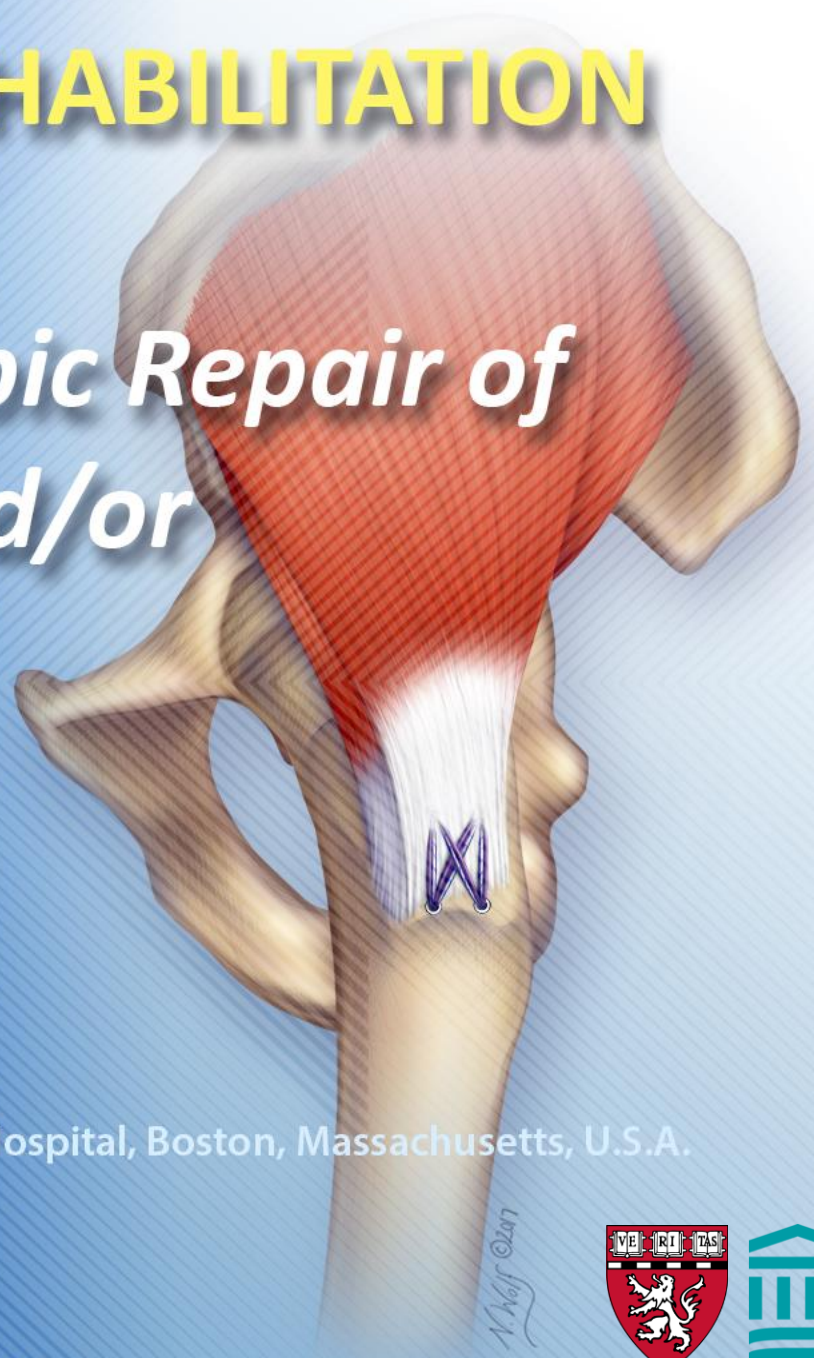
A COMPREHENSIVE 6-PHASE PREHABILITATION AND REHABILITATION PROGRAM *for Patients Undergoing Endoscopic Repair of Full-Thickness Gluteus Medius and/or Minimus Tears*



