

My Cuff Anchor Will Not Hold

Jan Fronek, MD

- ▶ Scripps Clinic Medical Group
- ▶ San Diego Padres Baseball, Former Head Team Physician

Disclosures:

- ▶ AAOS website

Anchor will not hold

- ▶ Etiology
- ▶ Prevention
- ▶ Management

Anchor will not hold

- ▶ Etiology
 - ▶ Bone quality
 - ▶ Anchor design
 - ▶ Technique
- ▶ Prevention
- ▶ Management

Anchor will not hold

- ▶ Prevention

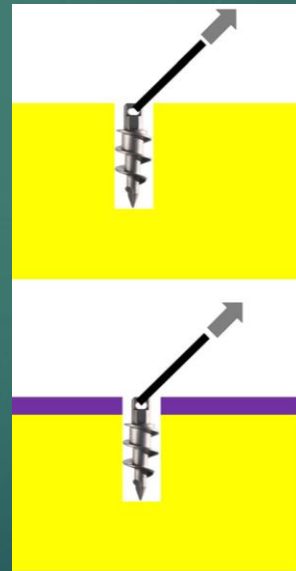
 - ▶ Bone quality

 - ▶ Osteoporotic bone – pre-op Xray, DEXA scan

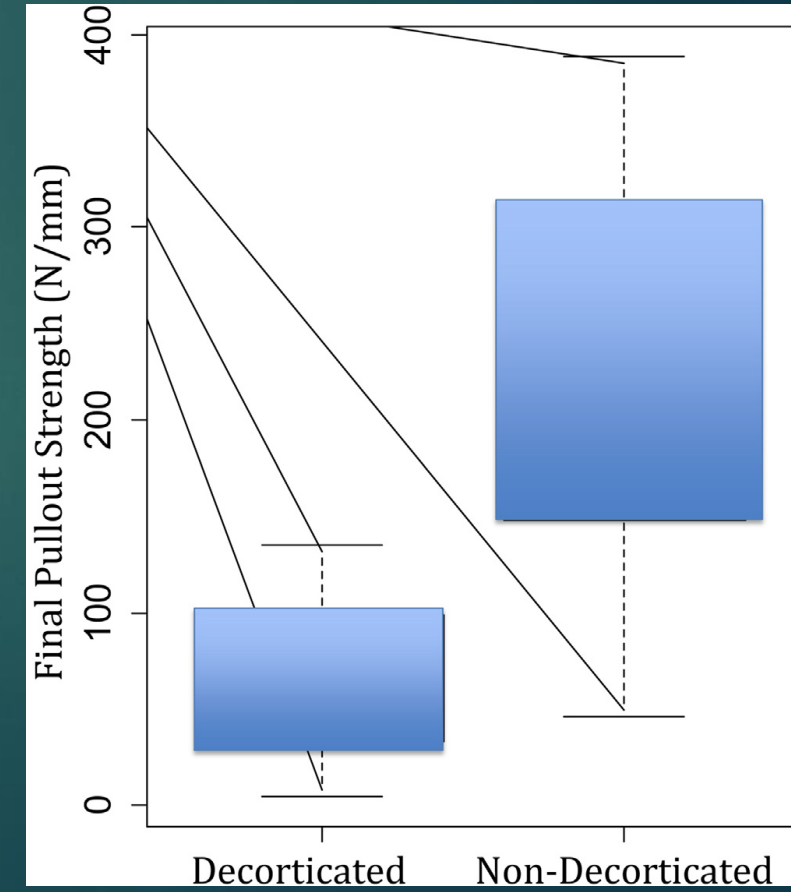
 - ▶ Decortication - minimize

 - ▶ Anchor characteristics

 - ▶ Technique



Hyatt et al. Arthroscopy 2016



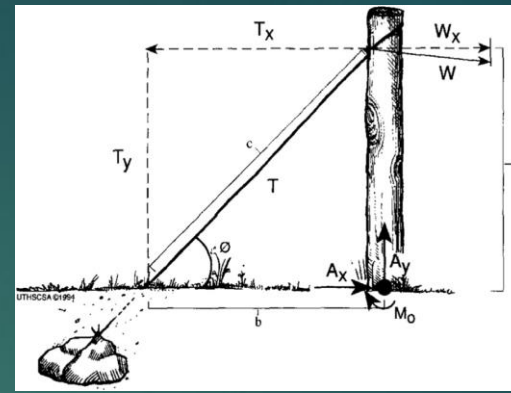
Anchor will not hold

- ▶ Prevention
 - ▶ Bone quality
 - ▶ Anchor characteristics
 - ▶ All-Suture Anchor (ASA)
 - ▶ Push-in v. Screw-in
 - ▶ Technique

