶ Acromion fx
- ▶ Mistake burse with cuff
- ▶ Unsecure RC repair to bone
- ▶ Detachment of deltoid



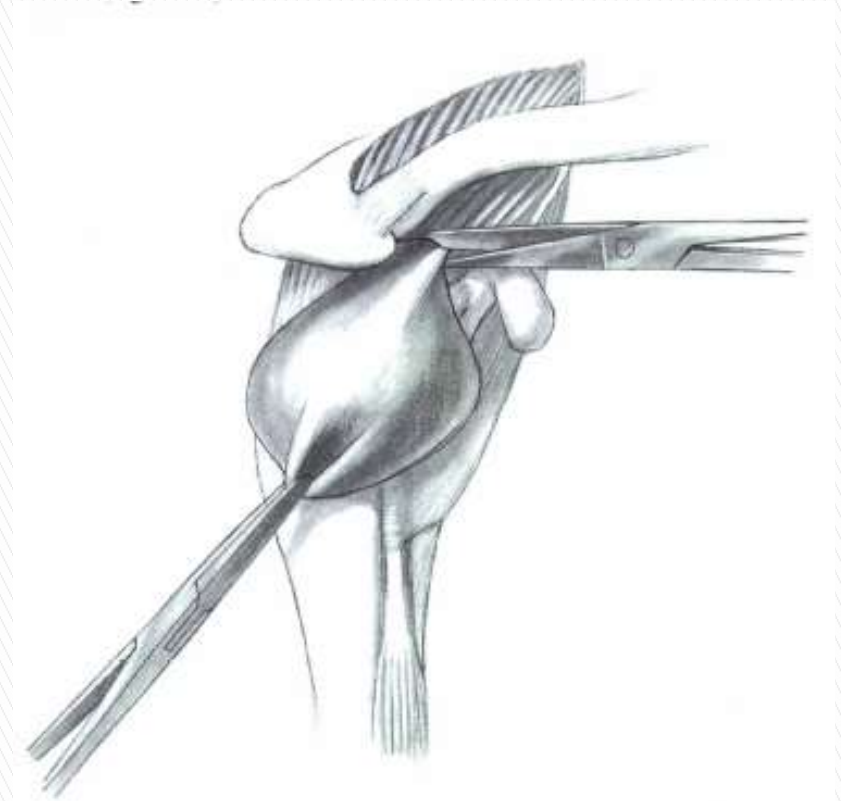
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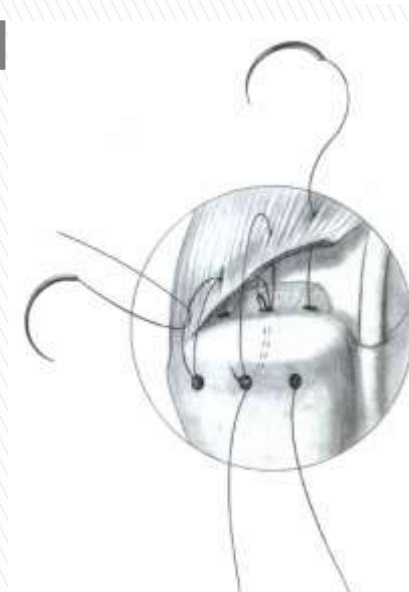
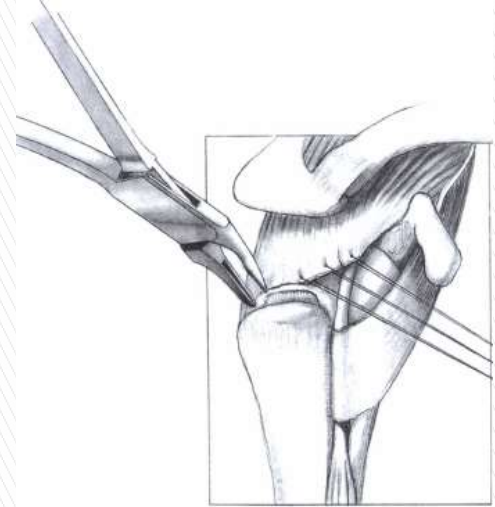
Mistakes in open repair?

