

ARTHROSCOPIC IN-SITU BICEPS TENODESIS FOR THE TREATMENT OF MASSIVE IRREPARABLE ROTATOR CUFF TEARS

ePoster Number #13

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FACULTY DISCLOSURES

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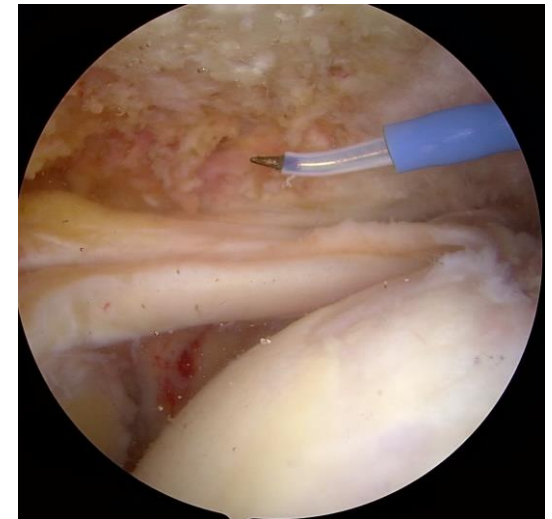
Stock or Stock Options in *embody*

Stock or Stock Options in *parcus*

No other authors have disclosures to report

INTRODUCTION

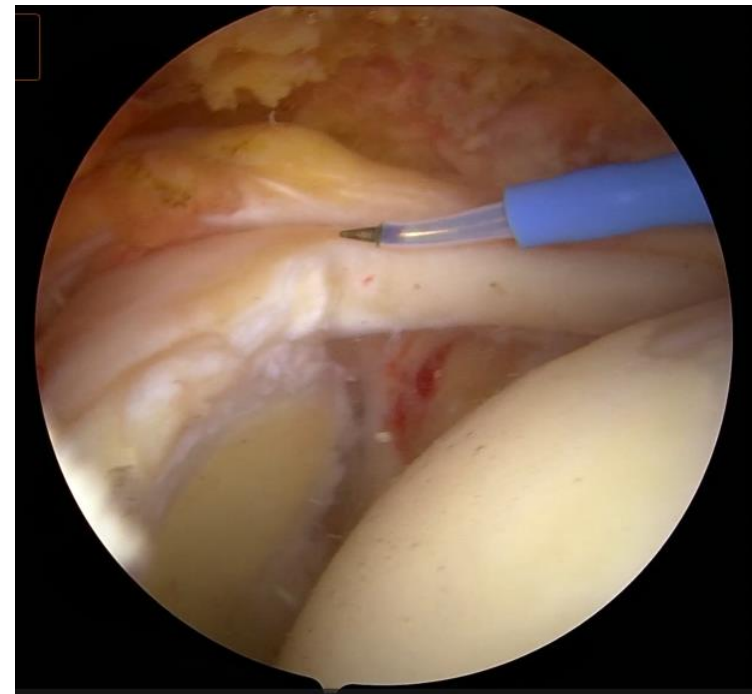
- Massive irreparable rotator cuff tears
 - Common and challenging problem
 - Many treatment options¹⁻³:
 - Debridement¹⁻³
 - Partial repair^{1,3}
 - superior capsular reconstruction (SCR)⁴
 - rTSA^{5,6}
 - Balloon²
- Limited evidence?