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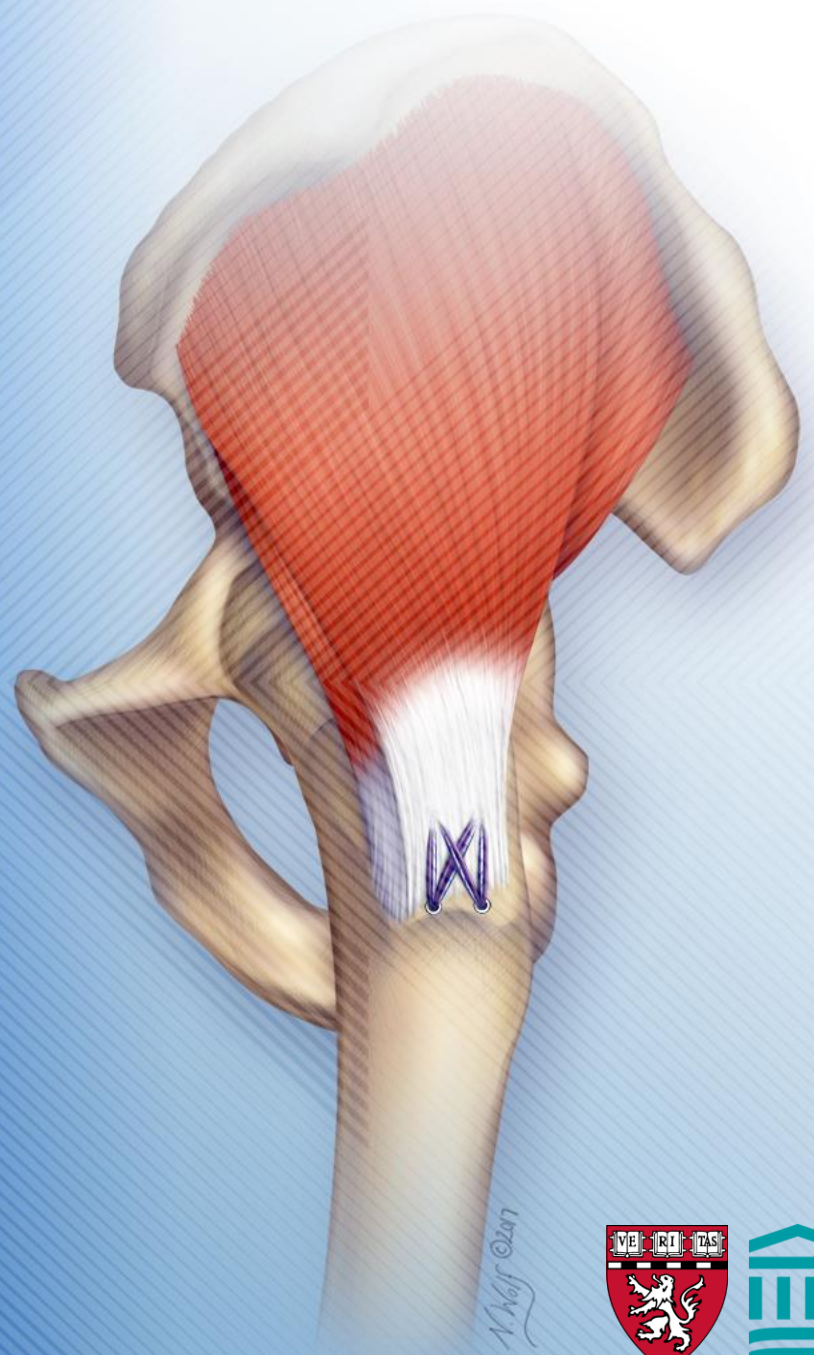
DISCLOSURES

- *Research Support provided by:*
- *The Conine Family Fund for Joint Preservation*

- I (and/or my co-authors) have nothing to disclose directly related to this talk.

- I have no conflicts.