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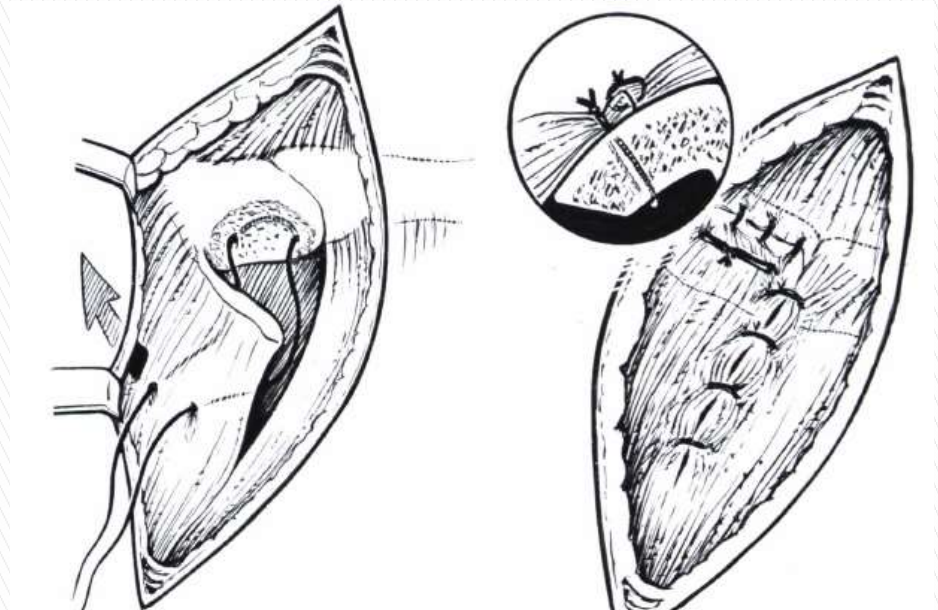
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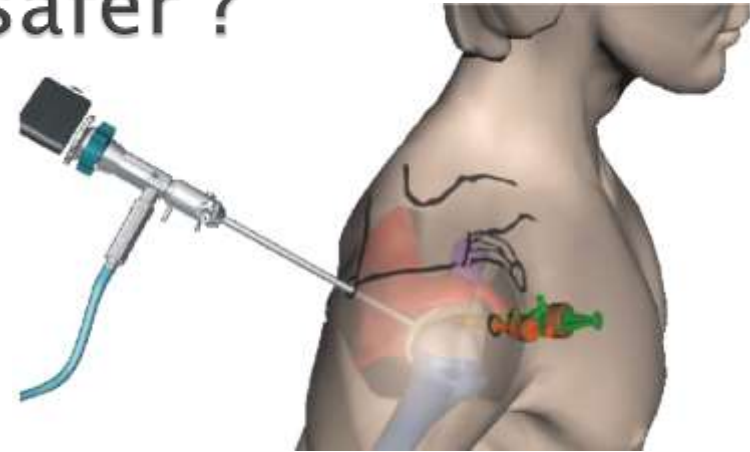


Mistakes in open repair?

- ▶ Axillary n. injury
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- ▶ **Detachment of deltoid**



Arthroscopic treatment is safer ?