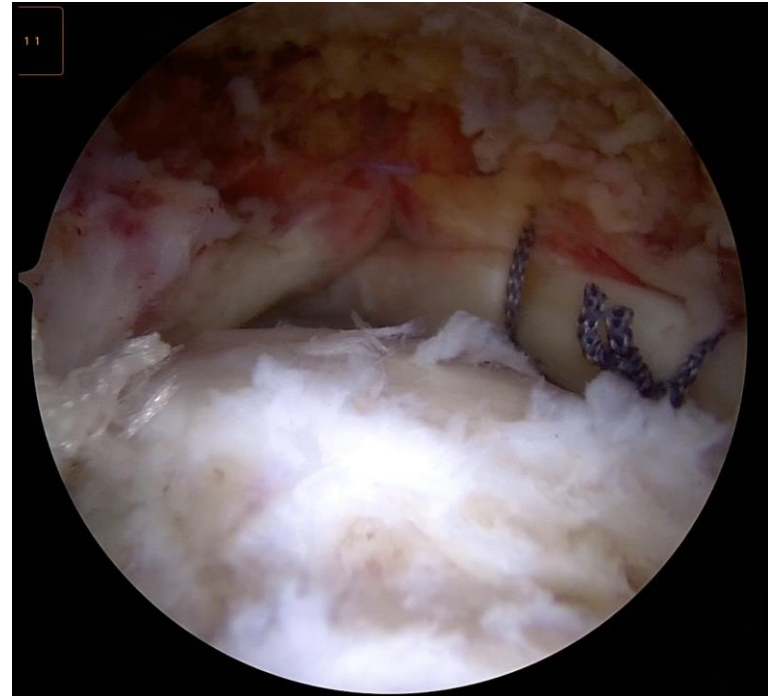
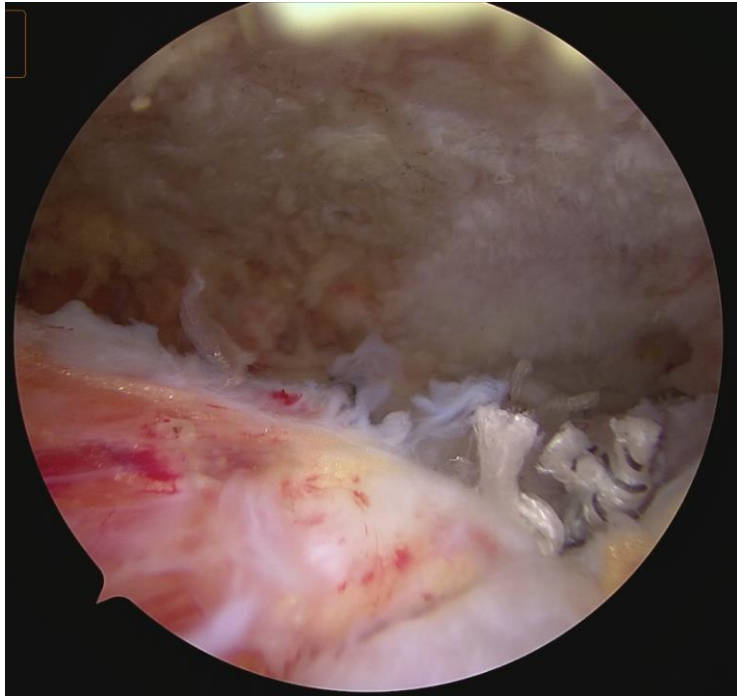
OBJECTIVES AND METHODS

Objective:

To evaluate an alternative technique to treat massive irreparable rotator cuff tears- a partial repair with an in-situ biceps tenodesis, effectively acting like a biologic SCR

