

Arthroscopic Instability Repair 2020 Recurrent Traumatic Dislocator

Pro: Bankart Repair

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Disclosures

Are Available in
the brochure, on
the APP and @
AAOS website

...and for this case I would
typically do what Gilles is
going to say!



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Introduction

- Arthroscopic Bankart Repair
 - Marked Advancement through the years
 - “Standard of Care” in patients without significant bone loss...in the US---this may be shifting
 - Failure rates have consistently decreased
 - Better Surgical Technique
 - More Experience
 - **Better Patient Selection**
 - Better Equipment

Failure Rates better...Still higher than Latarjet!
.....Fewer Complications too



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Arthroscopic Instability Repair

- In patients **without significant bone loss**, Arthroscopic Repair can afford good to excellent outcomes...if effective:
 - repair the labrum, reduce capsular volume and restore capsulolabral balance
- Knotless techniques have evolved and becoming popular
- But, I Use Double Loaded Knotted Anchors
- Get 2 points of fixation for the price of one!
- Address the Capsule and Labrum...
INDEPENDENTLY!



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What We Have Learned

Select the Proper Patient for the Procedure

- Careful History/PE
- Review Initial Radiographs
- MRI vs. CT scan
 - Calculate the Glenoid Track



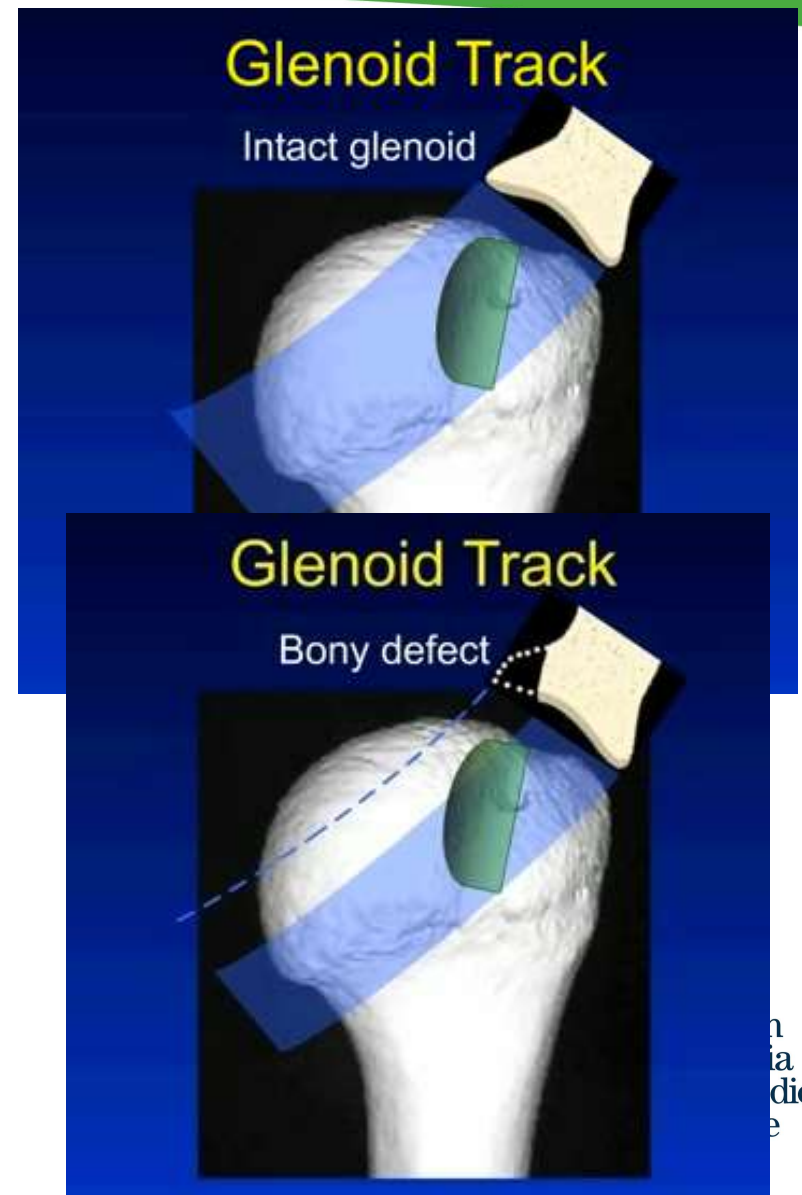
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Glenoid Track

- It is the relative size of the Hill-Sachs lesion combined with the glenoid defect that is significant
- If the HSL does not contact the glenoid track the shoulder unlikely to dislocate