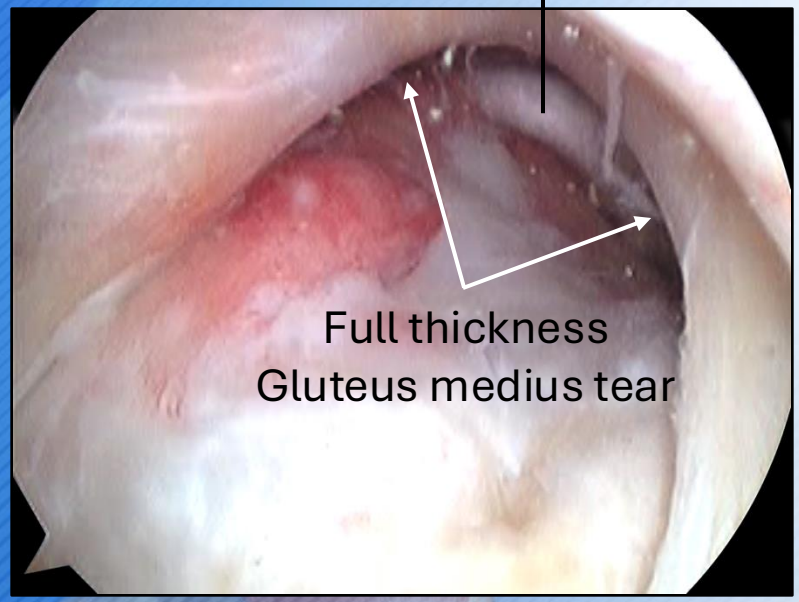


BACKGROUND

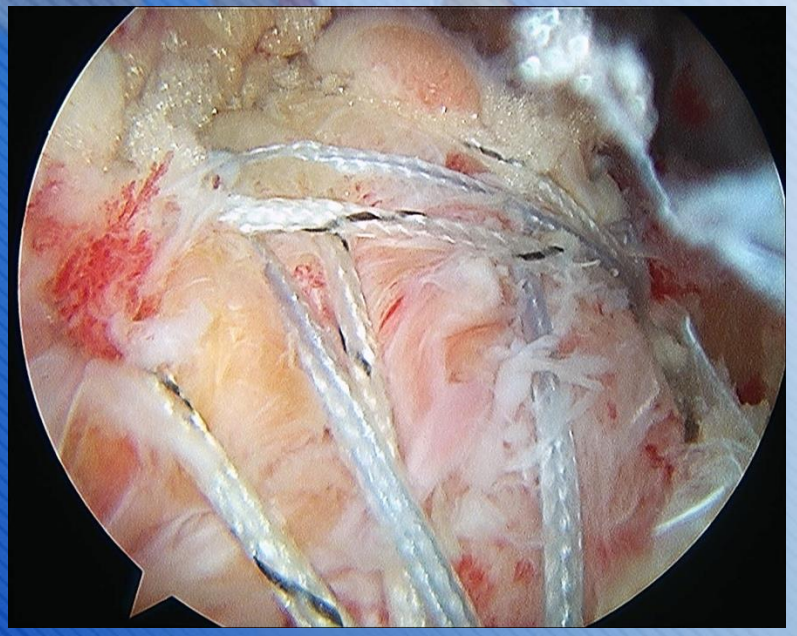
- Most patients undergoing endoscopic repair for gluteus medius and/or minimus tears
  - No formal pre-operative physical therapy
- Previous rehabilitation protocols
  - Fail to consider risks of surgical repair site disruption
    - Early hip abduction, strengthening exercises in intermediate post-operative period

Study Aims

- Comprehensive prehabilitation & rehabilitation protocol
- Demonstrate its efficacy
  - Reporting mid-term patient-reported outcome measures (PROMs)



Transosseous equivalent repair



METHODS

- Prospective study
  - Patients ≥ 18 years old
  - Minimum 2-year follow-up
  - Endoscopic repair of symptomatic full-thickness gluteus medius and/or minimus tendon tears
- Tears classified intra-operatively
  - Full-thickness
    - tear involving > two-thirds the width of the tendon
  - Partial-thickness
    - tear involving ≤ two-thirds the width of the tendon
- All patients followed a standard 6-phase prehabilitation/rehabilitation protocol:

1. Prehabilitation
   - 3 months pre-operatively
2. Immediate Post-operative Recovery
   - 0-6 weeks post-operatively
3. Endurance and Strength
   - 6-12 weeks post-operatively
4. Balance, Coordination, and ROM
   - 3-6 months post-operatively
5. Home Exercise/physical therapy
   - 6-12 months post-operatively
6. Gradual Return to Sport/Recreational Activity
   - 12-24 months post-operatively

RESULTS

- **26 patients met inclusion criteria**
  - **Age 67.5 ± 7.2 (range: 48-81)**
  - **BMI 28.8 ± 4.1**
  - **76.9% female**

