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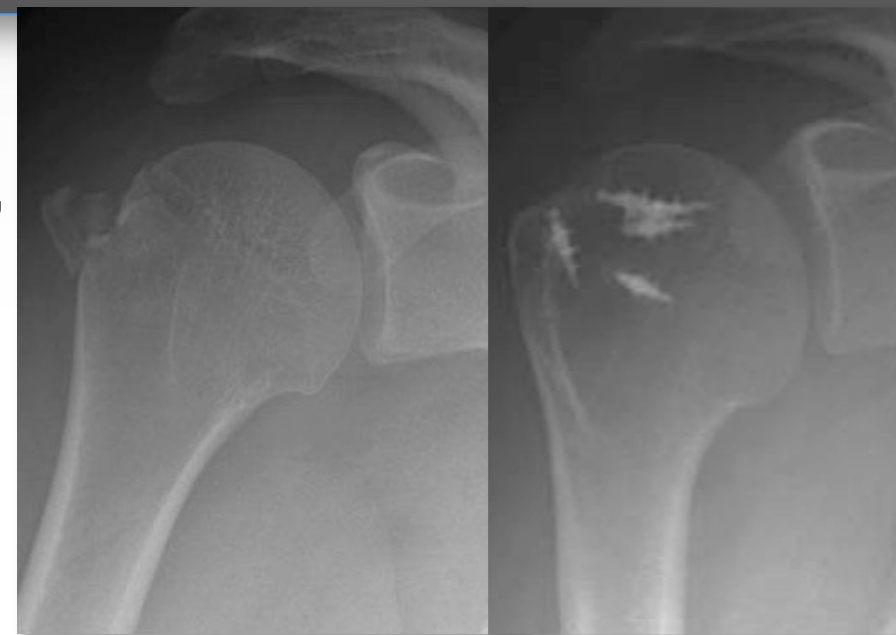


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Massachusetts
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Arthroscopic Repair of Displaced Greater Tuberosity Fractures: Outcomes and Radiographic Consolidation

