

# Instability and the First Time Dislocator



Simon Boyle

Consultant Shoulder and Elbow Surgeon



# Cultural Change

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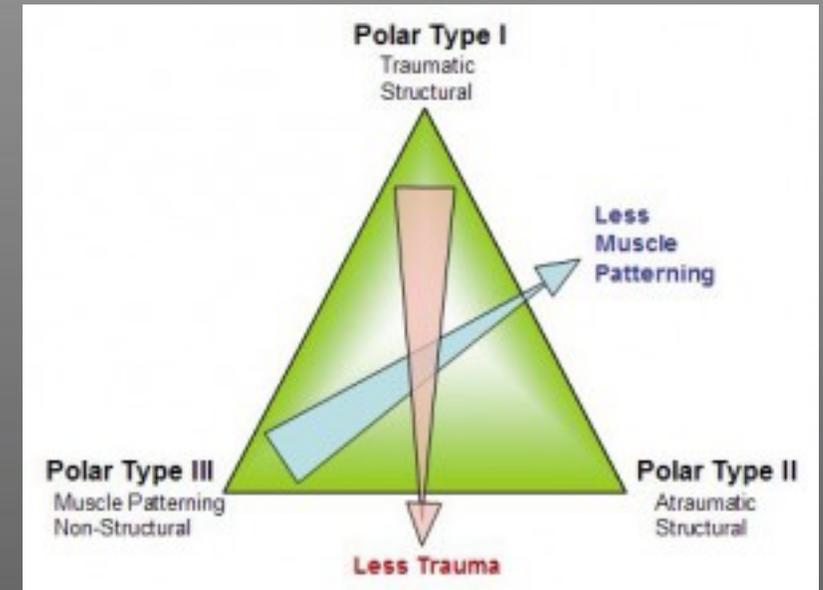
# Cultural Change

- Melvin Post -1978 - operative treatment is indicated when the patient has three or more dislocations in a short period of time
- Gary Gartsman - 2003 - historians will likely view our treatment of shoulder dislocations as suboptimal. Orthopaedic surgeons operate on acute ligament injuries of the knee and the ankle but rarely the shoulder



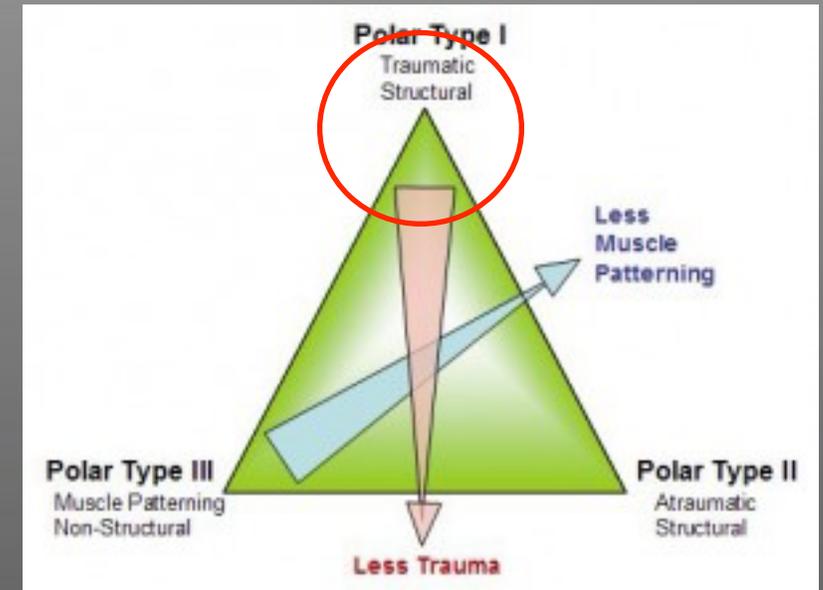
# Introduction

- Examination and Investigations
- Natural history
- Spectrum of damage
- Treatment
  - timing
  - types of surgery
- Rehab



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# Clinical Case

- 17 year old male
- rugby player - centre
- 1st dislocation tackling 1 week ago
- Reduced with entonox in A&E
- Books into your clinic



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# Clinical Case

- What now?
- Does he need a sling? For how long?
- What are the chances of it happening again?
- Should we refer? Does he need surgery?
- Which operation?
- When can he play again?



# History and Examination

- History
- Core strength
- Scapulothoracic rhythm
- Range of movement/Cuff
- Apprehension signs
- Hyperlaxity - Beighton score, sulcus sign



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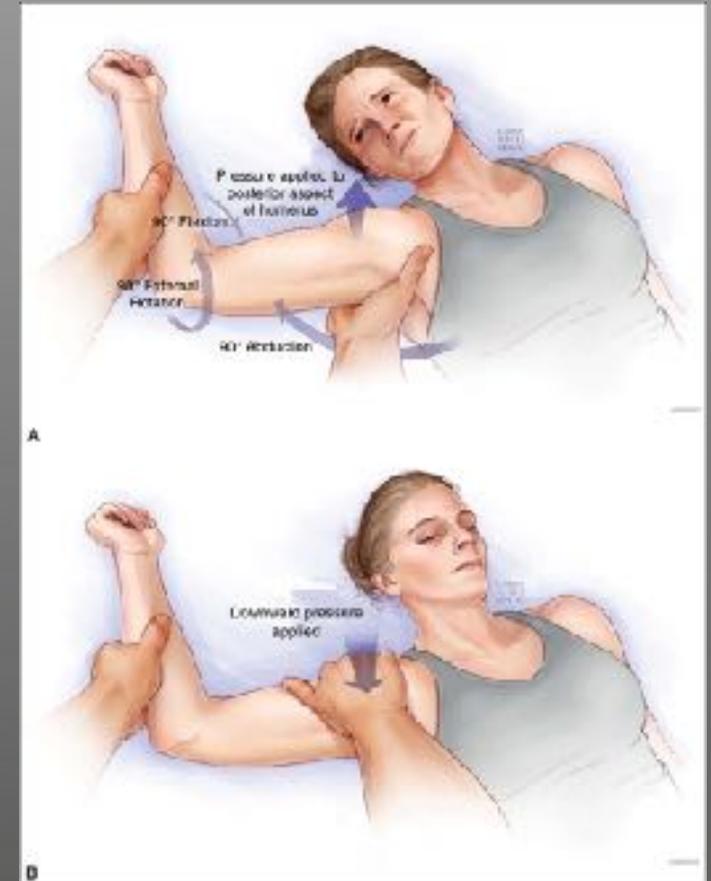
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# Investigation

- X-ray
  - essential to have 2 views
  - look for associated injuries
  - subtle signs



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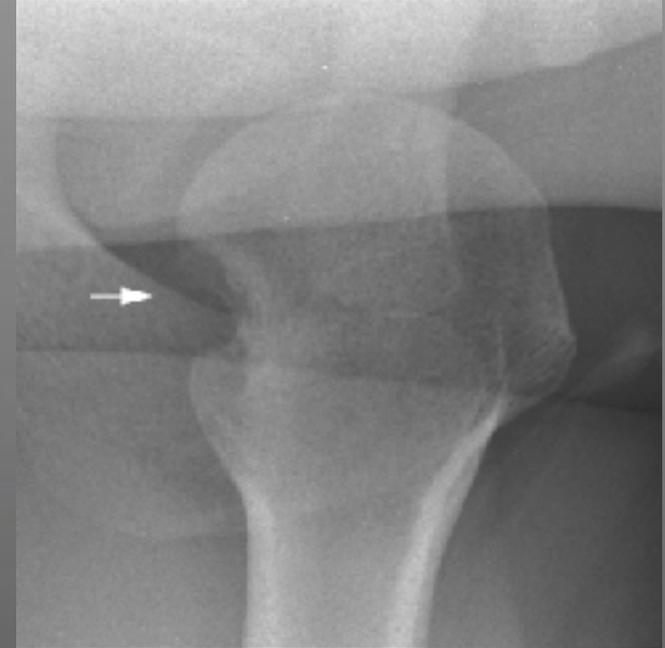
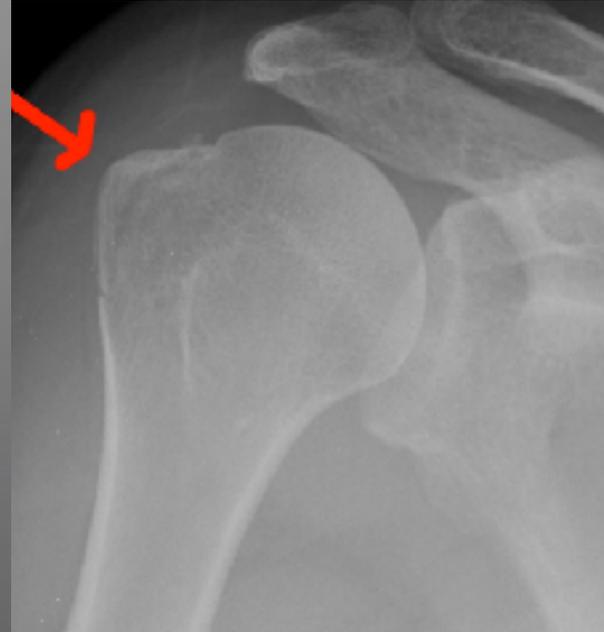
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  - Manage apprehension
  - Mobilise free of sling