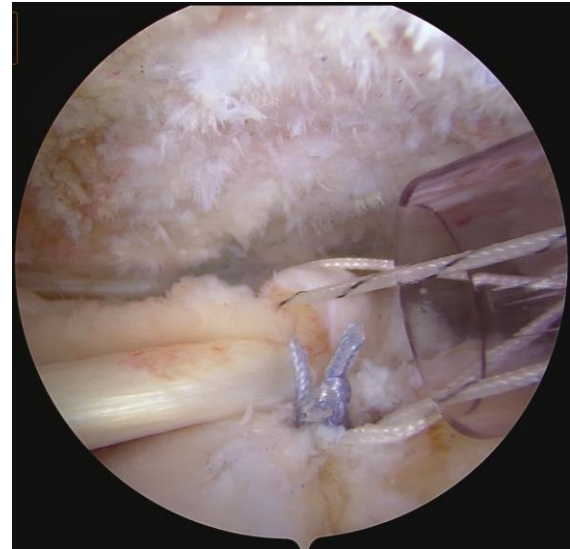
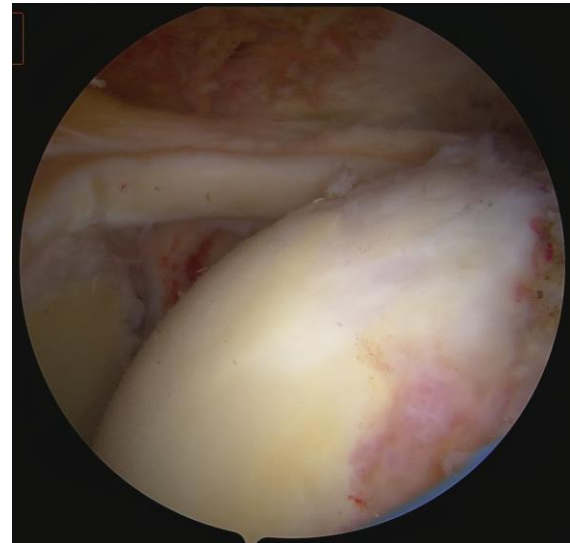


STATUS POST PARTIAL REPAIR WITH IN-SITU BICEPS TENODESIS



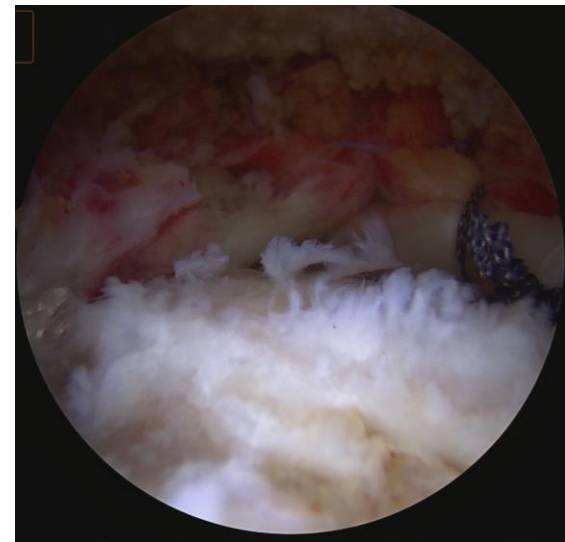
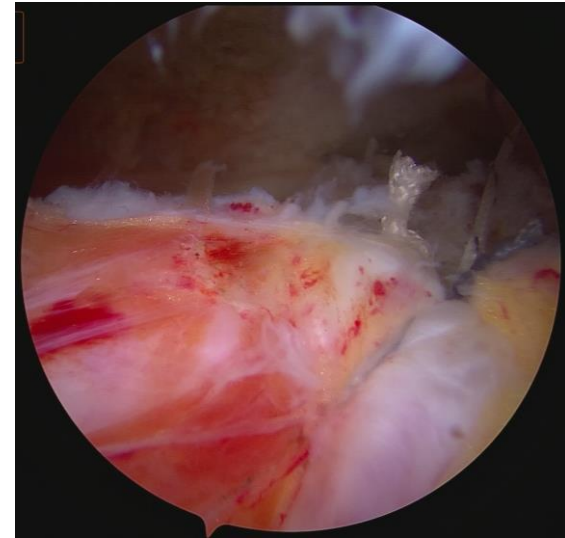
IN SITU SURGICAL TECHNIQUE

- Place Triple Loaded Anchor Just Behind Biceps Just Off Edge Of Articular Surface
- Arm In 20 Degrees Of Abduction
- Pass One Stitch Through And One Stitch Around Biceps. Third Stitch Passes Around Biceps And Through Interval Tissue.