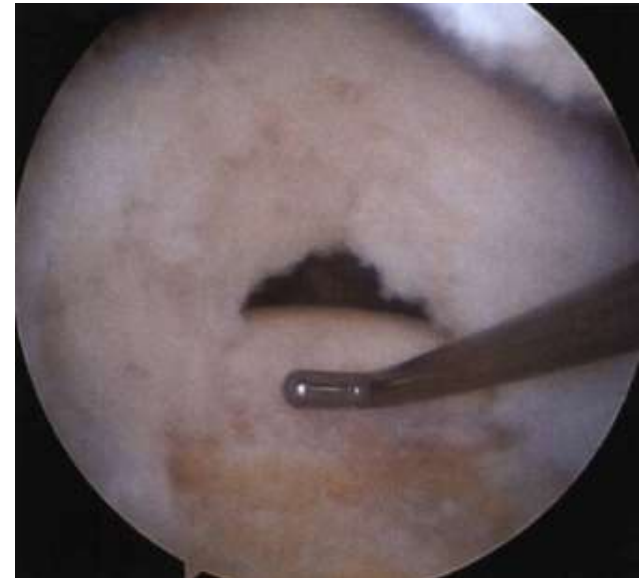


- ▶ assessment of both articular and bursal surfaces of RC
- ▶ increases the surgeon's "window of visualization
- ▶ minimal disruption to the overlying deltoid

Arthroscopic repair more complicated than open repair ?

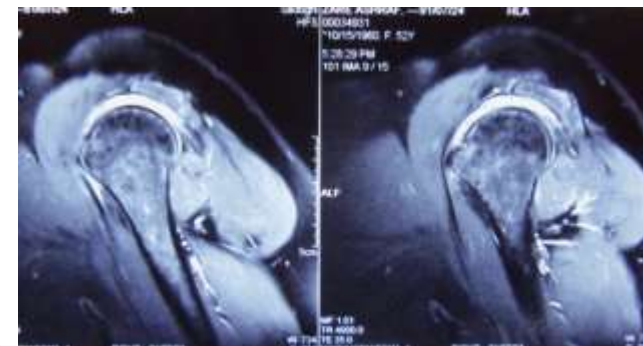
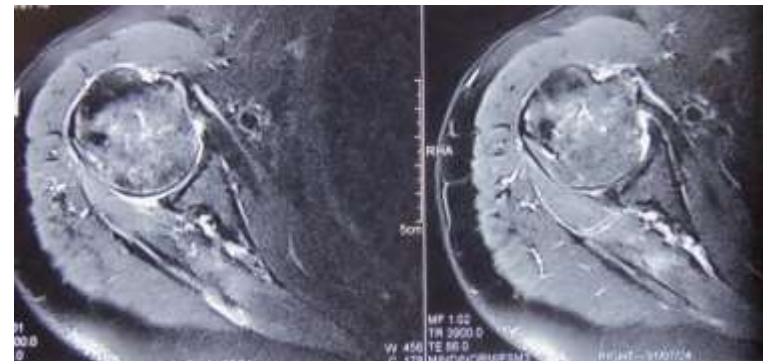
▶ Disadvantages

- Longer learning curve
- Needs good visualization
- Needs good experience



52 female following falling down one year ago

- ▶ Shoulder pain
- ▶ Night pain
- ▶ No medical illness
- ▶ Conservative treatment failed
- ▶ ROM full but weak
 - FF 4/5
 - ER 4/5
 - IE 5/5