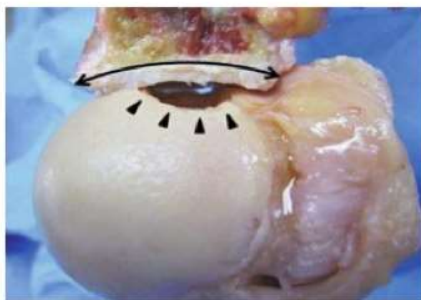
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Glenoid Track Measurement

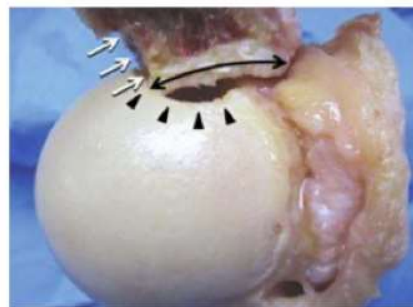
Calculate the width of the
Glenoid track GT
 $GT = 0.84D - d$

Measure the Diameter (D)
of the glenoid by CT/MRI

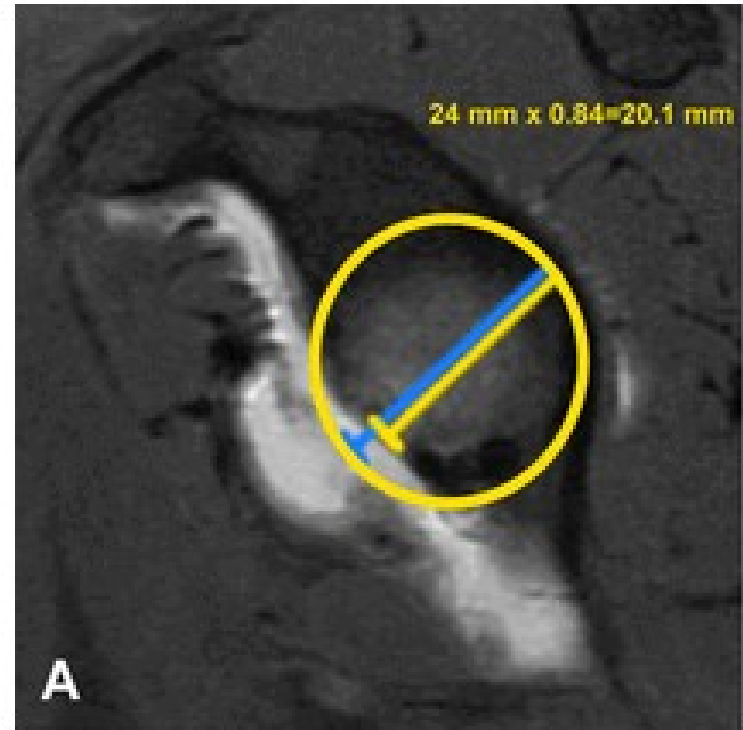
Determine the width of the
Anterior bone loss (d)



On Track



Off Track



If the $HSL > GT$ engaging
Off track
 $HSL < GT$
On track



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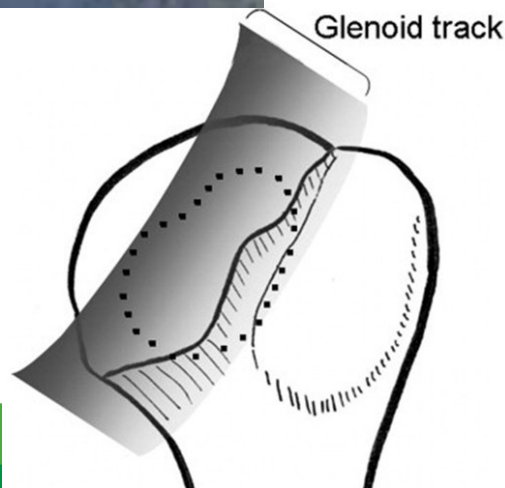
Pathoanatomy

Itoi JSES



Really
OFF
TRACK!

If the HSL does not
contact the glenoid
track the shoulder
will not dislocate



On Track!

Arthroscopic Instability Repair

How do We Achieve Success?