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Disclosure

Dr. Narbona P.A.: I am Consultant for Arthrex

Vaquer M.: I have no financial conflicts to disclose

Olmos M.I.: I have no financial conflicts to disclose

Martinez R.: I have no financial conflicts to disclose

Arce G.: I have no financial conflicts to disclose

Ruffini G.: I have no financial conflicts to disclose

Carranza N.: I have no financial conflicts to disclose

No Potential Conflict of Interest
In this Presentation

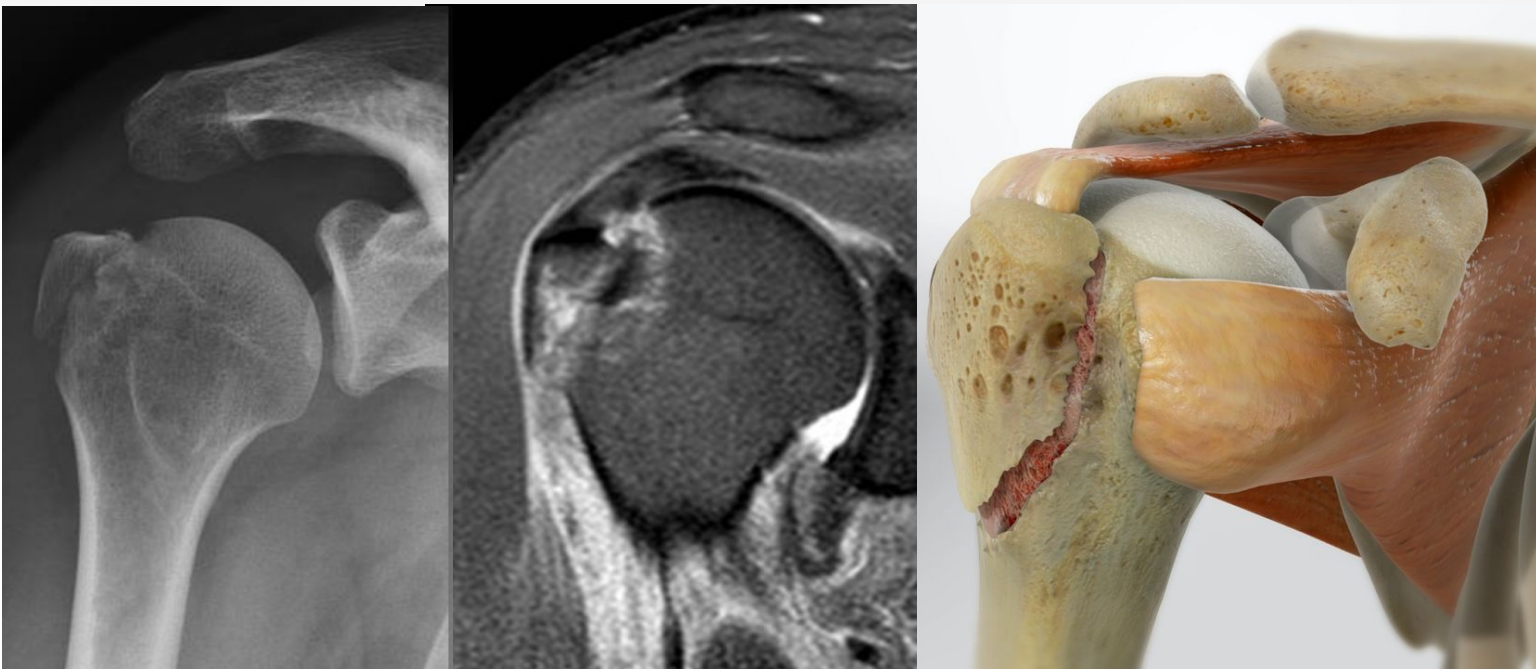
INTRODUCTION

Greater Tuberosity Fractures are 20% of Proximal Humerus Fractures

MRI → Play Important Roll to Diagnose specially Associated Lesions

Risk of Chronic Pain + Shoulder Dysfunction with Conservative Treatment

Arthroscopic Reconstruction is Ideal Indication to this type of Fractures



Indication
Arthroscopic Reconstruction

> 3-5 mm Displacement
High Functional Demand
< Complication
Better Mobility

INTRODUCTION

Advantages

- ↓ Soft Tissue Lesions
- ↓ Scar and adhesions
- ↓ Blood Loss
- ↓ No Radioscopy Needed
- Associated Lesions Treatment
- Optimal fragment mobilization
- Optimal visualization of the Fracture

Bone Bed

Disadvantages

- ↑ Surgical Skill Procedure
- ↑ Technically demanding
- ↑ Surgical Time
- Limitation on Large Fragment

Chillemi et al. Arthroscopy techniques 2021

Holt et al Arthroscopy techniques 2021

Lin et al. Journal of orthopaedic surgery and research 2020



PURPOSE

- Primary Purpose:

To analyze Functional and Radiographic Results in Patients with Greater Tuberosity Fracture Treated by Arthroscopy Technique with anchors.

Secondary Purpose:

To Evaluate Associated Pathologies

HYPOTHESIS

The Greater Tuberosity Fracture heal with an Arthroscopic Reconstruction?

METHODS

Type of Study: Retrospective, Cases Serie Study
Level of Evidence IV Between 2009 - 2021

- Population
- Average Age
- Sex
- Dominant Shoulder
- Acute Shoulder Dislocation Association
- Time Between Trauma and Surgery

