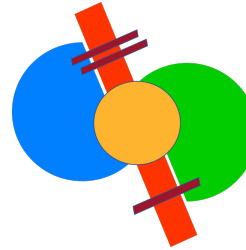




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Centro R.I.T.M.O.
Ricerca e Innovazione in Traumatologia,
chirurgia della Mano e Ortopedia
«Giorgio Brunelli»



Superior Capsule Reconstruction with Long Head of the Biceps Tendon for Massive Irreparable Rotator Cuff Tears

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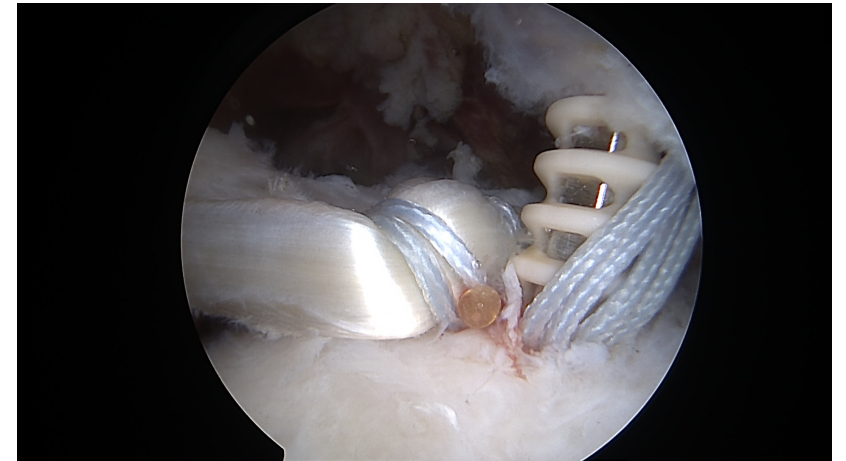
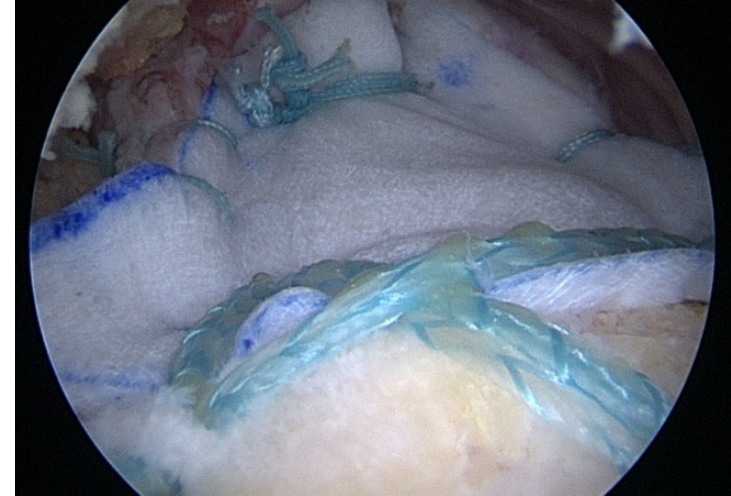
- Arthrex, Inc: Paid consultant; Paid presenter or speaker; Research support
- CONMED Linvatec: Paid presenter
- FGP srl: Research support
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Superior Capsular Reconstruction (SCR)

Main options

- Fascia lata autograft
- Extracellular dermal matrix
- **Long head of the biceps tendon (LHBT)**
- Hamstring autograft
- Tendon allograft



SCR with LHBT

- No donor-site morbidity
- Low operative time and cost
- Easy to manage during arthroscopy
- Adequate mechanical strength (vs FL)



Park 2018, El-Shaar 2018, Han 2019, Berthold 2020

Purpose

To evaluate the clinical outcome of arthroscopic SCR with LHBT for the treatment of massive irreparable rotator cuff tears (MIRCTs)