IN SITU SURGICAL TECHNIQUE

- Repair As Much Of The Infraspinatus As Possible
- Tie Stump Of Supraspinatus To Biceps Using It As A Jump Graft.
- This Creates A Balanced Partial Repair
- Can Be Augmented With Various Biologic Options At Surgeon's Discretion



OBJECTIVES AND METHODS

Methods:

- Single surgeon
- Retrospective cohort from March 2017-January 2020
- Minimum 2 year follow up
- Preoperative MRI evaluation
- PROMS (ASES, VAS, SANE, VR-12)
- Compared to previously reported MCIDs

RESULTS

- 33 patients
 - 21 patients with complete preop scores
 - Mean age 61.6 ± 8.4
 - Mean follow up 30 months (24-58)
- Tear characteristics:
- 100% involved SST
 - 81.8% involved Infra
 - 52% with + Tangent Sign

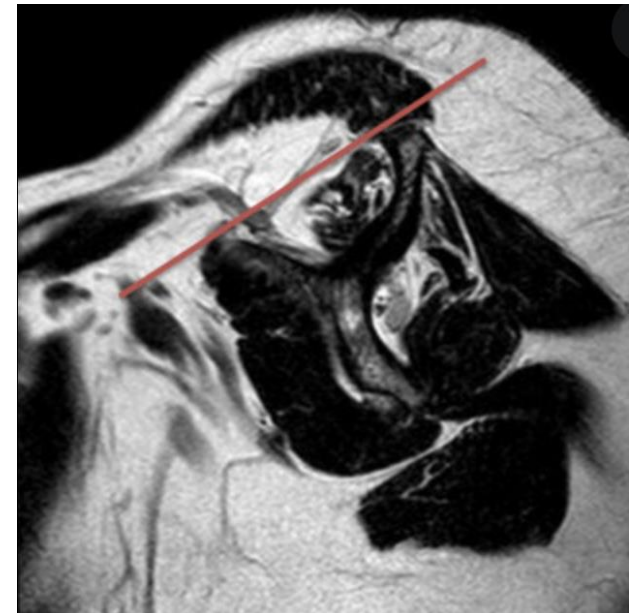
RESULTS

- Preop to postop:
 - ↓ VAS pain (71.4% MCID)
 - ↑ ASES (66.7% MCID)
 - ↑ SANE (71.4% MCID)
 - ↑ VR-12 physical
 - No difference VR-12 mental

RESULTS

Table I. Preoperative Rotator Cuff Quality

| Muscle | No. (%) |
|----------------------|-----------|
| Supraspinatus | |
| Low-grade FI | 14 (66.7) |
| High-grade FI | 7 (33.3) |
| Positive Tangent | 11 (52.4) |
| Full Thickness Tears | 21 (100) |
| Infraspinatus | |
| Low-grade FI | 7 (33.3) |
| High-grade FI | 14 (66.7) |
| Full Thickness Tears | 16 (76.2) |
| Teres Minor | |
| Low-grade FI | 16 (76.2) |
| High-grade FI | 5 (23.8) |
| Subscapularis | |
| Low-grade FI | 20 (95.2) |
| High-grade FI | 1 (4.8) |



RESULTS

Table II. Comparison of Outcome Scores Between Pre and Postoperative Care

| Outcome | Preoperative | Postoperative | p-value |
|----------------|---------------------|----------------------|----------------|
| VAS Pain | 4.2 (3.0, 6.1) | 1.6 (0.0, 2.7) | < 0.001* |
| ASES | 54.2 (44.4, 57.3) | 82.0 (66.7, 93.0) | < 0.001* |
| SANE | 31.0 (24.0, 51.0) | 75.0 (55.5, 90.0) | 0.001* |
| VR-12 Physical | 39.3 ± 7.6 | 49.7 ± 7.8 | < 0.001* |
| VR-12 Mental | 50.0 (42.8, 58.1) | 48.7 (42.4, 55.1) | 0.304 |

* *Denotes statistical significance*

LIMITATIONS

- Retrospective
- No ROM data
- No control group
- 12 patients missing pre-op data

CONCLUSION

- Viable and effective treatment
- PROMS good to excellent
- Majority of patients reaching previously reported MCID
- Useful tool when complete repair not possible with little down side

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