17 Patients
52,2 y/o (26 - 86)
65% Female
58%
64%
87 days (7 - 365)



Inclusion Criteria

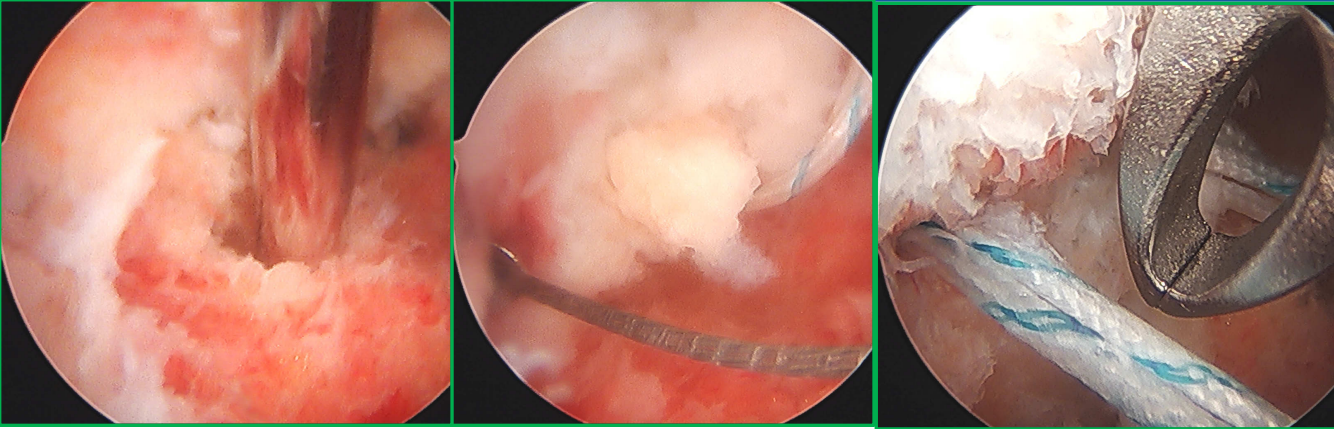
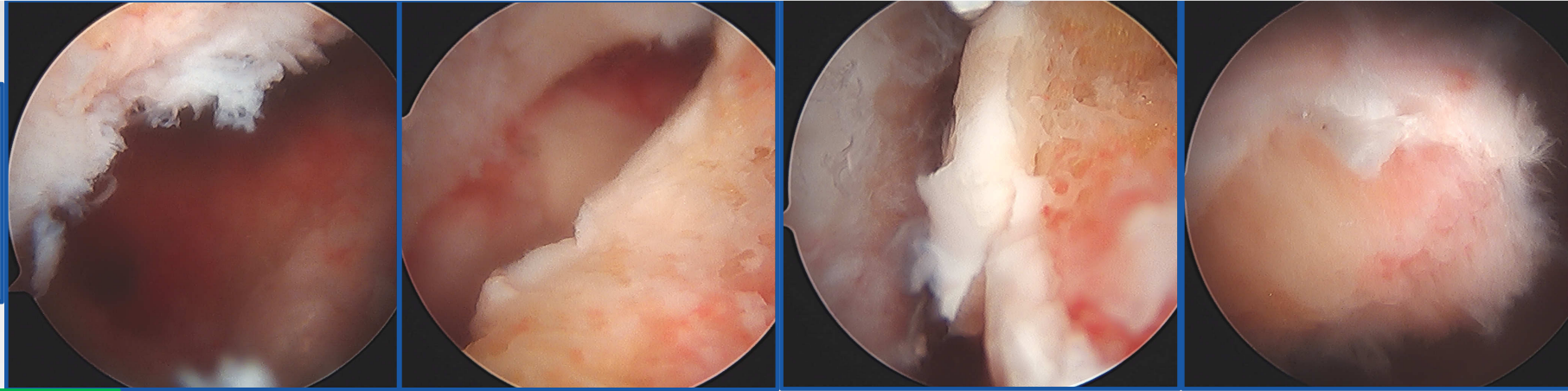
- Greater Tuberosity Fracture ($> 5\text{mm}$)
- Arthroscopic Reconstruction Technique (Transoseo Equivalent)
- Minimun F/U: 12 month

Exclusion Criteria

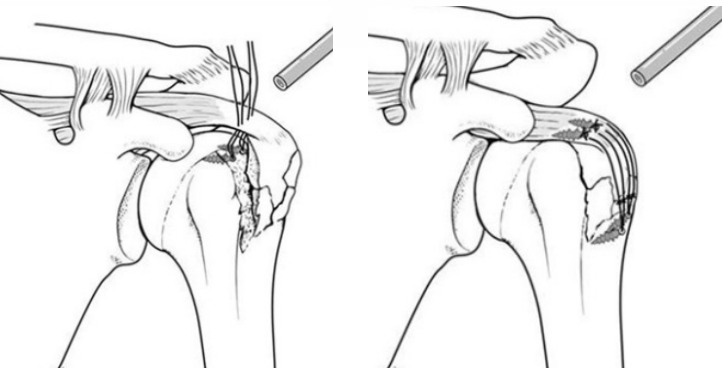
- Greater Tuberosity Fracture ($< 5\text{mm}$)
- Proximal Humerus Fractures (3-4 parts Fracutres)
- Patients with ORIF with Screw