Hypothesis

SCR with LHBT can improve subjective and functional outcomes

Methods

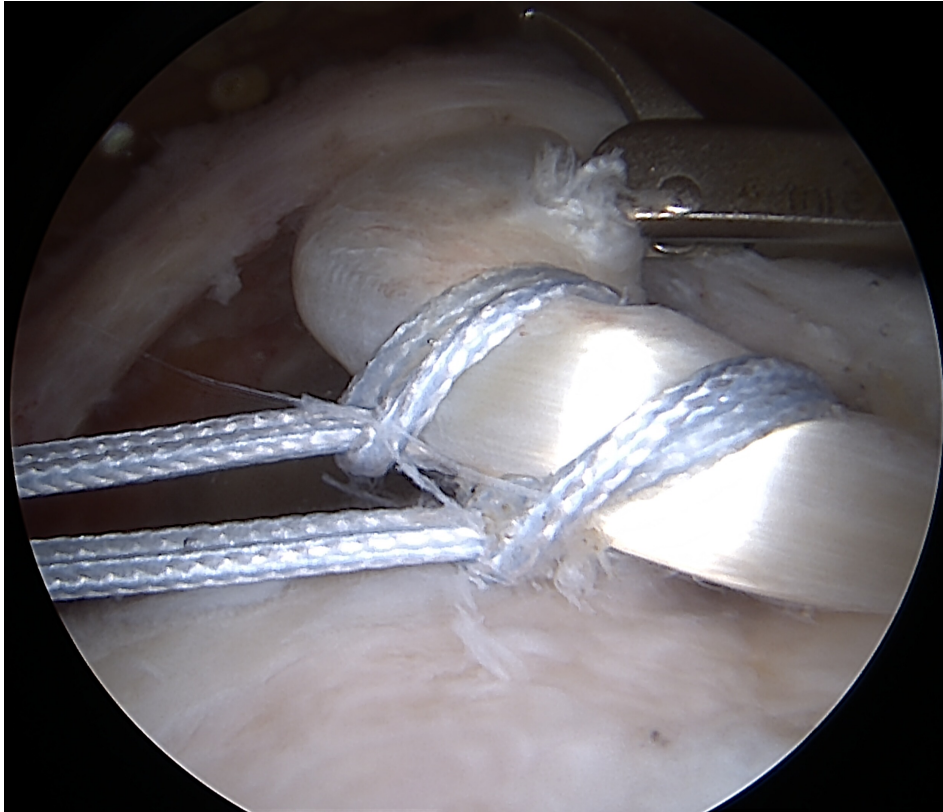
Study design

- Retrospective study

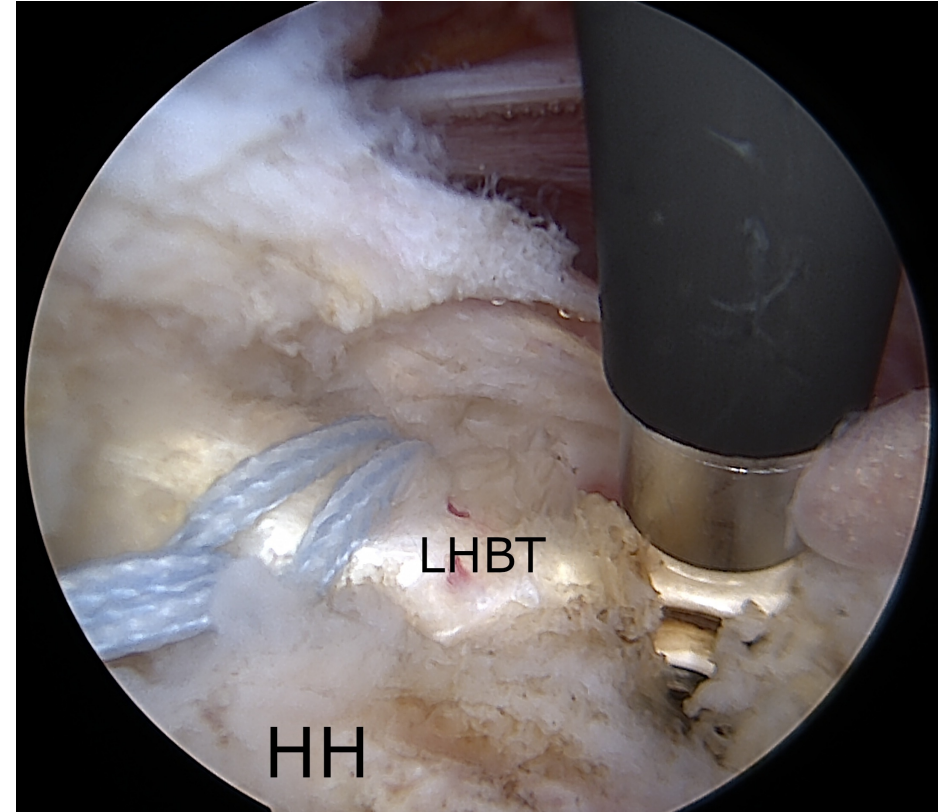
Participants

- Patients with MIRCTs of the posterosuperior rotator cuff who underwent arthroscopic SCR with autologous LHBT
- Follow-up > 24 months