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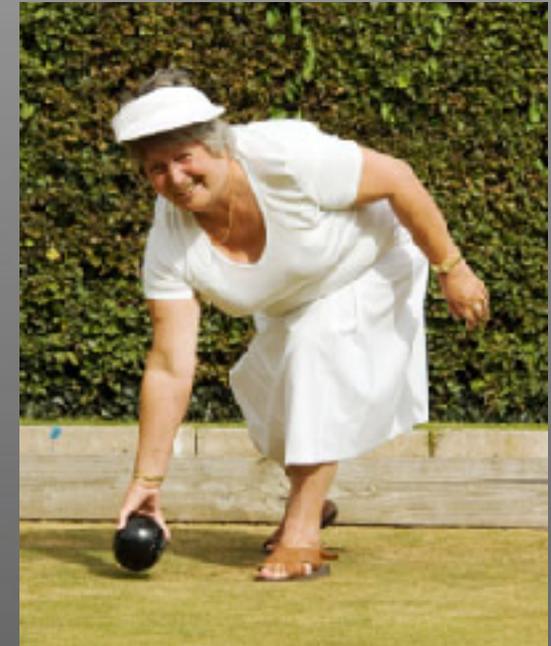
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Will it happen again?



# Natural History

- Clinical factors
  - age
  - sex
  - sport
  - lesion



# Natural History - Age and Sex

- Non-operative management
- Age and Sex
  - Kirkley Arthroscopy 2005
    - 60% vs 19% at 5 years
  - Robinson JBJS Am 2006



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**TABLE IV Age and Sex-Specific Estimated Probability of Recurrent Instability within the First Two Years After a Primary Glenohumeral Dislocation**

Age (yr)	Males	Females
15	0.86	0.54
16	0.84	0.51
17	0.81	0.48
18	0.78	0.45
19	0.75	0.42
20	0.72	0.40
21	0.69	0.37
22	0.66	0.34
23	0.62	0.32
24	0.59	0.30
25	0.56	0.28
26	0.53	0.26
27	0.50	0.24
28	0.47	0.22
29	0.43	0.20
30	0.41	0.19
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# Natural History - Sport

- Shoulder instability highest in contact athletes
  - American football
  - wrestling
  - ice hockey
  - player collision > player object
  - game events > practice events



Incidence of glenohumeral instability in collegiate athletics. Owens BD, Agel J, Mountcastle SB, Cameron KL, Nelson BJ. Am J Sports Med. 2009 Sep;37(9):1750-4.



# Natural History - Sport

- Recurrence rates highest in contact athletes
  - Rugby - 89%
  - American football



Traumatic glenohumeral bone defects and their relationship to failure of arthroscopic Bankart repairs: significance of the inverted-pear glenoid and the humeral engaging Hill-Sachs lesion.  
Burkhart SS, De Beer JF. Arthroscopy. 2000 Oct;16(7):677-94.

# Natural History - Sport



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# Clinical Case

- Male
- Young
- Collision sport



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**High Risk**

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**High Risk**

What damage has been done?

# Clinical Case

- Male
- Young
- Collision sport
- Pre-hab
- Investigate and Refer

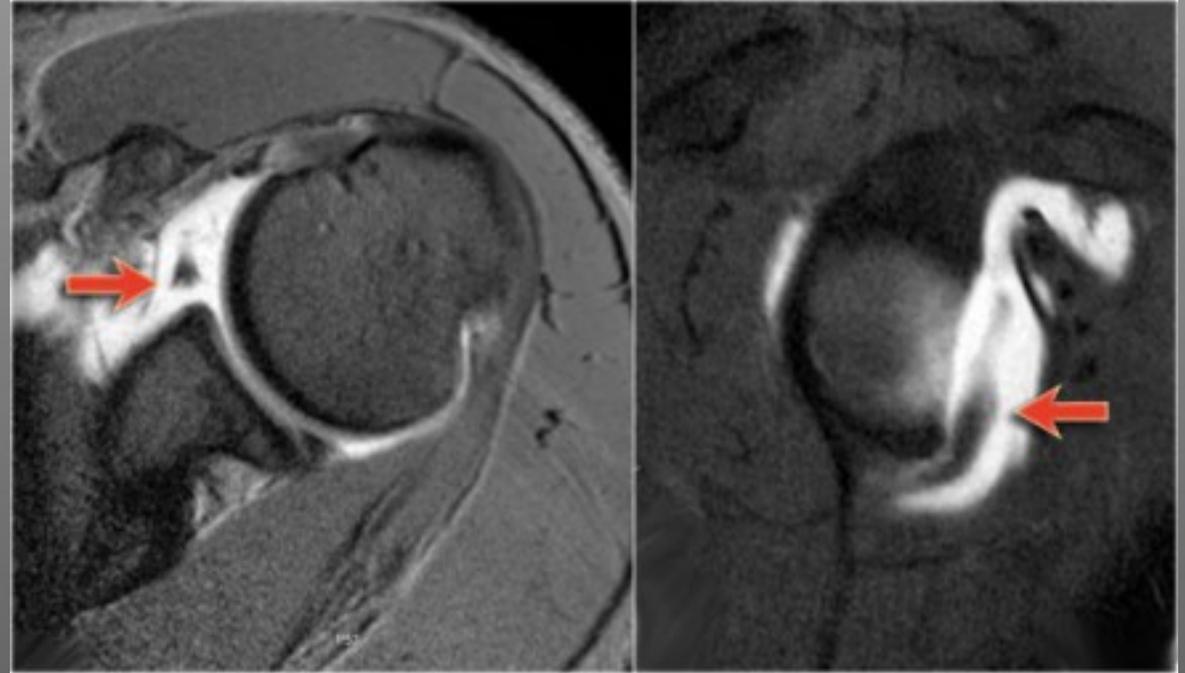
**High Risk**

What damage has been done?



# Investigation

- MRI arthrogram - Gold Standard
- (CT arthrogram)



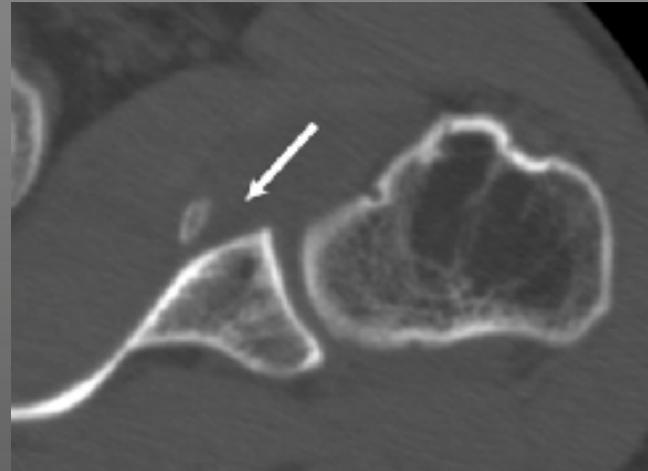
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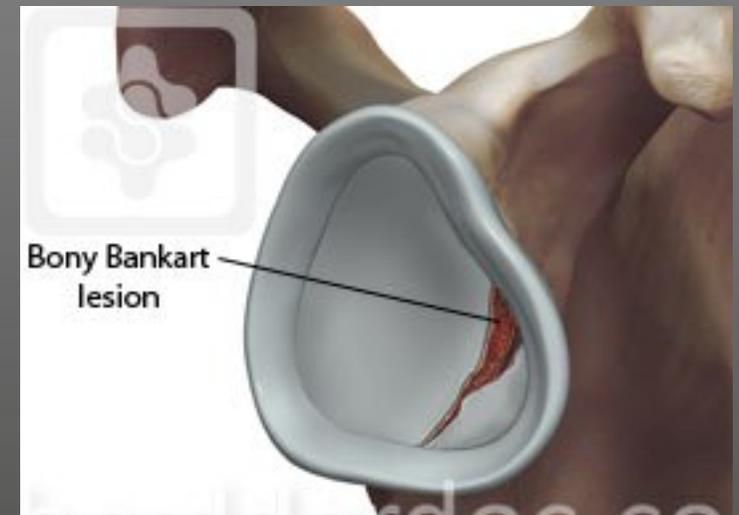
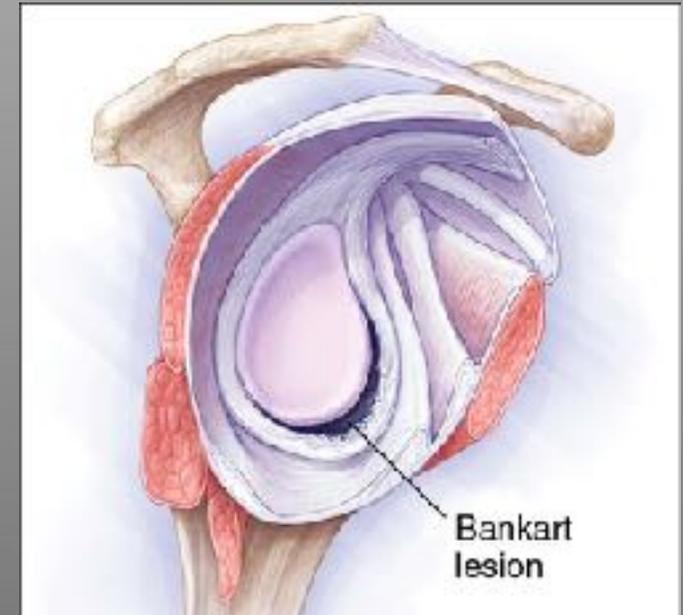
# Anatomic Lesions