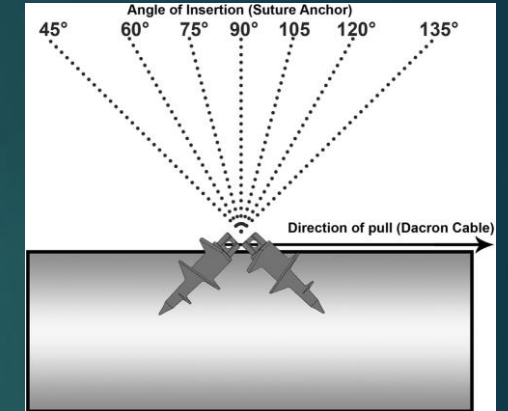


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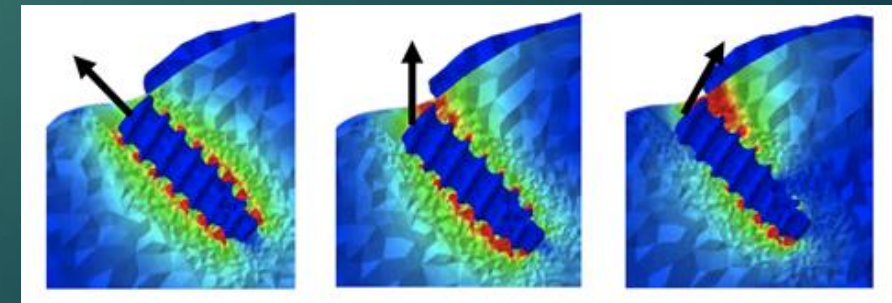
- ▶ Prevention
 - ▶ Bone quality
 - ▶ Anchor characteristics
 - ▶ Technique
 - ▶ Angle of insertion
 - ▶ Biomech lab does not duplicate clinical scenario
 - ▶ Anatomic limitations
 - ▶ Distance between anchors