Surgical technique



«Lasso-loop» suture configuration

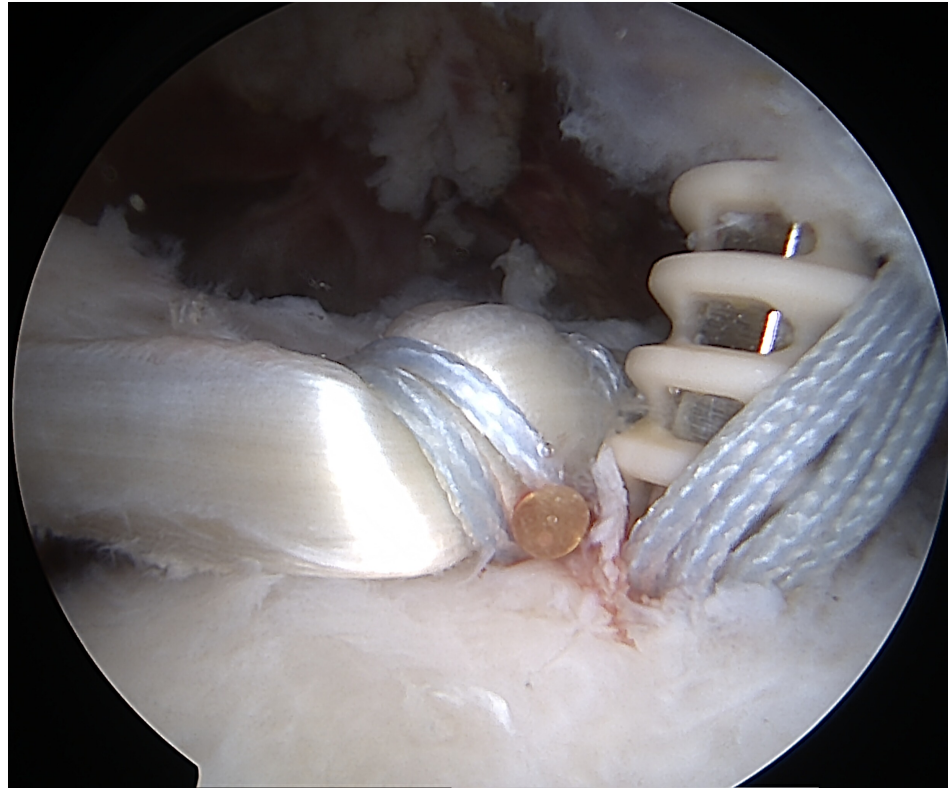


Distal tenotomy

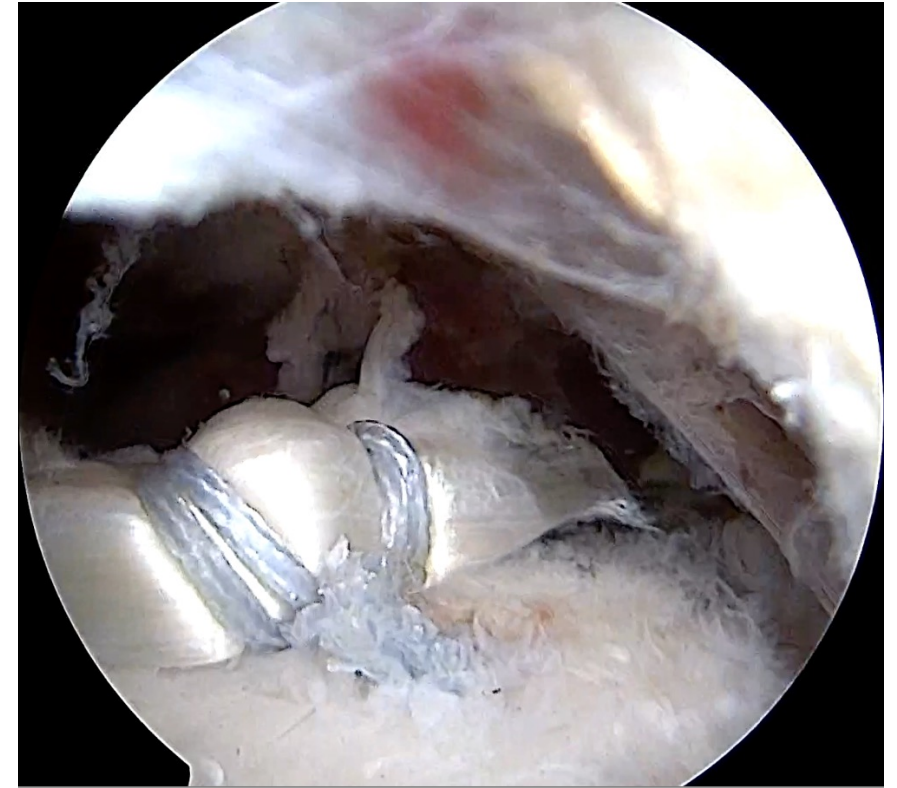
LHBT: Long Head Biceps Tendon

HH: Humeral Head

Surgical technique



LHBT fixation on
Supraspinatus footprint



Final result

Methods

Outcome measures

- Primary: ASES score
- Secondary
 - Quick-DASH
 - WORC

QuickDASH

Please rate your ability to do the following activities in the last week by circling the number below the appropriate response.

	NO DIFFICULTY	MILD DIFFICULTY	MODERATE DIFFICULTY	SEVERE DIFFICULTY	UNABLE
1. Open a tight or new jar.	1	2	3	4	5
2. Do heavy household chores (e.g., wash walls, floors).	1	2	3	4	5
3. Carry a shopping bag or briefcase.	1	2	3	4	5
4. Wash your back.	1	2	3	4	5
5. Use a knife to cut food.	1	2	3	4	5
6. Recreational activities in which you take some force or impact through your arm, shoulder or hand (e.g., golf, hammering, tennis, etc.).	1	2	3	4	5

	NOT AT ALL	SLIGHTLY	MODERATELY	QUITE A BIT	EXTREMELY
7. During the past week, to what extent has your arm, shoulder or hand problem interfered with your normal social activities with family, friends, neighbours or groups?	1	2	3	4	5

	NOT LIMITED AT ALL	SLIGHTLY LIMITED	MODERATELY LIMITED	VERY LIMITED	UNABLE
8. During the past week, were you limited in your work or other regular daily activities as a result of your arm, shoulder or hand problem?	1	2	3	4	5