- Soft tissue lesions
  - Labral Tear - Bankart
  - ALPSA - Anterior Labral Periosteal Sleeve Avulsion
  - GLAD - Glenoid Labral Articular Defect
  - SLAP - Superior Labrum Anterior Posterior



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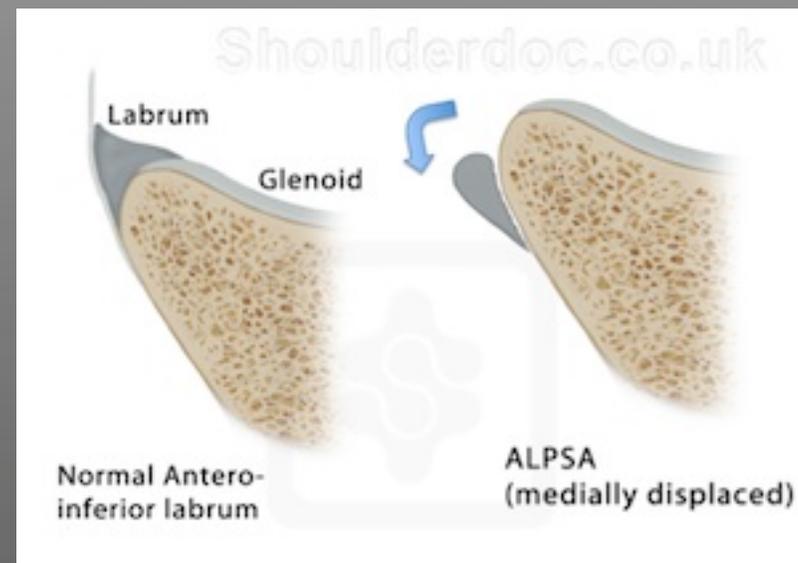
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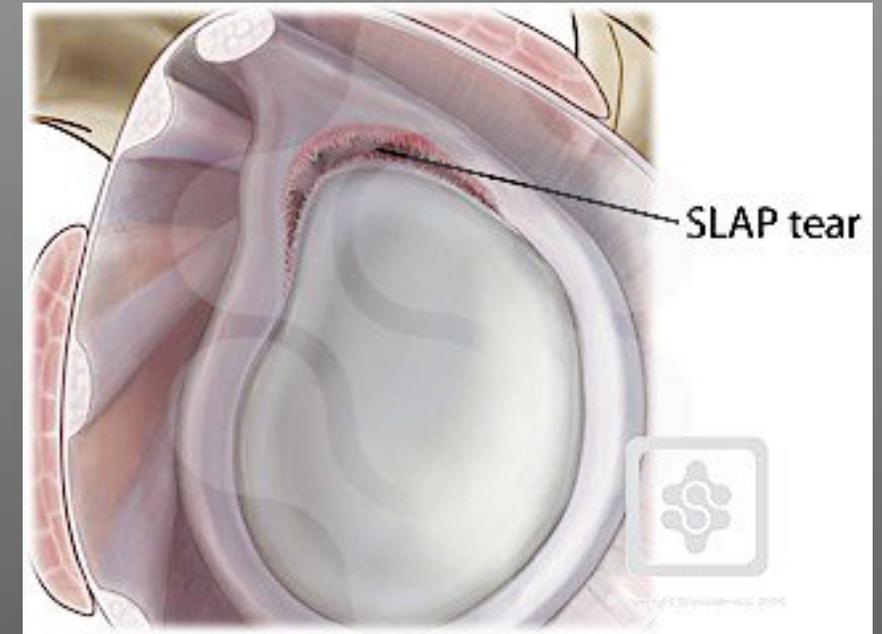
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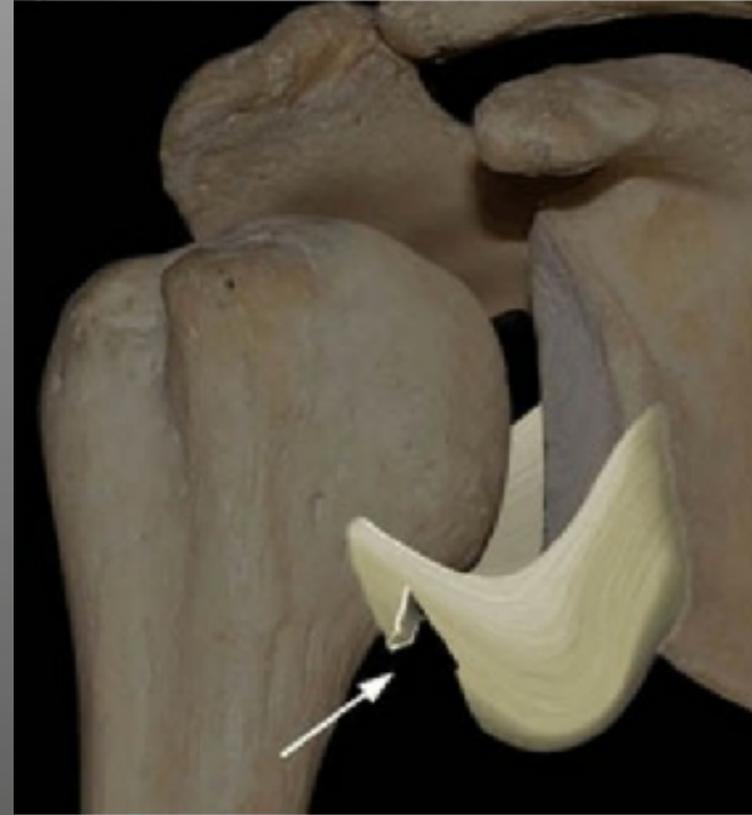
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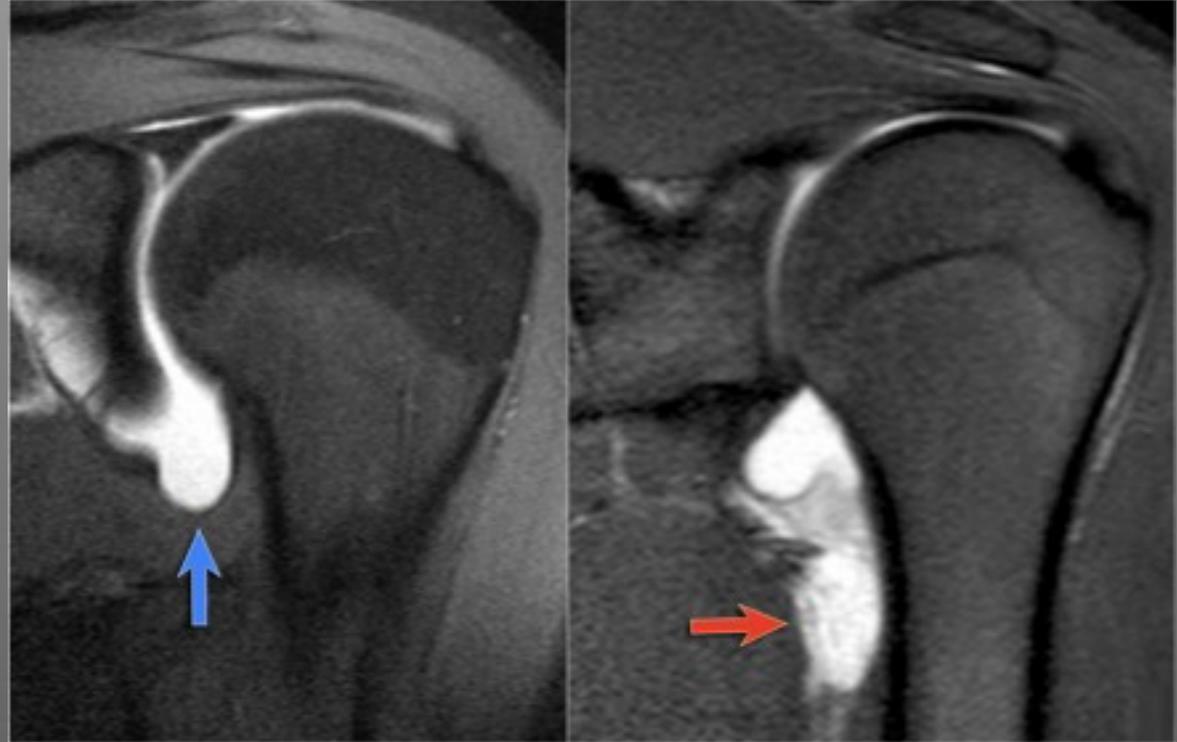
# Lesion