Burkhart, Arthroscopy 1994, 2014



Clevenger et al. Arthroscopy 2014



Chae et al. JOR 2018

Anchor will not hold

▶ Prevention

- ▶ Bone quality

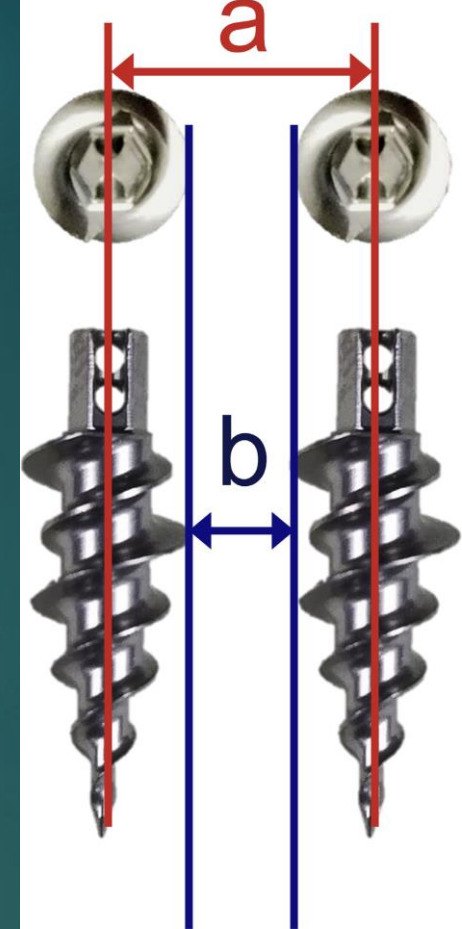
- ▶ Anchor characteristics

- ▶ Technique

 - ▶ Angle of insertion

 - ▶ Distance between anchors

 - ▶ 6 mm is minimal distance without decreasing pullout strength



Kawakami et al. Arthroscopy 2018

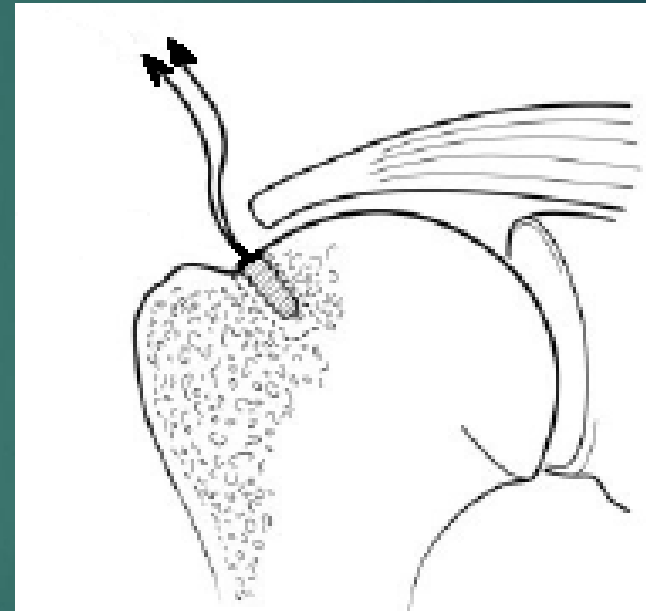
Anchor will not hold

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- ▶ Prevention
- ▶ Management



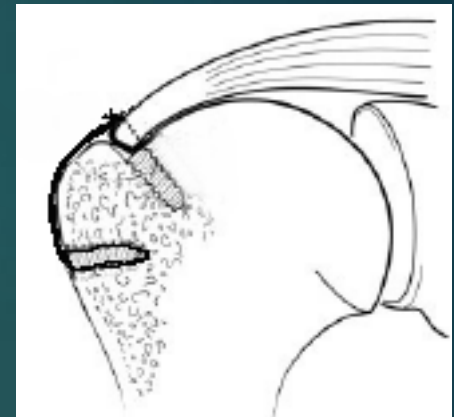
Anchor will not hold

- ▶ Management
 - ▶ Insertion
 - ▶ Resistance during insertion
 - ▶ Tug test



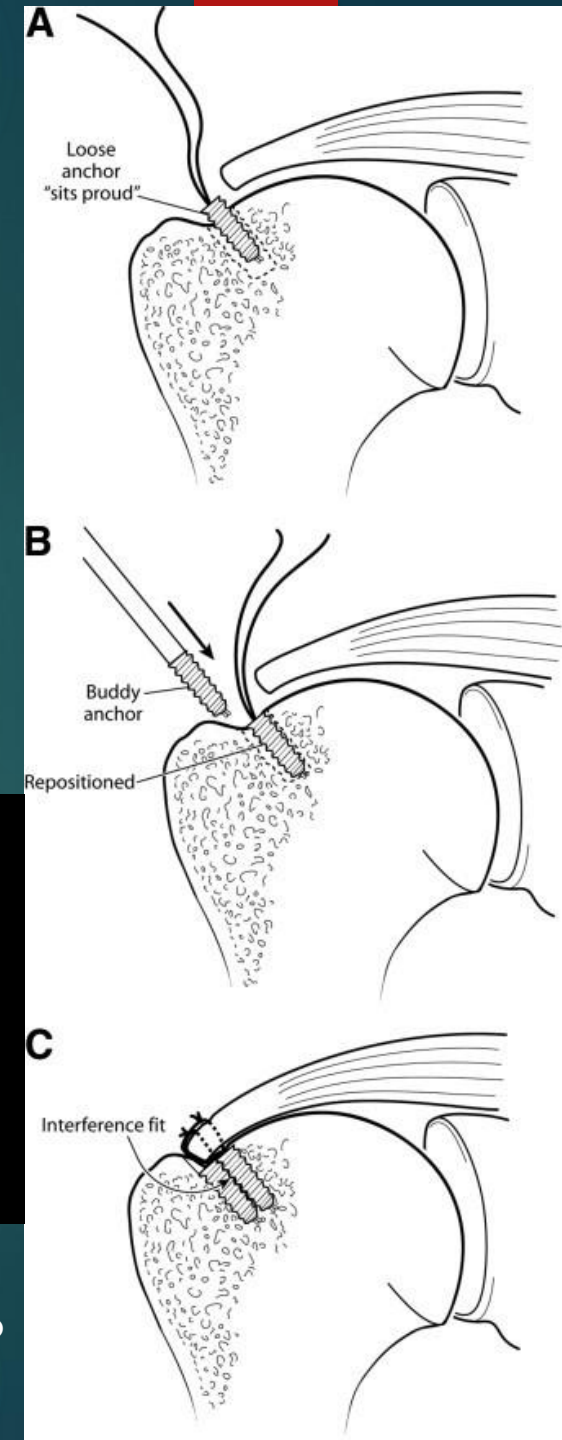
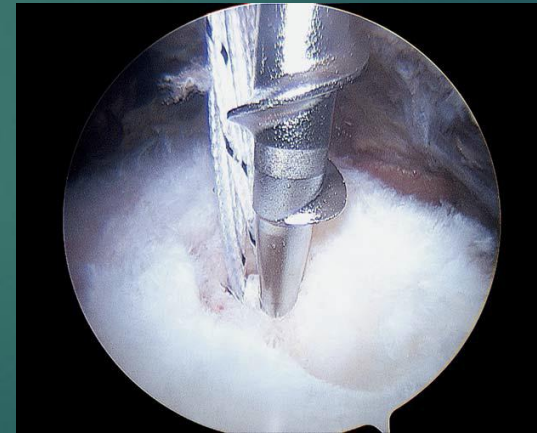
Anchor will not hold

