Practice Patterns for the Treatment of Acute Proximal Hamstring Ruptures

Start of Block: Letter of Information
Letter of Information and Consent

Project Title: Practice patterns for the treatment of acute proximal hamstring ruptures

Principal Investigator: Dr. Ryan Deegan

Co-investigator: Dr. Robert Giffin

Invitation to Participate in Research:
You are invited to participate in our research. This study aims to explore practice patterns in the treatment of acute proximal hamstring ruptures. All practicing orthopedic surgeons holding membership with the Canadian Orthopedic Association (COA) and/or International Society for Hip Arthroscopy (ISHA) and/or belong to the Fowler Kennedy Fellows Alumni are eligible to participate. We are inviting approximately 200 orthopedic surgeons who belong to these associations to participate.

Study Information:
This is a survey-based study. Questions have been designed to identify factors that may guide clinical decisions in the management of Achilles tendon injury. Survey responses will help us describe current opinion and practice trends among orthopaedic surgeons internationally.

Participation:
Participation in this research is voluntary. There are no anticipated risks and/or benefits to your involvement.

Should you choose to participate, the survey will require 10-15 minutes to complete. Submitted responses cannot be changed or revoked.

You will receive two emails, at weekly intervals that will serve as reminders of your invitation to participate in this study. There will be no further attempts to contact you thereafter.

Compensation:
There is no compensation for your participation in this research.

Confidentiality:
Your email invitation has been generated by the COA, ISHA and/or the Fowler Kennedy Fellows Alumni. Your contact information has not been shared with members of the research team and will remain confidential.
All survey responses will be processed in aggregate to ensure anonymity and all data will be used for scholarly purposes only. Gathered data will be stored securely for a period of 15 years. Data will not contain personal identifiers and will not be shared with third parties.

Representatives of the University of Western Ontario Health Sciences Research Ethics Board may require access to study-related documents to oversee the ethical conduct of this study.

Representatives of Lawson Quality Assurance Education Program may require access to study-related documents to ensure that proper laws and guidelines are followed.

If you have any questions about your rights as a research participant or the conduct of this study, you may contact The Office of Human Research Ethics (519) 661-3036, email: ethics@uwo.ca.

For any other inquiries please contact one of the listed project investigators.

Warm Regards,

**Ryan Degen, MD, FRCS (c)**
Associate Professor of Orthopaedic Surgery
Fowler Kennedy Sport Medicine Clinic
3M Centre
Western University
London, ON, Canada
N6A 3K7
(519) 661-4121

**Co-Investigator:**

**Robert Giffin, MD, FRCS (c)**
Associate Professor of Orthopaedic Surgery
Fowler Kennedy Sport Medicine Clinic
3M Centre
Western University
London, ON, Canada
N6A 3K7
(519) 661-4121

**Consent**

You do not waive any legal right by consenting to this study. By starting the survey you agree that you have read the Letter of Information and agree to participate in our research.
Do you see patients with proximal hamstring ruptures?

- Yes
- No

Do you treat them yourself or refer them elsewhere?

- Treat them myself
- Refer elsewhere

If you refer, to what specialty/subspecialty?

_____________________________________________________________________

End of Block: Default Question Block

Start of Block: Experience

How many acute proximal hamstring ruptures/avulsions have you treated?

- 0-5
- 5-10
- 10-20
- 20-40
- >40
Roughly how many have you treated per year?

- 0-5
- 5-10
- 10-20
- >20

Do you think proximal hamstring injuries are being missed or delayed in being diagnosed?

- Yes
- No

Have you seen an increase in the number of referrals of patients with these injuries?

- Yes
- No

What proportion have you treated operatively vs. non-operatively

- _____ Operative
- _____ Non-operative
Have you changed your management of these injuries over the past few years?

- More operative management
- No change
- More non-operative management

How many acute proximal hamstring ruptures/avulsions have you surgically repaired?