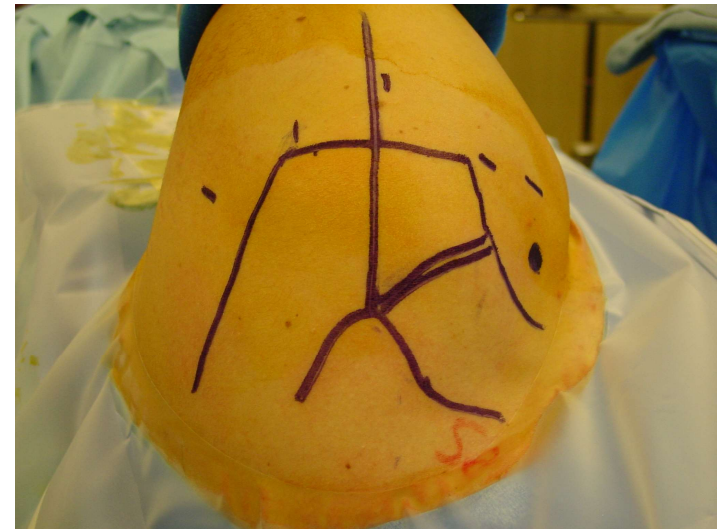
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Patient and Portal Positioning

- I Do it LATERAL!
- Standard posterior portal
 - May be adjusted superior/lateral
 - Allows posterior plication
- Anterior Portals
 - Ant/Sup(AS) portal
 - Ant/Midglenoid (AMG) portal



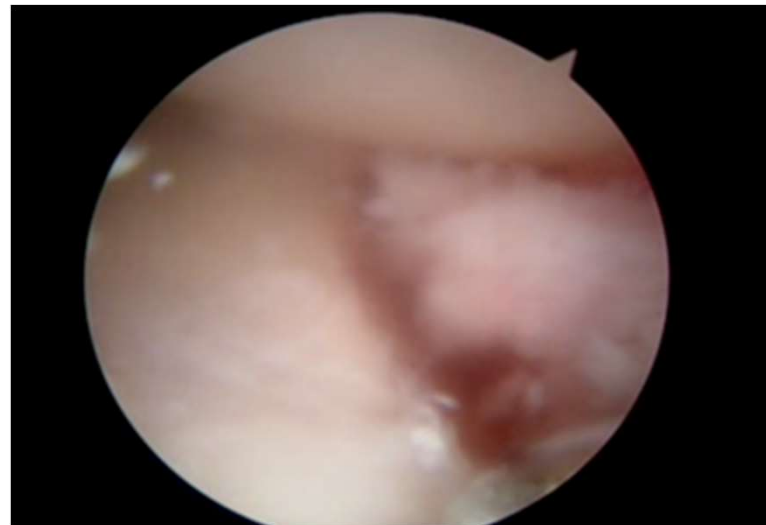
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Tissue Mobilization

- View from Anterior Superior Portal
- Begin with Elevator and then use Wissinger rod
- Labrum needs to be fully mobilized
 - Must see fibers of Subscapularis
- Test tissue advancement



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Suture Anchor Selection



- All Suture Anchor Option
 - Tap-in
 - Material
 - Soft, All Suture
 - Sizes Vary
 - Single loaded 1.3 mm
 - Double loaded 1.8 mm
 - Curved insertion guide available
 - Allows access to 6:00



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Suture Options

- Simple vs. Mattress
 - With cyclical loading, simple sutures tend to perform better...Burkhart
- 1 vs. 2 sutures/anchor
 - Load sharing by multiple suture tails and knots lead to superior strength...Burkhart
 - Arthroscopy 1996
- We seem to have discounted this with the advent of tape and knotless fixation



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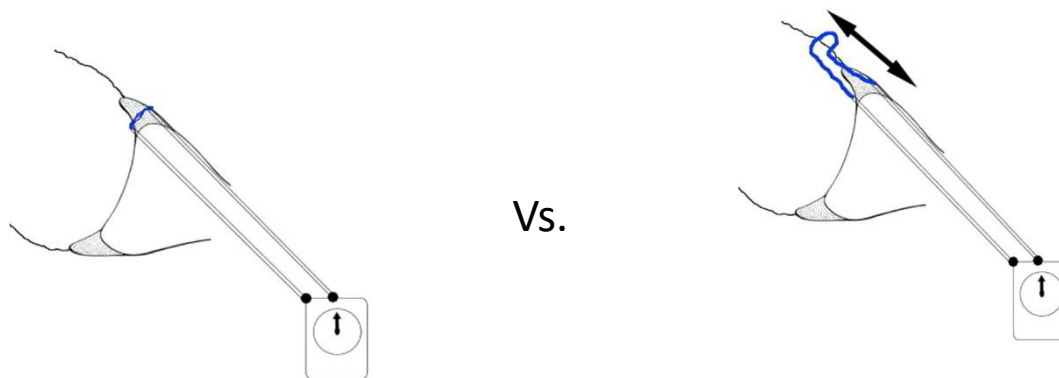
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Anterior Labral Repair Stress

- “...the forces experienced at the glenoid-labrum interface are higher when a capsular shift is included with a labral repair as opposed to labral repair alone. This difference was statistically significant.”

