



**THE OHIO STATE
UNIVERSITY**

WEXNER MEDICAL CENTER

Outcomes of Repair of Radial Meniscus Tears

Poster #88

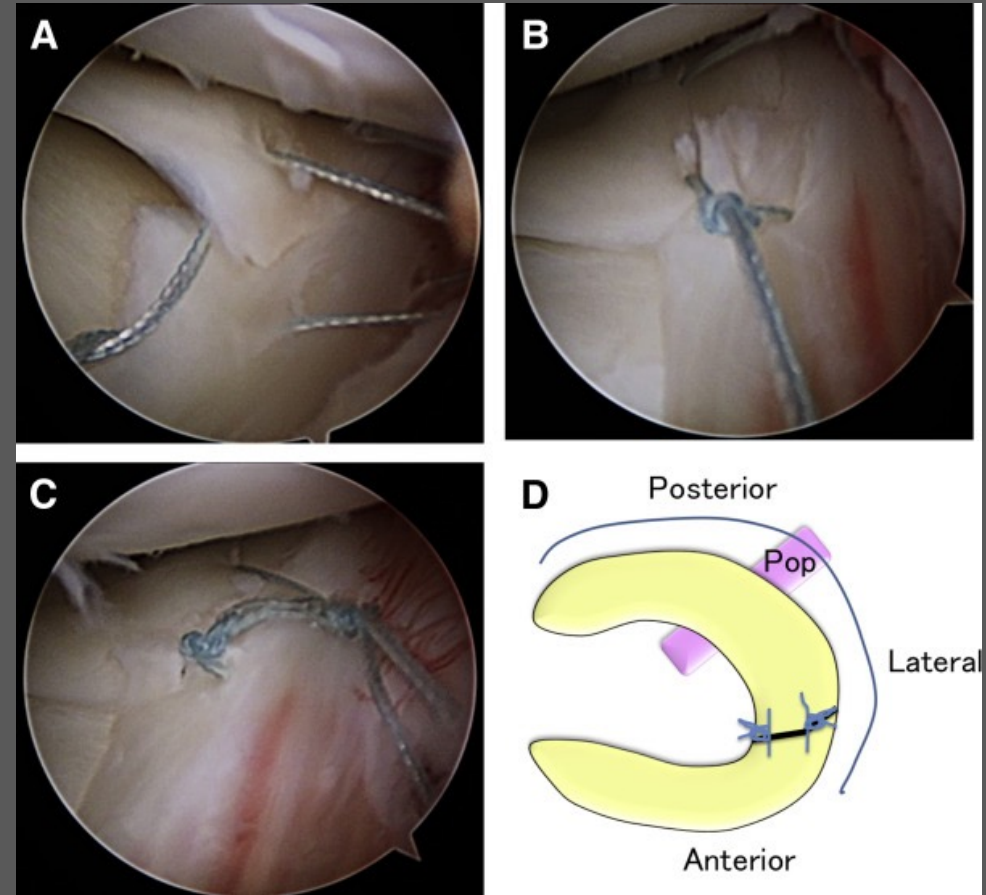
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Disclosures

- Dr. Flanigan has been a consultant for Moximed, ConMed, Smith & Nephew, Depuy Synthes, Vericel, Hyalex, and Nanochan
- The other authors have no disclosures