- ▶ Management – decision making
 - ▶ Anchor fixation suboptimal but does not pull out
 - ▶ Leave anchor
 - ▶ Single row – augment with lateral anchor
 - ▶ Double row – placement of lateral row more distal
 - ▶ 2nd Buddy anchor – interference screw construct
 - ▶ Replace anchor
 - ▶ Bigger anchor - wider & more threads
 - ▶ Different location – more realistic with ASA anchors



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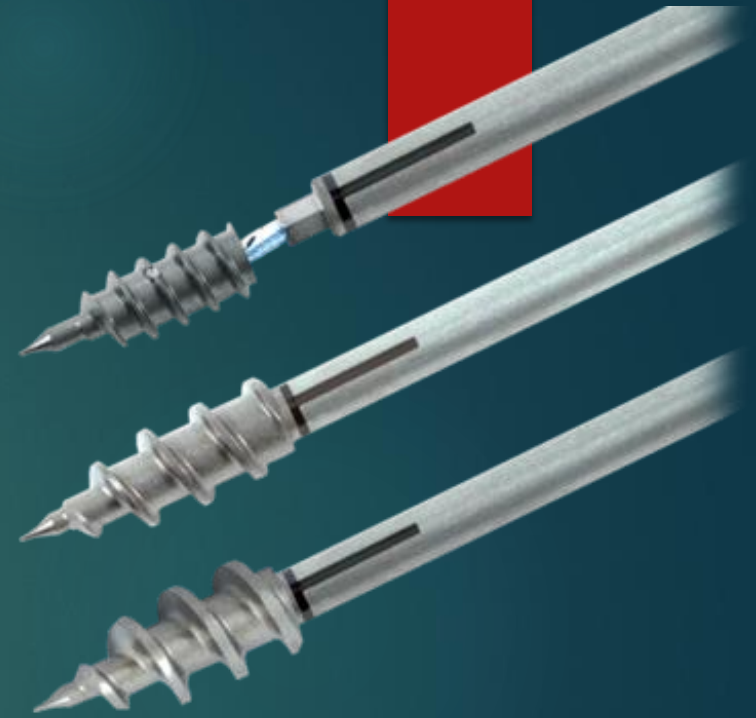
Jung et al. KSSTA 2021
Brady et al. Arthroscopy 2006
Denard & Burkhart Arthroscopy 2011