- Capsular
  - “HAGL” - Humeral Avulsion of Glenohumeral Ligaments



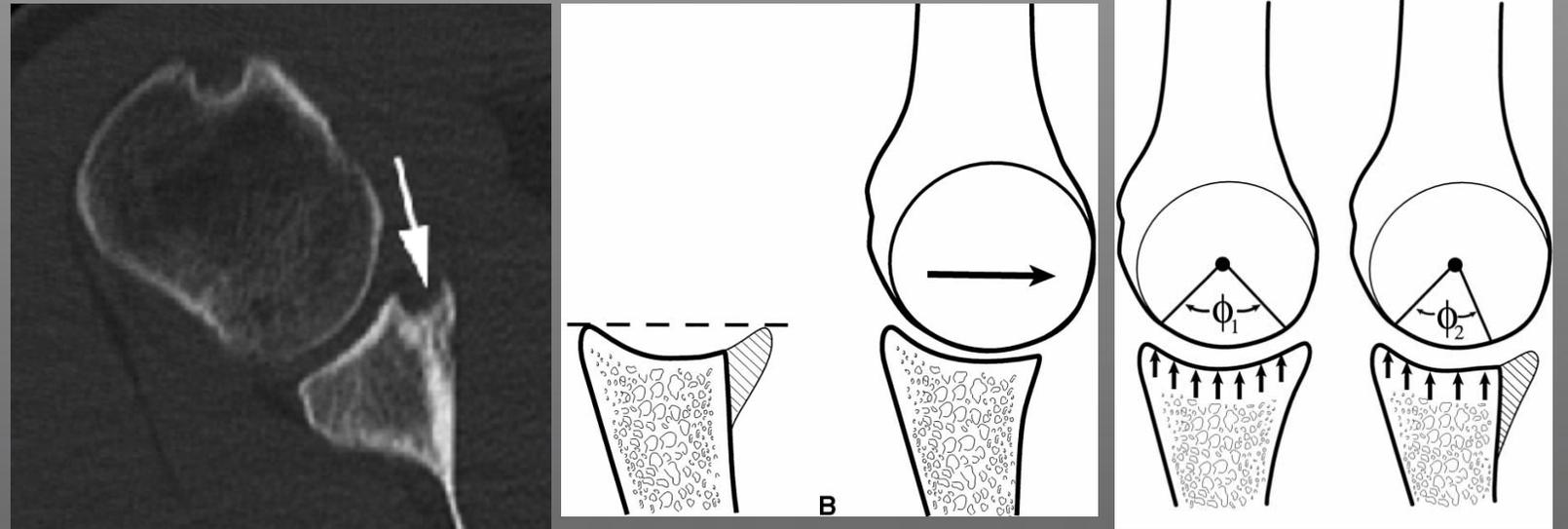
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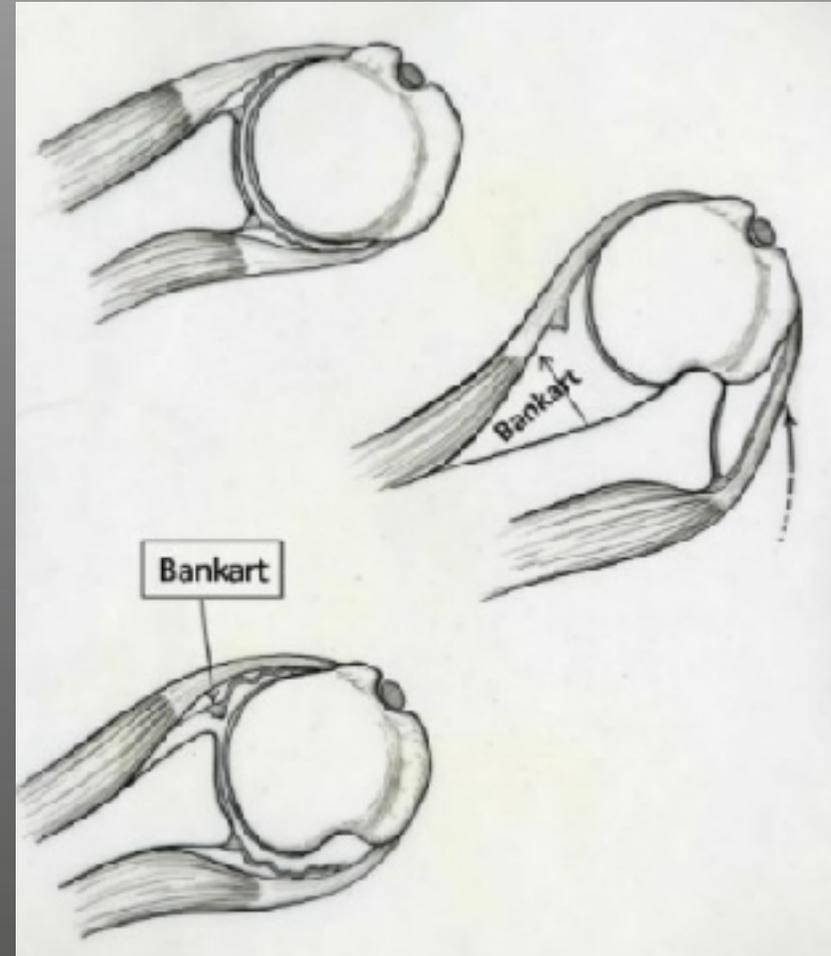
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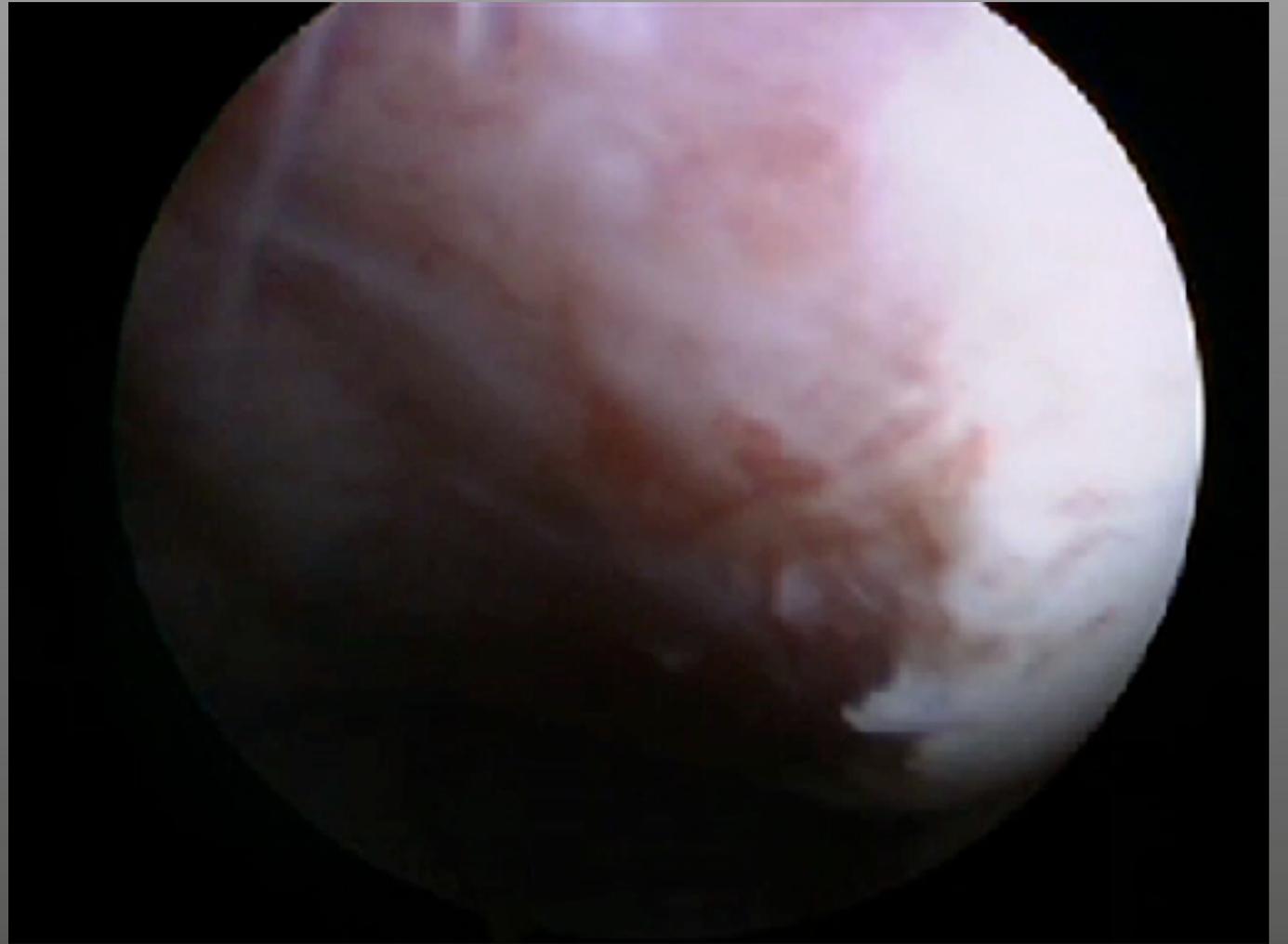
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# Major and Minor Lesions

- **Minor** lesions
  - isolated undisplaced labral tears
  - small Hill-Sachs lesions
  - partial thickness cuff tears
- **Major** lesions true dislocation
  - Bony bankart tears
  - ALPSA lesions
  - HAGL lesions
  - Full thickness cuff tears

# Clinical Case

- Displaced Bony Bankart Labral tear (3mm bone)
  - Medium Hill-Sachs lesion
- Major lesion
- Can we change the natural history?