Introduction

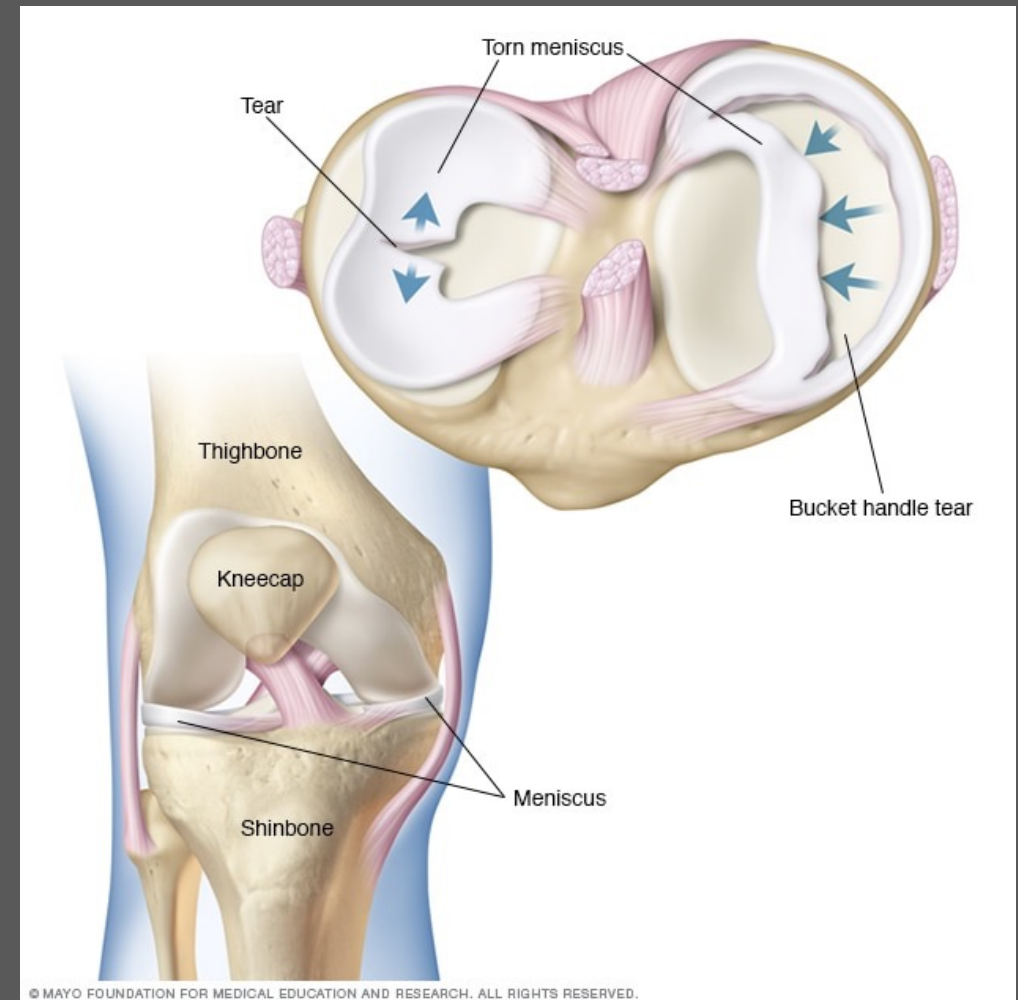
- Preserving the meniscus through repair as opposed to meniscectomy is a priority in managing meniscal tears
 - Reduces risk of development and progression of osteoarthritis¹
- Advances in surgical techniques and biologic augmentation of repairs have facilitated repair of radial tears²⁻⁵
 - However, data on outcomes is needed



Arthroscopic images of an all-inside suture repair of a radial meniscus tear⁹

Introduction

- Radial tears⁶⁻⁷
 - Traditionally treated with **partial meniscectomy**
 - Traditionally **poor** long-term prognosis



Depiction of radial and bucket-handle meniscus tears⁸

Aim

- To evaluate outcomes following repair of radial meniscus tears:
 - Complications
 - Recurrent swelling, stiffness, persistent pain, and repeat injury
 - Repeat surgery
 - E.g., cyclops lesion, synovectomy, new meniscus tear
 - Meniscus repair failure

Materials and Methods

- Retrospective chart review
 - Radial meniscus tear repair patients at our institution from 2011 to 2019
- Collected data regarding:
 - Demographics
 - Type of meniscus tear
 - Concomitant ACL reconstruction
 - Postoperative complications
 - Rate of repair failure

Tear Type	Sex	Age (years)	BMI (kg/m ²)	Tear Laterality	Concomitant ACL reconstruction
Radial	21.2% female	24.5±9.8	28.1±4.4	63.6% lateral	51.5%

Table 1: Summary of the demographics and characteristics of the radial meniscus repair patients

Results - Radial Repairs

- 51 radial tear repair patients identified
 - Age: 31.5 ± 15.2 years
 - BMI: 30.3 ± 6.4 kg/m²
- 24 (47.1%) of patients underwent concomitant ACL reconstruction

Results - Radial Repairs

- Complications in 15 patients (30.0%)
 - e.g., swelling, stiffness, persistent pain, and repeat injury
- Repeat surgery in 6 patients (12.0%)
 - 4 of these 6 patients initially underwent concomitant ACL reconstruction
 - And then underwent repeat surgery for a reason unrelated to the radial tear repair (e.g. cyclops lesion, synovectomy, new meniscus tear)
- