Distance to Dislocation and Recurrent Shoulder Instability After Latarjet

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Disclosures

The authors have no conflicts of interest or company affiliations to disclose.

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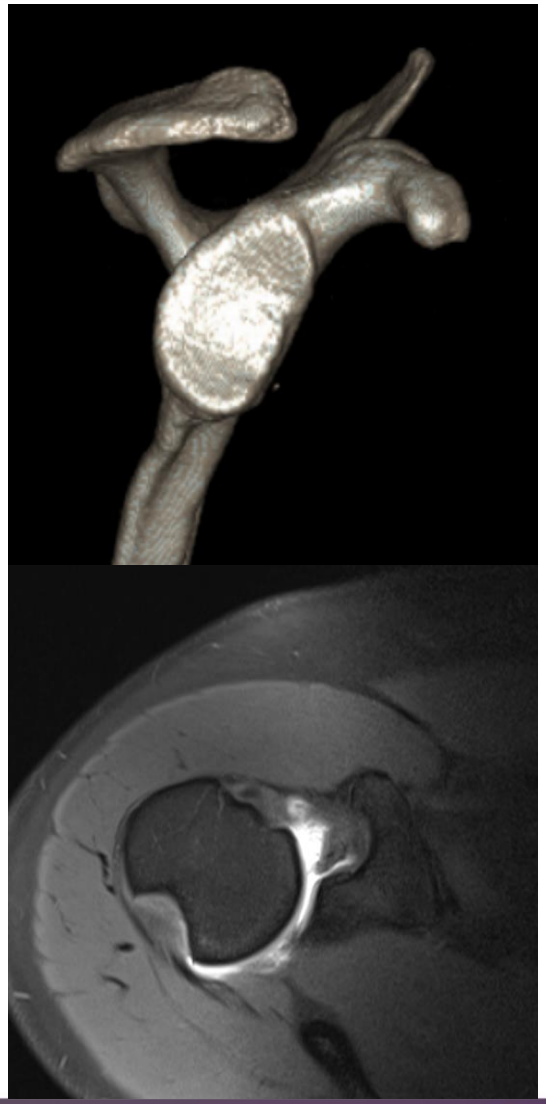
Background

- Risk factors for recurrent instability
  - Glenoid track
    - Hill-Sachs lesions
    - Glenoid bone loss (GBL)
  - Distance to dislocation (DTD)



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Latarjet

- Large glenoid defects
- Increases DTD
- Decreased recurrent instability in the setting of off-track lesions
- DTD impact has not been analyzed

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Objective

To determine the relationship between DTD and recurrent shoulder instability in military patients who have undergone a Latarjet procedure

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Methods

- CPT 23462 (2010-2018)
  - History, demographics, complications collected
  - Imaging reviewed
- Inclusion criteria
  - Index bone block augmentation
  - 2 screws for fixation
- Exclusion criteria
  - <2yr follow-up
  - Bristow technique or arthroscopic Latarjet
  - Inadequate imaging
- Primary Outcome: Recurrent instability
- Secondary Outcomes: Revision stabilization procedure, reoperation, military medical separation, failure