Please rate the severity of the following symptoms in the last week. (circle number)

	NONE	MILD	MODERATE	SEVERE	EXTREME
9. Arm, shoulder or hand pain.	1	2	3	4	5
10. Tingling (pins and needles) in your arm, shoulder or hand.	1	2	3	4	5

	NO DIFFICULTY	MILD DIFFICULTY	MODERATE DIFFICULTY	SEVERE DIFFICULTY	SO MUCH DIFFICULTY THAT I CAN'T SLEEP
11. During the past week, how much difficulty have you had sleeping because of the pain in your arm, shoulder or hand? (circle number)	1	2	3	4	5

QuickDASH DISABILITY/SYMPOM SCORE = $\left(\frac{\text{sum of } n \text{ responses}}{n} - 1 \right) \times 25$, where n is equal to the number of completed responses.

A QuickDASH score may not be calculated if there is greater than 1 missing item.

Results

- Baseline characteristics

	SCR (19)
Mean Age	61.74 (\pm 6.13)
Sex	
Male	12 (63.2%)
Female	7 (36.8%)
Hand dominance	
Yes	17 (89.5%)
No	2 (10.5%)
Job	
Manual	10 (52.6%)
Sedentary	9 (47.4%)
Timing	11.21 (\pm 8.52) months
Follow-Up	26.61 (\pm 5.67) months



Results

- Comparison between preoperative and postoperative outcomes

	Baseline	Follow-Up	P value
QuickDASH	57.06 ± 18.2	26.6±29	<0.0001
WORC	32.34 ± 14.67	72.3±29.9	<0.0001
ASES	29.56 ± 14.98	77.9±23.4	<0.0001

Conclusions

Arthroscopic SCR with LHBT for the treatment of MIRCTs provides
satisfactory subjective and functional outcomes

Limitations

- Study design (retrospective)
- Sample size
- No comparative group

References

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