# Does Surgery Make a Difference?

- Randomised Controlled Trial
- Recommended immediate arthroscopic stabilisation in patients who are younger than 30 years, higher level athletes, and the timing for surgery is good or their sport is risky (rugby, football, kayaking, rock climbing)
- Surgeon specific results



The True Recurrence Rate and Factors Predicting Recurrent Instability After Nonsurgical Management of Traumatic Primary Anterior Shoulder Dislocation: A Systematic Review  
Arthroscopy Journal 32(12) 2016: 2616-2625

# Does Surgery Make a Difference?



Does Surgery Make a Difference?

Yes

80% reduced to 5-15%

# Types of Surgery

- repair the lesion
- Soft tissue repair
  - Labral repair
  - Remplissage
  - HAGL repair
- Bony reconstructions
  - Latarjet



# Examination Under Anaesthesia

- Invaluable information
- Physio present



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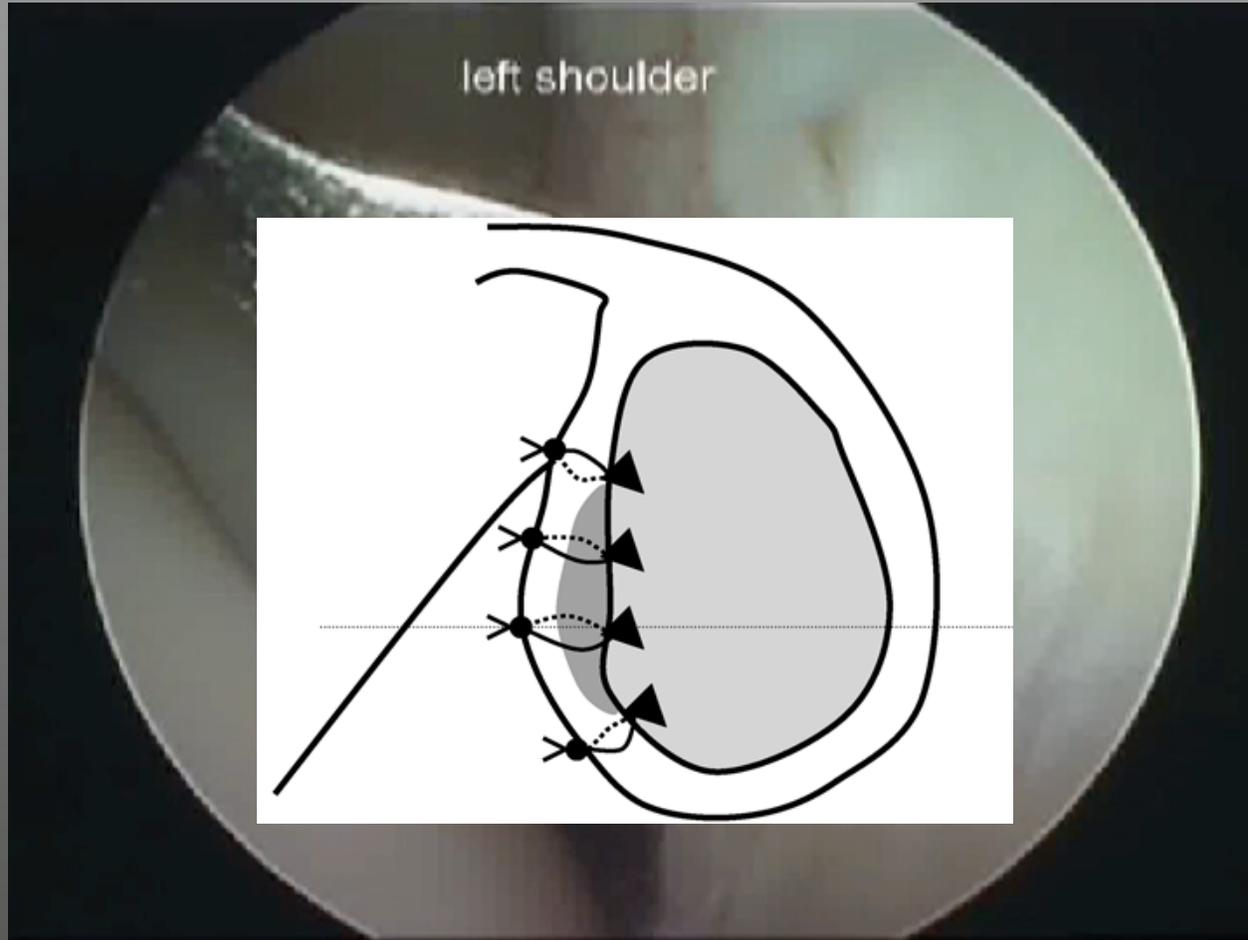