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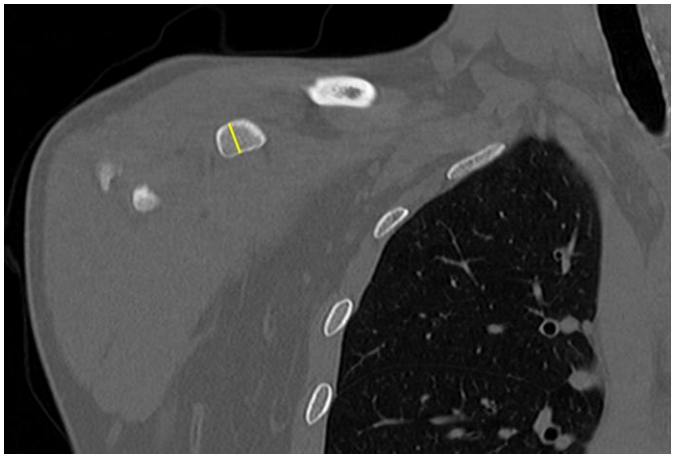
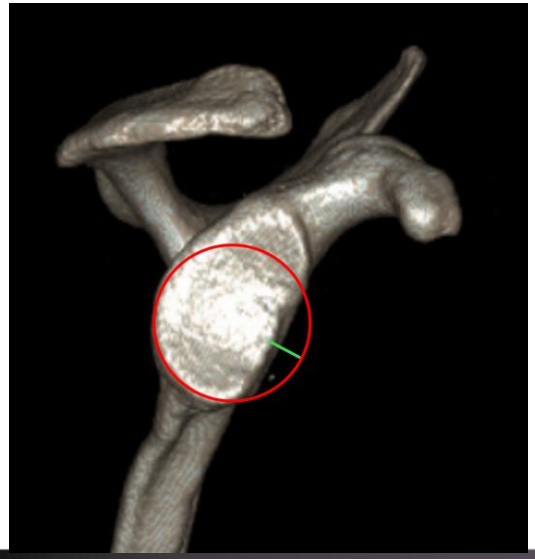
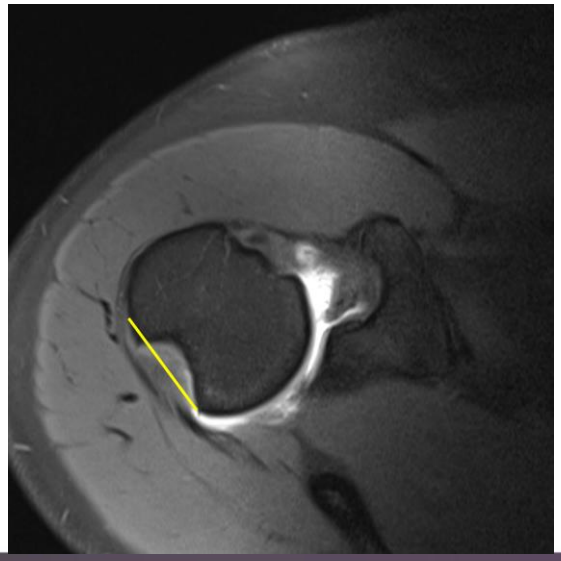
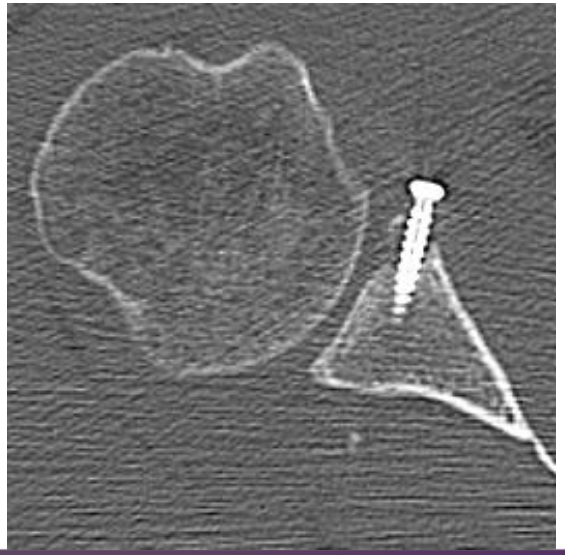
Imaging Review

- Preop CT
  - Coracoid thickness
  - % GBL
  - Hill-Sachs Index
- Postop CT: graft resorption









Cohort Characteristics

- **31 Primary and 47 Revision Latarjets**
- **Median age 24.0 years** (IQR 21.6-29.3)
- 94.8% male
- Median preoperative instability events 6.5 (IQR 4-12.3)
- **Median follow-up 6.4 years** (IQR 4.1-9.4)
- 1 concomitant remplissage (1.3%)

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Imaging Characteristics

Preop

- Median GBL:
  22.6% (IQR 17.4-28.0)
- 79.2% had GBL >15%
- Mean coracoid graft thickness: 11.4 ± 1.6 mm
- Near-track lesions (DTD < 8mm): 26
- Off-track lesions (DTD < 0mm): 30
- Mean preop DTD:
  2.6 ± 8.1mm