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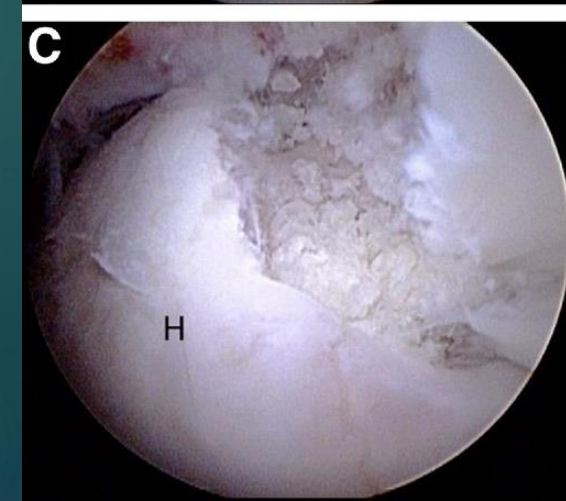
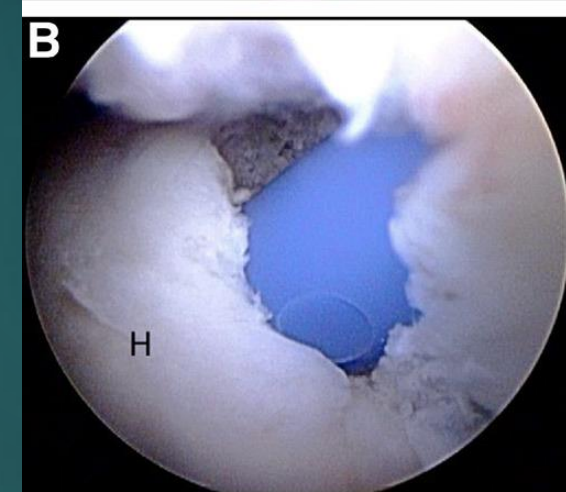
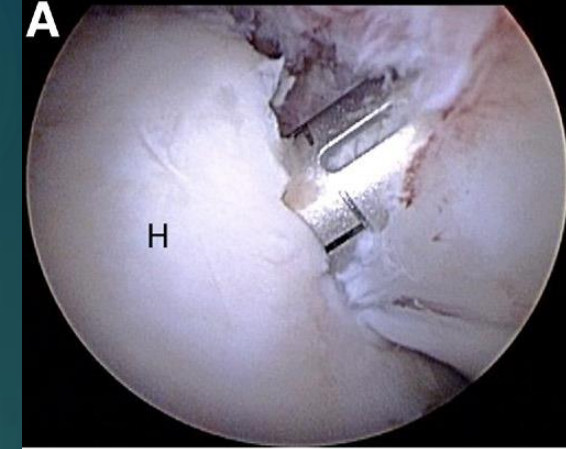
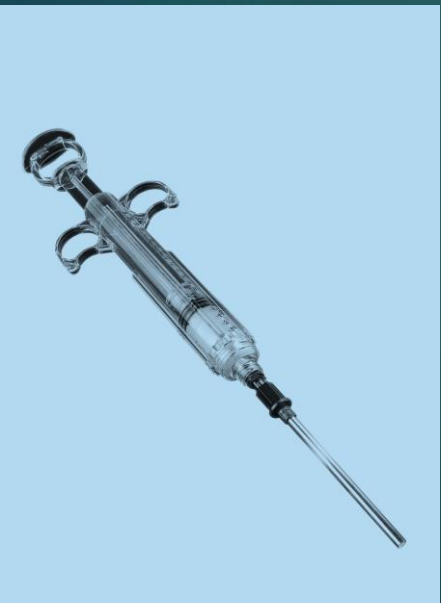
Anchor will not hold

- ▶ Management – decision making
 - ▶ Anchor pulls out
 - ▶ Anchor
 - ▶ New location – especially with ASA anchors
 - ▶ Replace with larger, threaded anchor
 - ▶ Modify location
 - ▶ Cancellous allograft – transfer & impact
 - ▶ Tricalcium Phosphate cement - inject



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 - ▶ New location – especially with ASA anchors
 - ▶ Replace with larger, threaded anchor
 - ▶ **Modify location**
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- ▶ Management

▶ Thank You