METHODS: Surgical Technique. Beach Chair Position

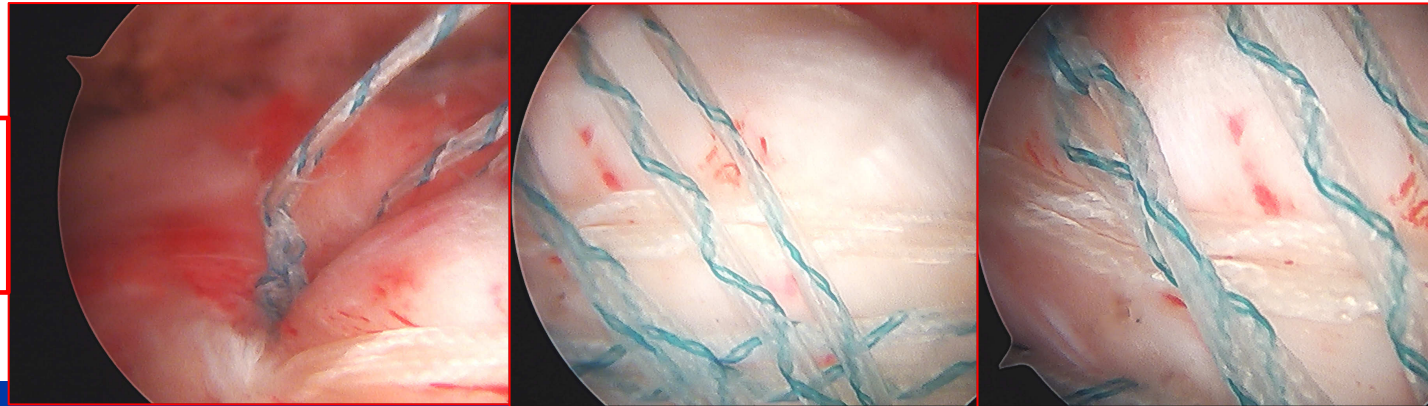
Bone Bed Preparation And Fragment Mobilization



Anchor Insertion and Suture Passing with Lassos



Final Repari



METHODS

• Preop

• Postop

• 1° month

• 6° month



Postsurgical Protocol

- 5 weeks Arm Holder
- Passive Range of Motion at 4 weeks
- Rehabilitation Begun at 1 month
- F/up XR → POP, 4, 6, 8 weeks, 6 month

RESULTS

- 100% of the cases with Intraop Anatomical Reduction
- Radiographic Union Between 6 to 8 weeks. → 7 weeks avg,

AROM 6° mes

FF	153°	(100 - 180)
ABD	117°	(90 - 150)
ER	53°	(50 - 70)
IR	T8	(T12 – T7)