Postop

- Major graft resorption:
  39/78 (50.0%)
- Mean postop DTD:
  13.9 ± 8.7mm
- 1/30 off-track lesions remained off-track

	Primary Latarjet	Revision Latarjet	p-value
Median GBL, % (IQR)	24.2% (21.4 – 29.1)	22.2% (14.4 – 27.7)	0.023*
Mean coracoid thickness, mm	10.9 ± 1.4	11.7 ± 1.6	0.024*
Mean preoperative DTD, mm	-1.3 ± 5.1	5.3 ± 8.1	<0.001*
Mean postoperative DTD, mm	9.6 ± 5.2	16.9 ± 8.7	<0.001*
Preoperative off-track	17/28 (60.7%)	13/41 (31.7%)	0.017*

* $p<0.05$

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Primary Outcome

- Recurrent Instability
  - 20 patients (25.6%)
  - Preoperative DTD
    - Primary: not associated (-0.8 vs. -4.3mm, p=0.053)
    - Revision: not associated (7.0 vs. 4.5mm, p=0.409)
  - Postoperative DTD
    - Primary: associated (6.4 vs. 10.1mm, p=0.009)
    - Revision: not associated (16.0 vs. 18.7mm, p=0.438)
  - Postoperative DTD <8.5mm
    - 100% sensitive and 58.3% specific for recurrent instability in primary Latarjet (AUC 0.781)
  - Multivariate analysis: no factor reached statistical significance

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Secondary Outcomes

There were no significant associations between DTD and the secondary outcomes of:

- Revision stabilization procedure
- Reoperation
- Military medical separation
- Failure

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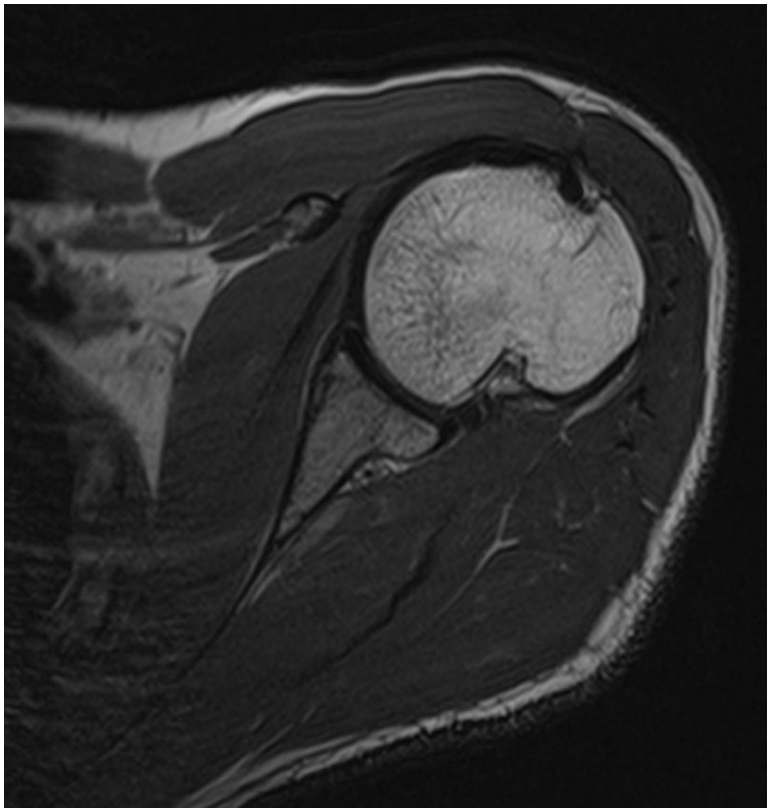
Conclusions

- Recurrent instability was high (25.6%)
- Primary Latarjet:
  - Postoperative DTD was associated with recurrent instability
  - Postoperative DTD threshold <8.5mm
- Revision Latarjet:
  - DTD was not predictive of recurrence
- The effect of concurrent Remplissage may be a topic of further study



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