The patient was operated by arthroscopic method



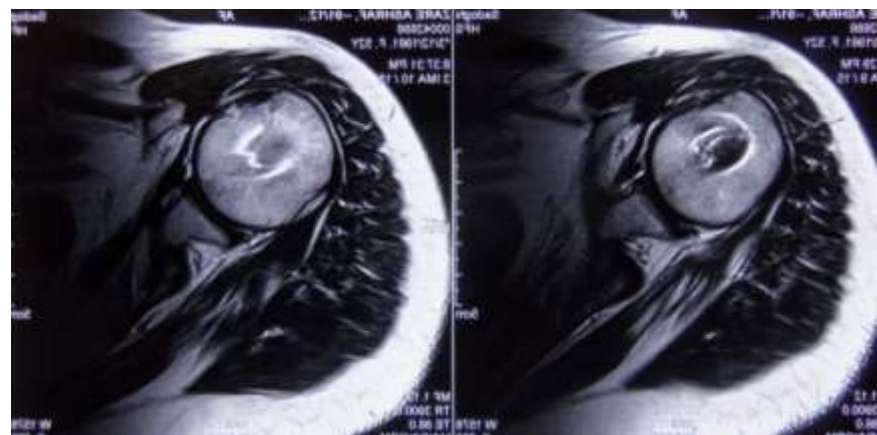
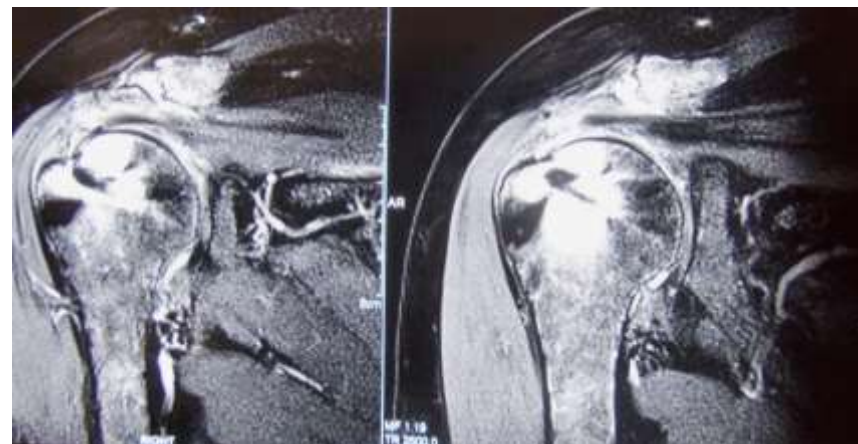
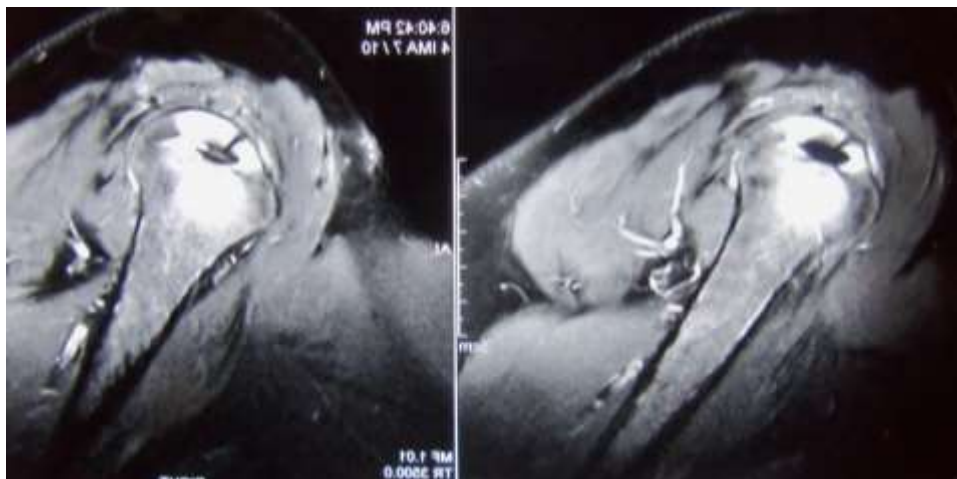
After several month physiotherapy patient still complains of pain & shoulder stiffness

After 1 year:

The patient had 1 time injection and over 100 session PT, but pain and stiffness continues