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# Labral “Bankart” Repair



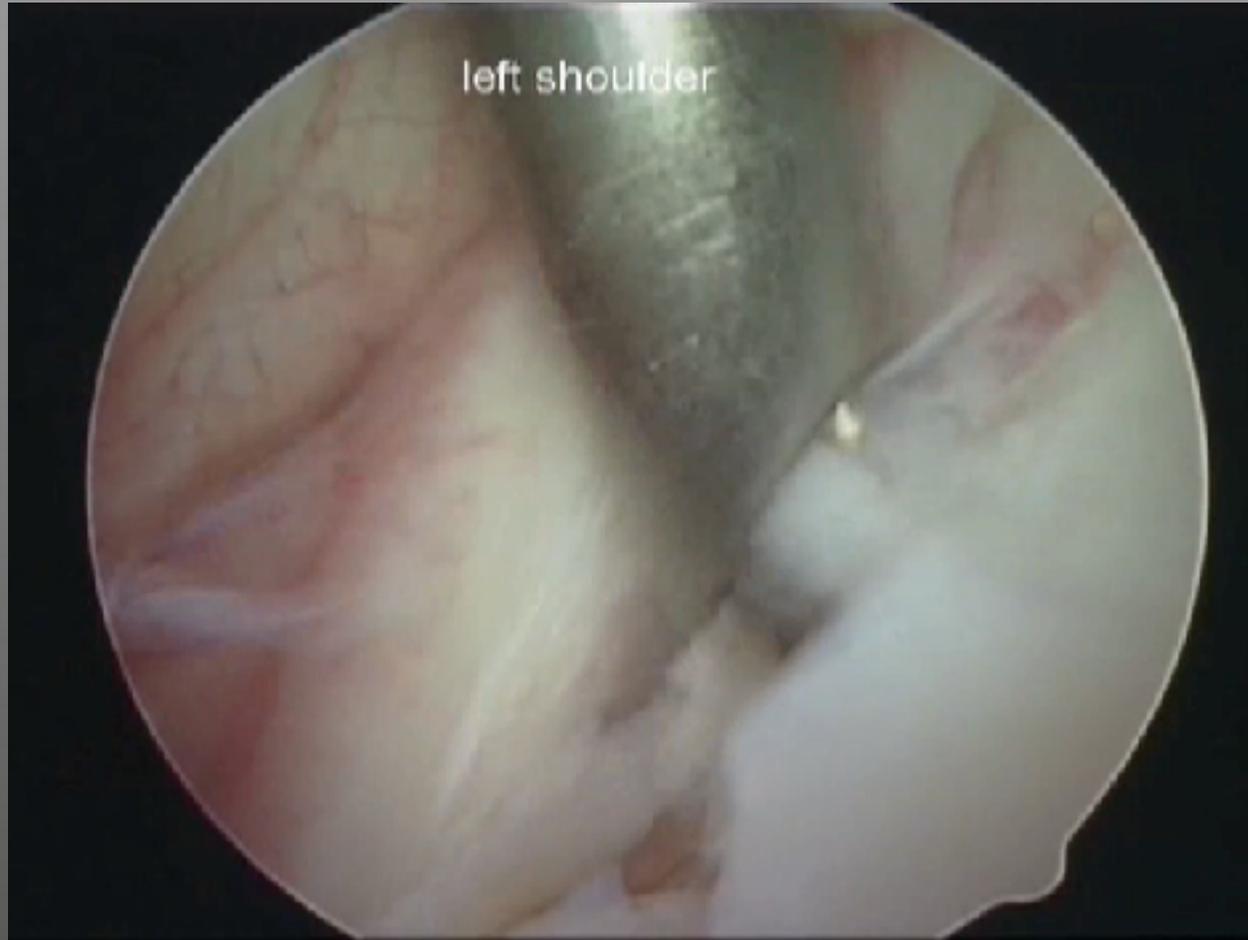
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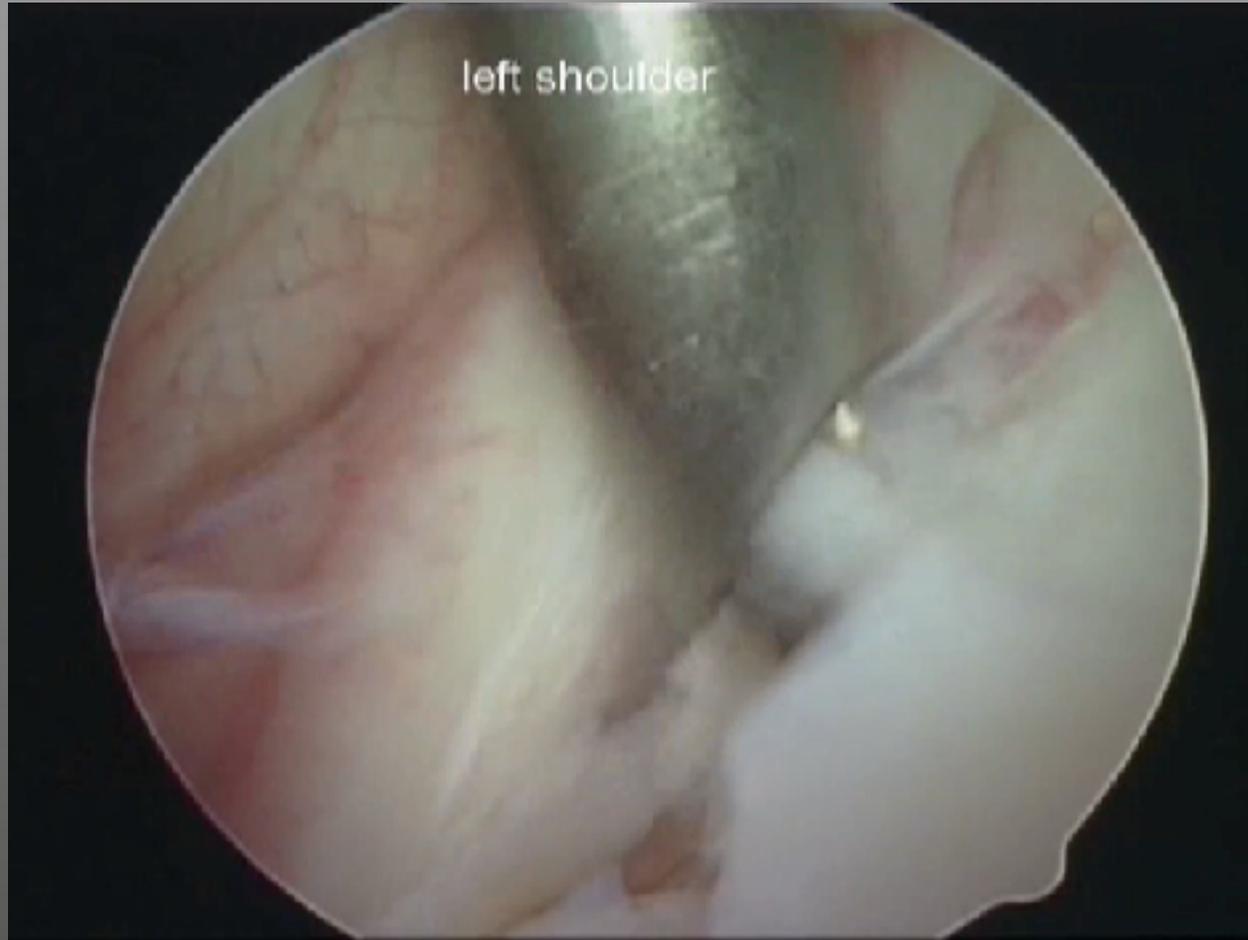
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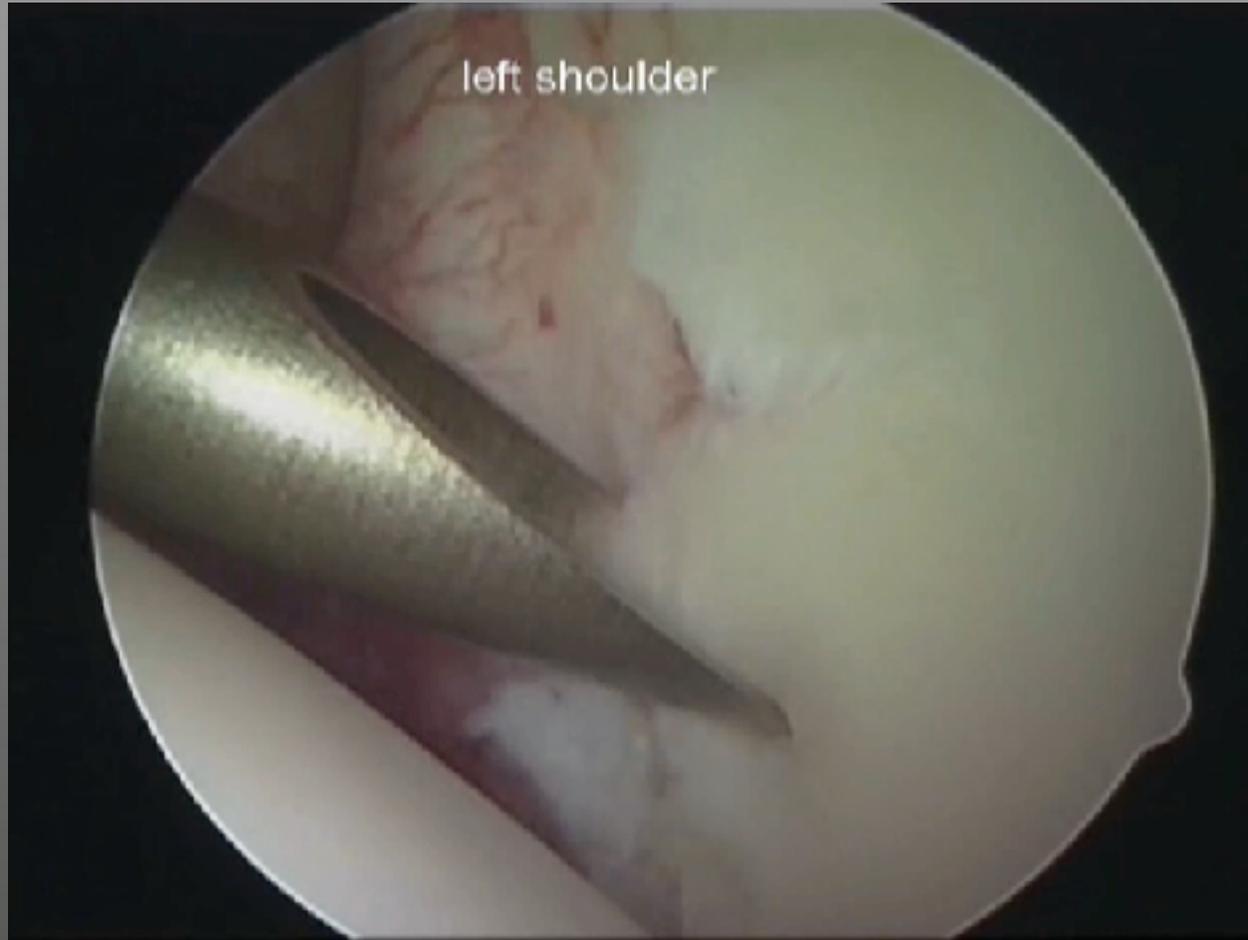
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# Safe Zone



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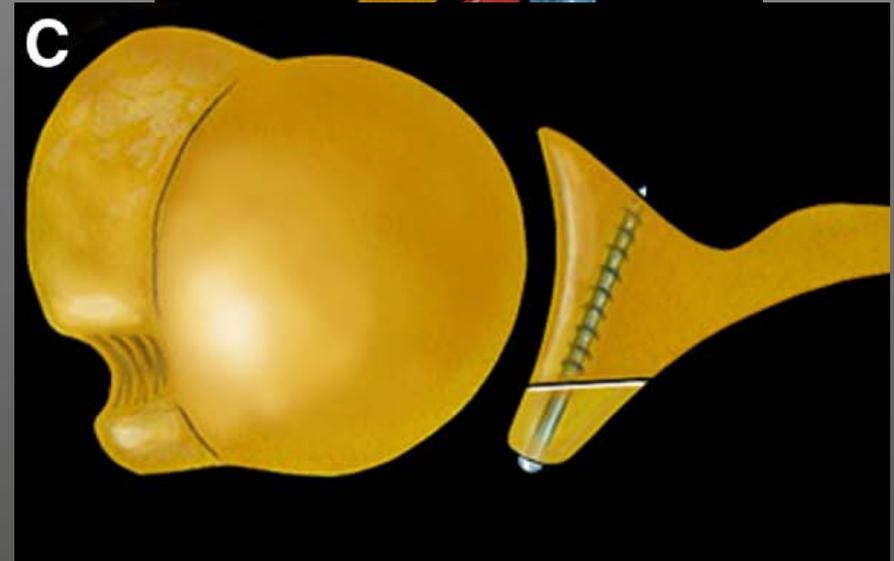
# Latarjet Procedure