- 0-5
- 5-10
- 10-20
- 20-40
- >40

Roughly how many per year?

- 0-5
- 5-10
- 10-20
- >20

End of Block: Experience

Start of Block: Diagnosis
What is your preferred imaging modality to confirm the diagnosis?

- Ultrasound
- MRI
- Both

Have you seen patients with associated injury to their sciatic nerve?

- Yes
- No

What proportion of all ruptures present with these symptoms?

<table>
<thead>
<tr>
<th>Percentage of patients with sciatic nerve symptoms</th>
</tr>
</thead>
</table>

Have you ever ordered EMG or nerve conduction studies on patients with sciatic nerve symptoms following injury?

- Yes
- No

End of Block: Diagnosis

Start of Block: Treatment Options
Do you believe there is a role for surgical management of proximal hamstring ruptures?

○ Yes
○ No

What are your surgical indications? Please rank in order

____ # of tendons involved (2+)
____ Amount of retraction (>2cm)
____ Neurologic symptoms
____ Patient age
____ Activity level
____ Concern for post-operative weakness

Do you have a cut off from time of injury to presentation after which you will not perform surgical repair?

○ Yes
○ No

If yes, what duration (in weeks)?

________________________________________________________________

End of Block: Treatment Options

Start of Block: Surgical Technique

What incision do you use?

○ Transverse gluteal incision
○ Vertical incision
○ Variable depending on tendon retraction
How many suture anchors do you use for repair in a complete 3-tendon avulsion with >2 cm retraction?

- 1
- 2
- 3
- 4
- 5

Does retraction alter your surgical approach (i.e. greater retraction = vertical longitudinal incision)?

- Yes
- No

What is your approach to managing the sciatic nerve?

- Routine neurolysis
- Neurolysis only if symptomatic
- Neurolysis only if chronic (>4 weeks)
- No neurolysis

End of Block: Surgical Technique

Start of Block: Post-op Management
Do you use routine DVT prophylaxis?

- Yes
- No

Which type of DVT prophylaxis, and for what duration?

________________________________________________________________

Do you use a hip orthosis?

- Yes
- No

How long do you use a hip orthosis for, and what hip ROM do you allow immediately post-op?

________________________________________________________________

Do you use a knee orthosis?

- Yes
- No

How long do you use a knee orthosis for, and what hip ROM do you allow immediately post-op?

________________________________________________________________

End of Block: Post-op Management

Start of Block: Rehab Protocol
Weight bearing immediately post-op

- Non-weight bearing
- Toe touch/foot-flat (~20 lbs)
- 50% weight bearing
- Weight-bearing as tolerated (WBAT)

If WBAT, any specifications on limb position?

How long do you wait before allowing strengthening (in weeks)?

How long do you wait before allowing a return to sport (in months)?

Do you use objective criteria for return to sport (please describe)

End of Block: Rehab Protocol

Start of Block: Outcomes
How do you think patients do with non-operative treatment of this injury?

- Excellent
- Good
- Fair
- Poor

How do you think patients do with operative treatment of this injury?

- Excellent
- Good
- Fair
- Poor

Do you think surgical repair improves outcomes over non-operative treatment?

- Yes
- No

Have you seen patients with persistent complaints of posterior knee pain or knee instability especially in patients treated non-operatively?

- Yes
- No

End of Block: Outcomes

Start of Block: Complications
Have you experienced complications associated with non-operative management? Choose all that apply

- [ ] Posterior knee pain
- [ ] Knee instability
- [ ] "Hamstring syndrome" with sciatic nerve irritation
- [ ] Posterior thigh pain/cramping

Have you experienced complications associated with operative management? Choose all that apply

- [ ] Hematoma
- [ ] Infection
- [ ] Numbness posterior thigh
- [ ] Sciatic nerve injury
- [ ] Buttock pain
- [ ] Failed repair

End of Block: Complications