Penna, et al. Arthroscopy 2008 p930.



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Tissue Advancement

Arthroscopy Dec. 2010

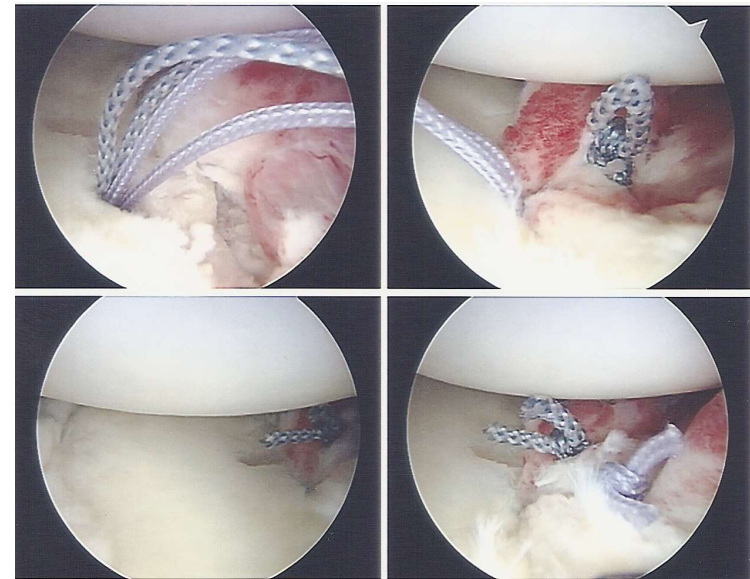
“Hospital-Corner Repair” for Shoulder Instability


David W. Wang, M.D., and Mark H. Getelman, M.D.

Abstract: Most shoulder instability repairs are performed with single-loaded suture anchors. Recent reports have shown that there is increased stress on both the glenoid labrum and suture anchor when sutures from single-loaded anchors are passed through the capsule and labrum. This report describes a novel technique for shoulder instability repair using double-loaded suture anchors in the glenoid. The first primary stitch is passed through the labrum only and then tied, shifting the tissue superiorly. The second stitch is passed inferiorly through the patulous capsule in addition to the labrum with a pinch-tuck technique. This technique distributes the tension on the labral repair and creates a fold to protect and shield the primary labral repair. Just as flat sheets are folded and tucked underneath a mattress to form a “hospital corner,” this procedure applies a similar principle to the labrum and capsule of the shoulder. This technique is applicable for any type of shoulder instability repair, including Bankart lesions, posterior labral tears, and multidirectional instability, that requires the use of suture anchors.