- Triple block
  - bone block effect
  - sling/hammock effect
  - Bankart effect
- 1 to 5% recurrence rate



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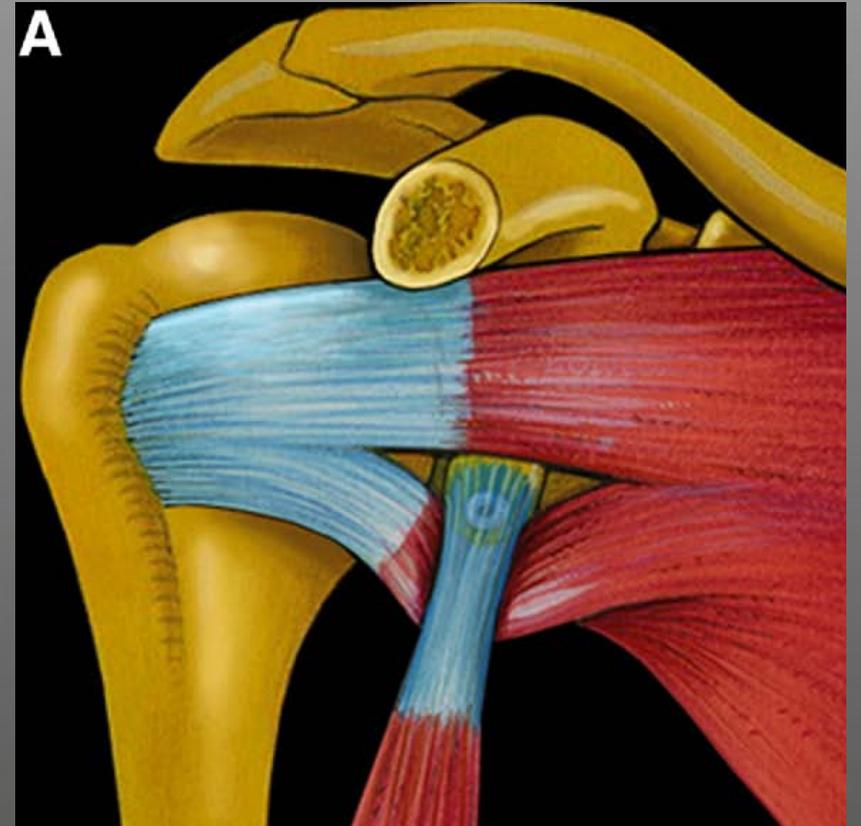
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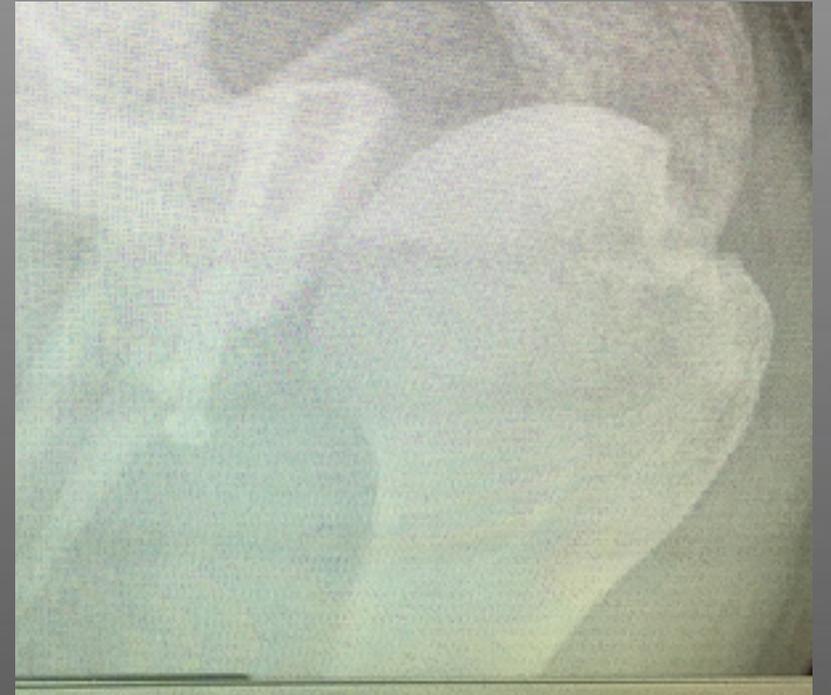
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# Latarjet Advancements

- Open
- All arthroscopic
- Hybrid



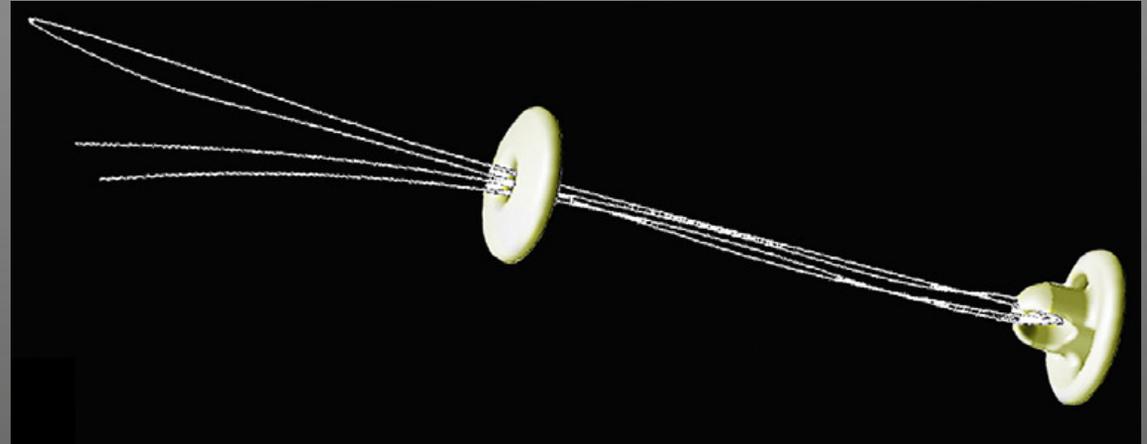
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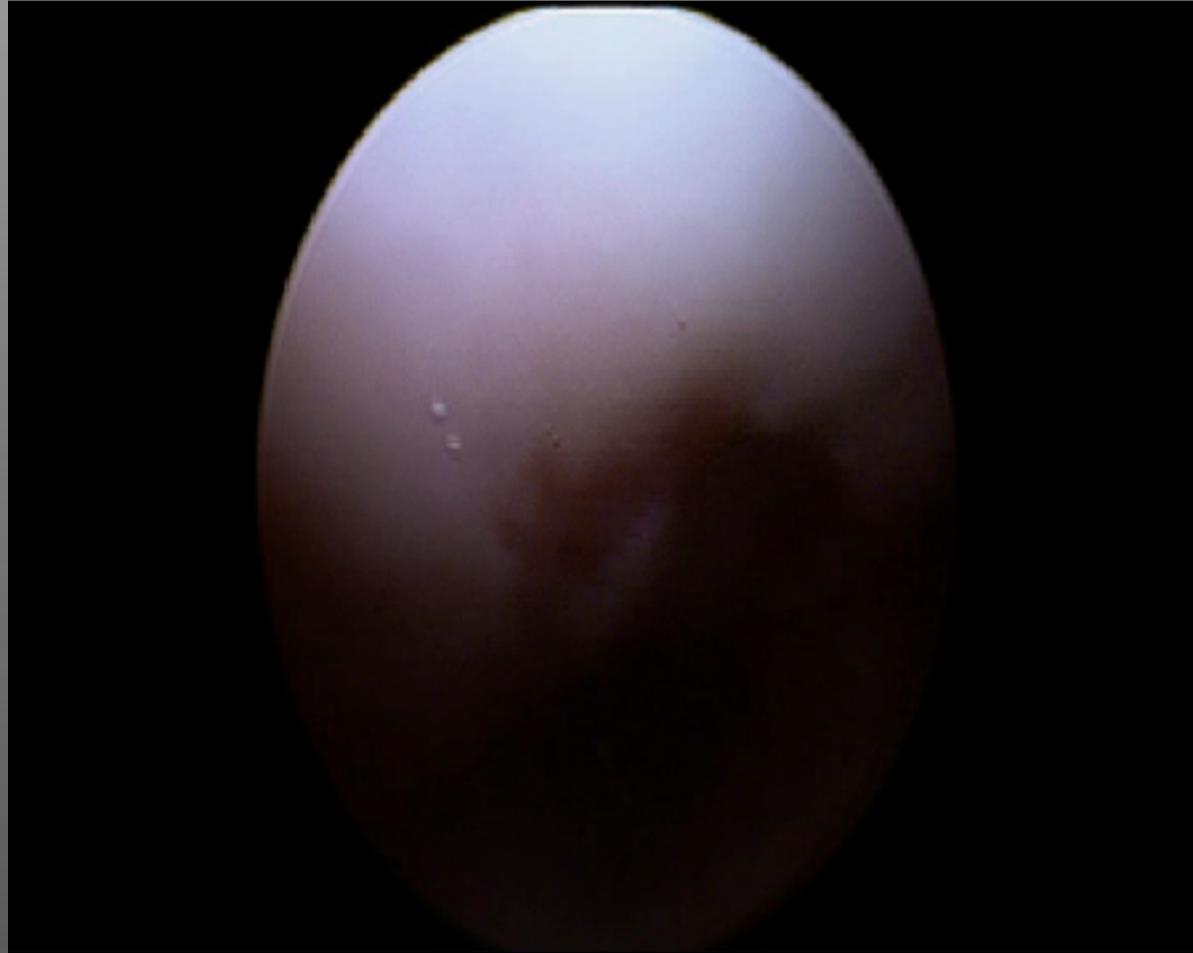