SCORES > 10 meses

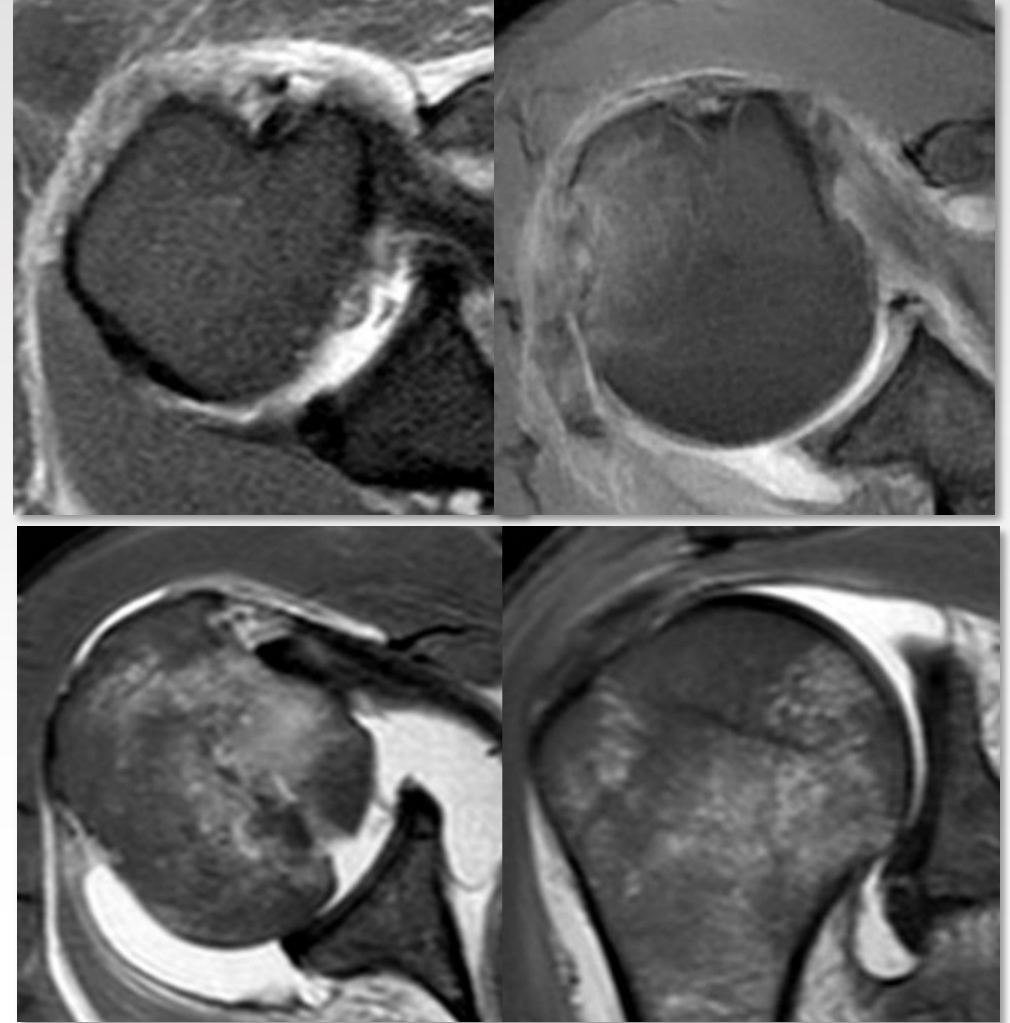
ASES	93,9	(70 - 100)
UCLA	3x3	(25 - 35)
SST	10,6	(7 - 12)

- No complications related to surgery were detected



RESULTS: Associated Lesions and Treatment

- 5 patients con LHB pathology
 - 2 Tenotomies
 - 3 Tenodesis
- 2 patients Partial Subscapular Lesion
 - 1 anchor Repair Technique
- 2 patients with Anteroinferior Bankart
 - Arthroscopic Reconstruction
- 2 patients Axillary Nerve Palsy after Dislocation (1 Recovery 3 month Later 1 Not Recovery)



Discusión

Results/Discussion

AUTHOR	Union Rate (%)	Number of Patients (n)
<i>Ji et al. Arthroscopy 2010</i>	100 %	16 (UCLA Score 3 Exc, 11 Good, 2 Poor results)
<i>Bahman et al. ASMAR 2021</i>	100 %	Excellent to Good results
<i>Tsikouris et al. Br J Sports Med 2013</i>	100 %	12 Athets 5 y. Fup. Excellents Results
<i>Maman et al. Orthopedics 2014</i>	100 %	Allow to Identify and Repair Associated Lesions
NARBONA, et. al	100% at 7 weeks	15 ptes Exc to Good Results 2 poor Results (preop Axillary Nerve Palsy)

LIMITATIONS

Retrospective study design

Small sample

One Surgeon Sample

No Comparison with Other Technique

CONCLUSION

The arthroscopic Reconstruction Technique for Displaced Greater Tuberosity Fractures with Double Row Anchor Fixation is a Feaseble Procedure with Satisfactory Functional Results, High Union Rate, with Good to Excellent Results and Early Mobility Recovery with No Complication.

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