Tissue Advancement

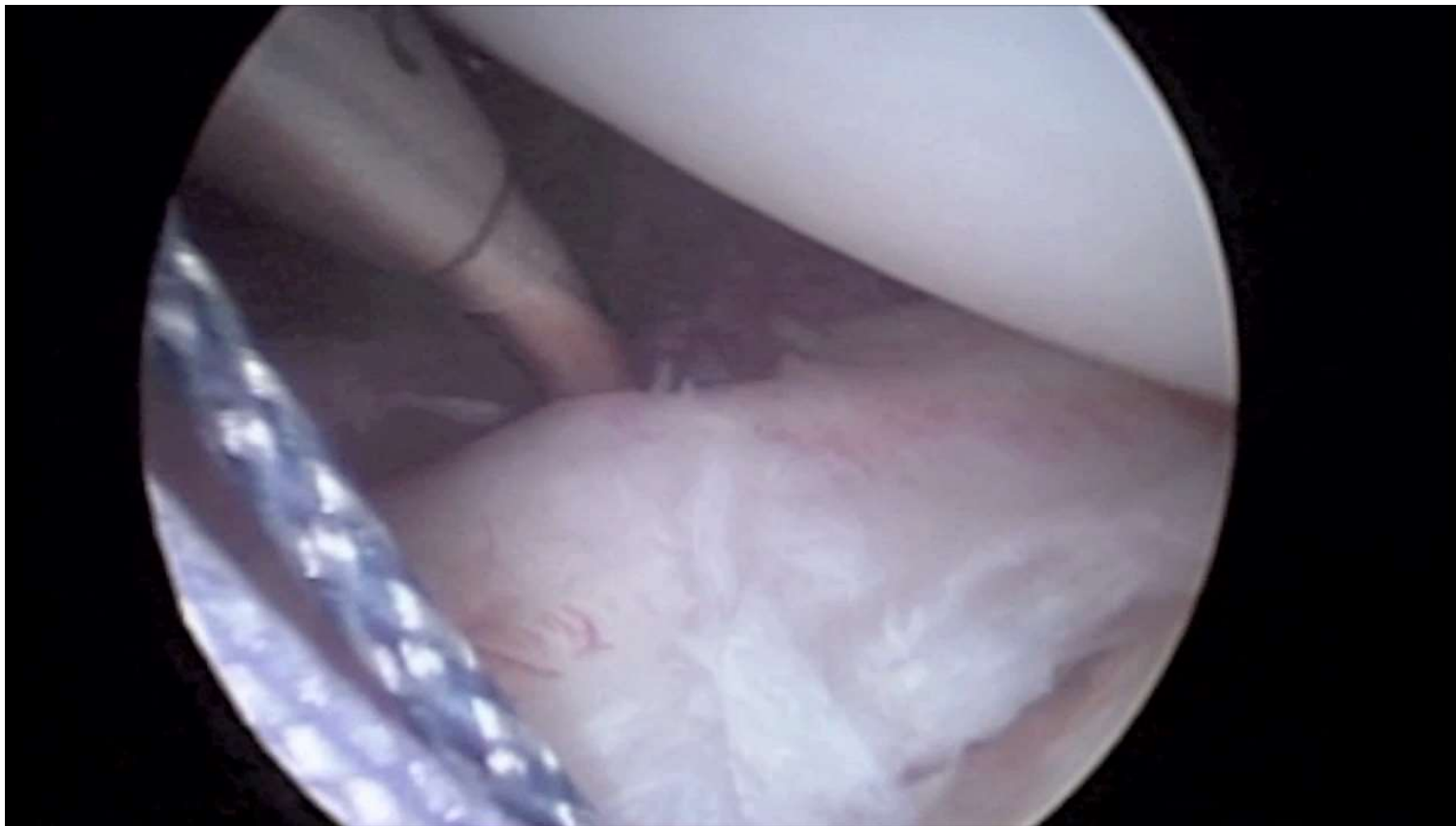
- “Hospital Corner” repair
 - Recreate Bumper
 - Plicate as Necessary
 - Double loaded anchor
 - Simple Stitch Configuration
 - 1st stitch labrum only...
Shift Superiorly-Create Bumper
 - 2nd stitch: plicate capsule over top
superior/lateral shift



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Hospital Corner Repair



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What about Bankart vs. Latarjet

Open Access J Sports Med. 2017 Apr 15;8:97-105. doi: 10.2147/OAJSM.S106983. eCollection 2017.

Long-term outcomes of the Bankart and Latarjet repairs: a systematic review.

Rollick NC¹, Ono Y^{1,2}, Kurji HM³, Nelson AA¹, Boorman RS¹, Thornton GM^{1,4}, Lo IK¹.

Minimum 5 year follow -up
1652 repairs

Outcomes: Re-Dislocation

Scope Bankart: 15.1%

Open Bankart 7.7

Open Latarjet 2.7

Complications:

Scope Bankart 0.0%

Open Latarjet 9.4

Latarjet—Most Reliable but with High Risk for Complications



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Knotted vs Knotless...

- Whichever Technique...Use what you like:
- ONLY AS GOOD as the surgeon's ability to:
- TIE An EXCELLENT knot
- GAUGE the IDEAL Tension before securing Knotless



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What I do in 2020...

- Double Loaded Knotted
 - Advanced Repair
 - Technically more difficult
 - **ALLOWS INDEPENDENT TENSIONING CAPSULE & LABRUM**
 - May provide more secure repair
- Select the Right Patient
 - Calculate the GT
 - If any question or revision case
 - Consider Bony Procedure
 - If Criteria Met:



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Anterior Instability Success

- Mobilize the Tissue well
- Get anchors onto the articular margin and 6:00
- Excel at knot tying
 - Use locking/sliding knots
- “Hospital Corner” Repair Level V → Level III
 - 5-6 sutures minimum, more prn
 - Getelman, Kerker...8.3% Failure rate for all pts. 4% if no bone loss at all
- Consider Remplissage for large H-S lesions





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My 2020 Instability Repair

- Double Loaded BioReplaceable  All Suture Anchors
 - hi-strength suture
- Angled suture hooks-Shuttle technique
- Tie secure knots/SMC knot
- Tension the labrum and capsule INDEPENDENTLY
- “Hospital Corner” Repair Level V  Level III
 - 5-6 sutures minimum, more prn
 - Getelman, Kerker...8.3% Failure rate for all pts. 4% if no bone loss at all
- Consider Remplissage for large H-S lesions



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Arthroscopic Bankart Repair Still has a role in Instability...

Thank You!



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