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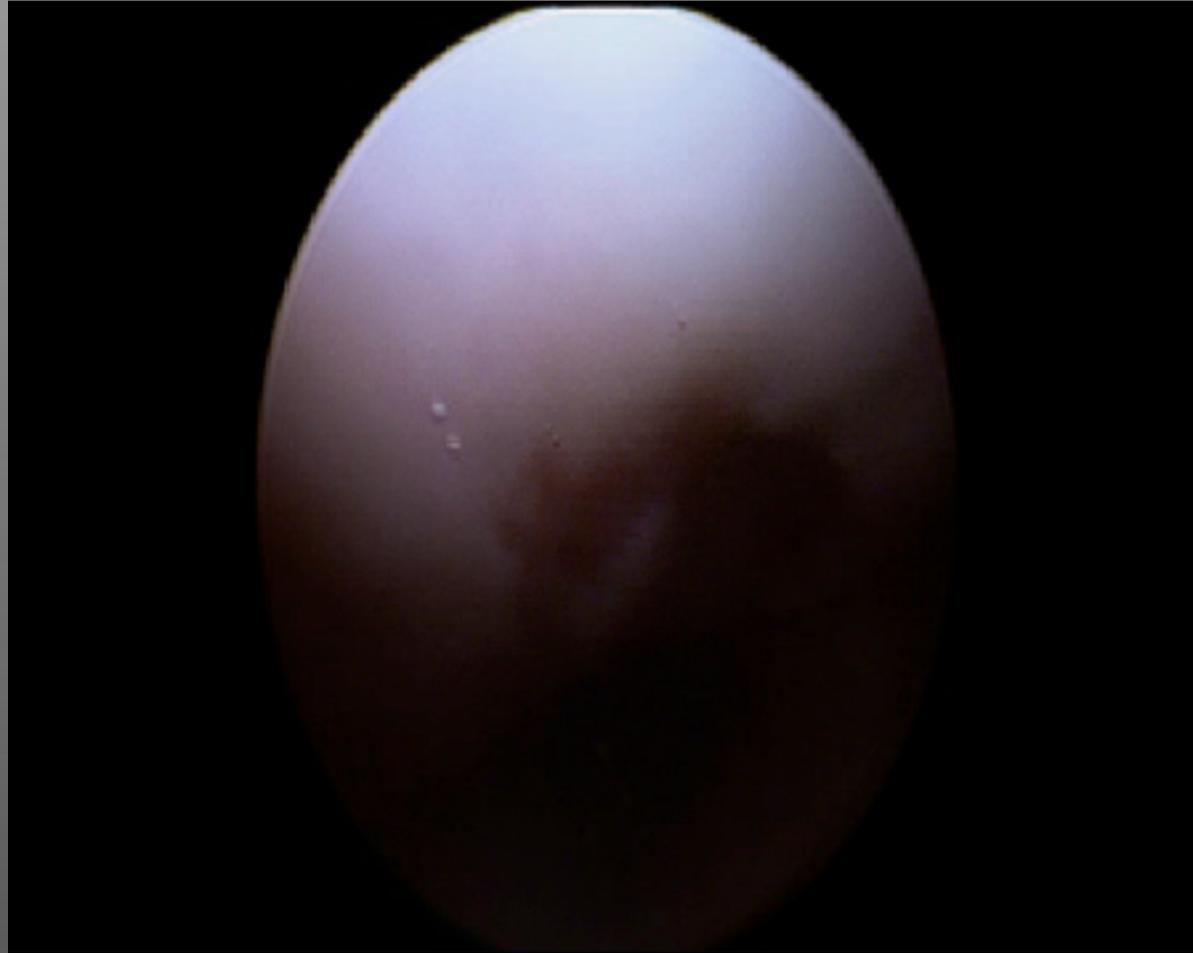
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# Arthroscopic Latarjet

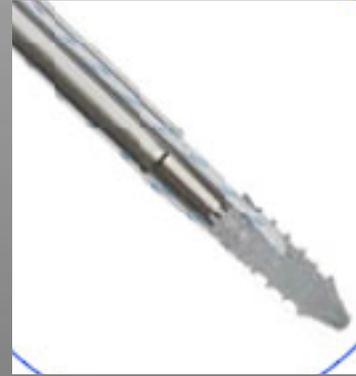


# Arthroscopic Latarjet



# Surgical Advances

- Smaller anchors
- All arthroscopic
- Surgical selection improved (Bone loss and Latarjet)
- Better understanding of rehab
- More collaborative - physios attend theatre discuss sports specific rehab needs



# Timing of Surgery

- Sports season
  - pre-season
  - in season
  - during the school year
  - post-season
- **minor** lesions return to play
- **major** lesions repair



# Rehab Mantra - Surgeons perspective

- Protect Repair
- Healing
  - Inflammation
  - Repair
  - Remodelling



# Rehab Mantra - Surgeons perspective

- Protect Repair
- Healing
  - Inflammation
  - Repair
  - Remodelling
- Immobilisation poor for
  - strength
  - tendon healing
  - proprioception
- Early mobilisation
  - collagen healing



# Rehab Mantra

- Goal Centred not time centred
- Kinetic chain/Kibler
- Safe zones/Tissue quality
- Early closed chain exercises



Accelerated rehabilitation after arthroscopic Bankart repair for selected cases: a prospective randomized clinical study. Arthroscopy. Kim SH, Ha KI, Jung MW, Lim MS, Kim YM, Park JH. Arthroscopy 2003 Sep;19(7):722-31



# Early Mobilisation/ Accelerated Rehab

- Rehab guide
  - Aim
  - Avoid
  - Treatment
- What patient can do and less of what they can't
- Sport and position specific



**YORKSHIRE SHOULDER CLINIC**  
— LEEDS | YORK | HARROGATE | ELLAND —

ARTHROSCOPIC POSTERIOR LABRAL REPAIR STABILISATION

PLAYER X

SURGEON - SIMON BOYLE

January 26th 2017

Indications:

- Performed for shoulder instability with a posterior labral tear
- MRI – Posterior labral tear
- EUA – gd III posterior laxity

Protocol:

	Post op
Day 1 to Week 4	<ul style="list-style-type: none"> <li>• Aim                             <ul style="list-style-type: none"> <li>• Pain control</li> <li>• Personal hygiene</li> </ul> </li> <li>• Avoid                             <ul style="list-style-type: none"> <li>• No combined Forward flexion and adduction</li> <li>• No combined forward flexion with Internal rotation exercises</li> </ul> </li> <li>• Treatment                             <ul style="list-style-type: none"> <li>• External rotation brace for 4 weeks.</li> <li>• Finger, wrist and radio ulnar movements</li> <li>• Elbow flexion &amp; extension in standing</li> <li>• Teach axillary hygiene</li> <li>• Teach postural awareness and scapular setting</li> <li>• Passive and active assisted abduction as comfortable to 60 degrees in scapular plane</li> <li>• Core stability exercises with sling</li> </ul> </li> </ul>
4 -6 Weeks	<ul style="list-style-type: none"> <li>• Aim                             <ul style="list-style-type: none"> <li>• Increase passive and active assisted ROM</li> <li>• Wean from sling</li> </ul> </li> <li>• Avoid                             <ul style="list-style-type: none"> <li>• No combined forward flexion/abduction with Internal rotation exercises</li> <li>• No combined forward flexion with adduction</li> </ul> </li> <li>• Treatment                             <ul style="list-style-type: none"> <li>• Body belt &amp; wedge removed gradually between 4 and 6 weeks</li> <li>• Gentle pendular exercises avoiding adduction</li> <li>• Active assisted flexion as comfortable</li> <li>• Active assisted abduction to 90 degrees</li> <li>• Active assisted external rotation as comfortable</li> <li>• Commence proprioceptive exercises (minimal weight bearing below 90 degrees)</li> </ul> </li> </ul>

[www.yorkshiresoulder.com](http://www.yorkshiresoulder.com)



# Return to Play

- Lesion healed
- Achieved rehab goals
- Sport and position specific goals







# Summary

- Young sporty first time dislocators  
- high risk
- Surgery changes outcome
- Rehab vital for return to play
- Communication between  
Surgeon and Physio essential



Thanks

Questions?

[simon@yorkshireshoulder.com](mailto:simon@yorkshireshoulder.com)