Table 1. Patient demographics

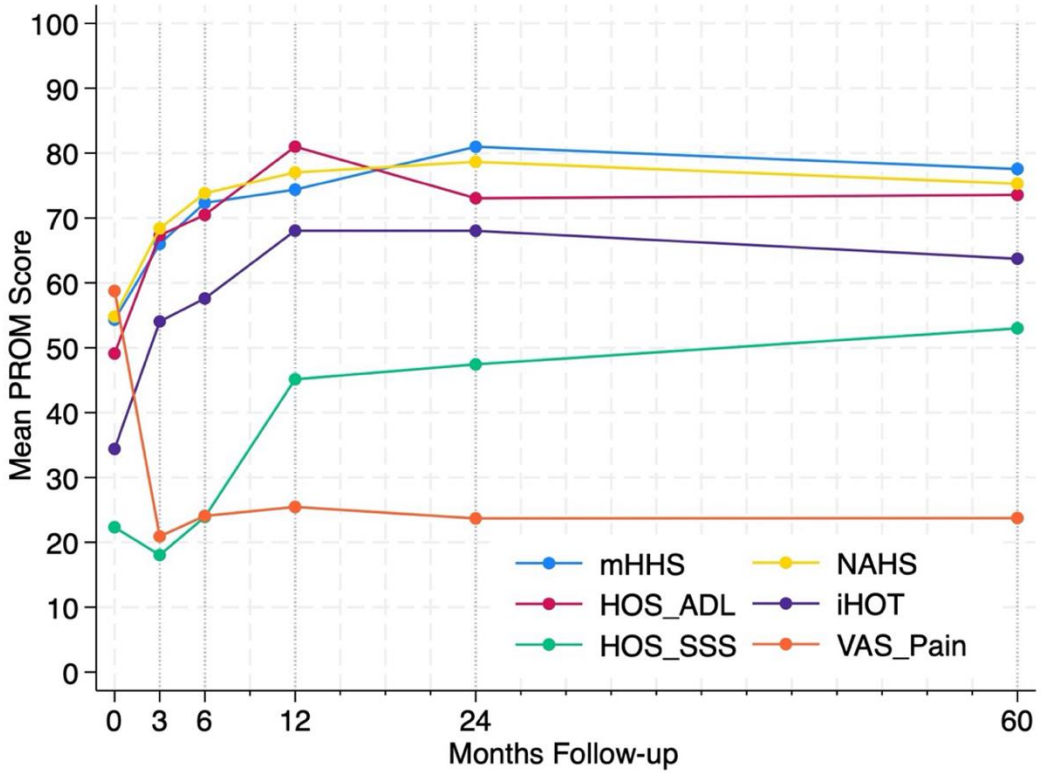
	Patients (n=26)
Length of follow-up, years	3.2 ± 1.4 (2.0 – 6.0)
Symptom duration, years	4.7 ± 2.4
Injury onset	
Spontaneous	24 (92.3%)
Traumatic	2 (7.7%)
Age, years	67.5 ± 7.2 (48 – 81)
BMI, kg/m^2	28.8 ± 4.1 (21.2 – 36.5)
Sex, n (%)	--
Female	20 (76.9%)
Male	6 (23.1%)
Laterality, n (%)	--
Left	15 (57.7%)
Right	11 (42.3%)
Tear Location	--
Gluteus Medius	14 (38.5%)
Gluteus Minimus	2 (7.7%)
Gluteus Medius and Minimus	10 (53.8%)
Gluteus-Score-7 (GS7), points	4.8 ± 1.2 (2 – 7)
Grade 1 Tear (1 point)	3 (11.5%)
Grade 2 Tear (2 point)	11 (42.3%)
Grade 3 Tear (3 point)	12 (46.2%)
Smoking (1 point)	13 (50%)
Psychiatric history (1 point)	12 (46.2%)
Back pain (1 point)	13 (50%)
Trendelenburg sign/gait (1 point)	26 (100%)
GS7 success/failure cut-offs	
≤ 2 points (success)	1 (3.9%)
≥ 4 points (failure)	23 (88.5%)

*Data are reported as mean ± standard deviation or No. of patients (%). Boldface denotes statistical significance ($p<0.05$).
Abbreviations: BMI, body mass index; GS7, gluteal-score-7.

RESULTS

- After endoscopic repair & following the patient-guided rehabilitation protocol
  - Significant improvements in all PROMs
    - Except HOS-SSS at 3-, 6-, 12-, 24-, & 60-month follow-up
      - Figure 1
- Despite a high overall GS7 score,
  - High rates of 2-year MCID
    - By end of Phase 6 of the 2-year rehabilitation protocol
      - Table 2

Figure 1: Patient-reported outcome measures at 3-, 6-, 12-, 24-, and 60-month follow-up



VAS Pain score was multiplied x 10 for graphing purposes Abbreviations: mHHS, modified Harris Hip Score; NAHS, Nonarthritic Hip Score; HOS-ADL, Hip Outcome Score-Activities of Daily Living; HOS-SSS, Hip Outcome Score-Sports Specific Subscale; iHOT-12, 12-item International Hip Outcome Tool; VAS, Visual Analog Scale.

Table 2. 2-year MCID Achievement Rates

	Threshold	Achievement Rate (n=26)
mHHS	10.52	20 (76.9%)
HOS-ADL	10.93	19 (73.1)
HOS-SSS	15.28	16 (61.5%)
iHOT-12	13.34	20 (76.9%)

Abbreviations: MCID, minimal clinically importance difference; modified Harris Hip Score; HOS-ADL, Hip Outcome Score-Activities of Daily Living; HOS-SSS, Hip Outcome Score-Sports Specific Subscale; iHOT-12, 12-item International Hip Outcome Tool.

CONCLUSION

- Patients who underwent prehabilitation/rehabilitation protocol
  - Endoscopic repair of full-thickness gluteus medius and/or minimus tears
  - Achieved significant improvements in functional outcomes
    - Despite high risk of post-operative failure

- Findings highlight value of implementing
  - Formal prehabilitation
  - Patient-guided rehabilitation protocol
    - Avoids early hip abduction, strengthening exercises
      - in intermediate post-operative period

THANK YOU

Massachusetts General Hospital