New MRI



- 1-stiffness
- 2-failing of repair or retear

the patient reoperated



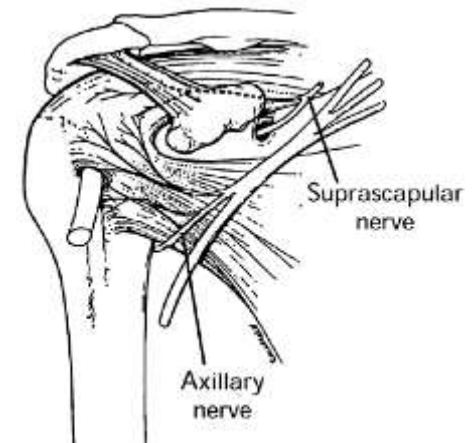
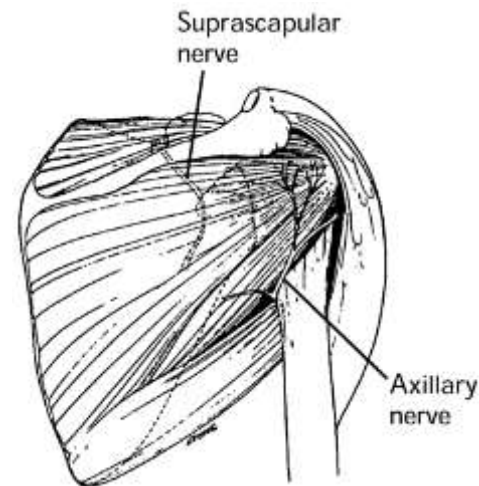
Mistakes in arthroscopic treatment ?

- **Position**
 - Brachial plexus injuries
 - Hypotensive brain damage



Mistakes in arthroscopic treatment ?

- **Position**
 - Brachial plexus injuries
 - Hypotensive brain damage
- **Incorrect Portals placement**
 - Nerve injuries



Mistakes in arthroscopic treatment ?

- **Position**

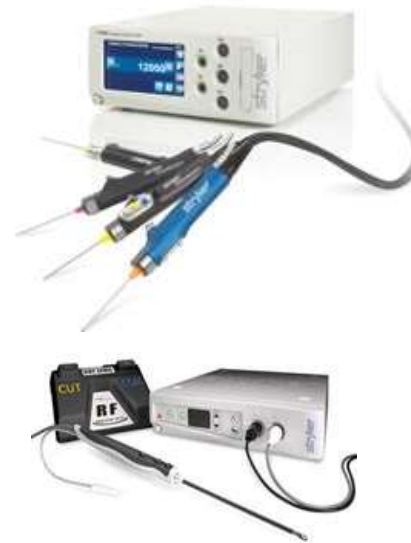
- Brachial plexus injuries
- Hypotensive brain damage

- **Incorrect Portals placement**

- Nerve injuries

- **Technical mistakes**

- Inadequate experience
- Inadequate vision
- Inadequate equipment



Complications in arthroscopic treatment ?

- ▶ Infection
- ▶ Chondrolysis
- ▶ Thromboembolic events
- ▶ fluid retention and weight gain
- ▶ Technical complications due to inadequate experience



Complications are rare but can be disastrous

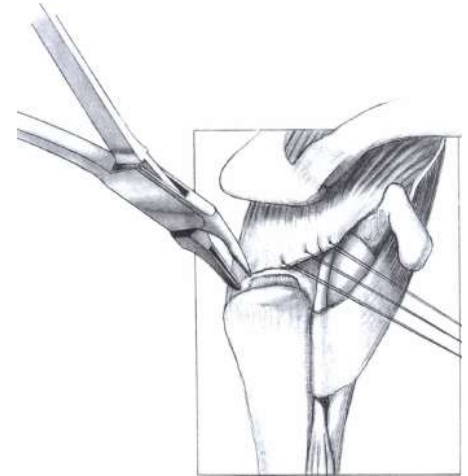
Complications occur more in unexperienced hand

Summary

Success in RC surgery depends on :

Avoiding mistakes

- Good knowledge
- Good equipments
- Good skill & experience



Result of bad arthroscopic RC repair is inferior to open repair

Thank you for attention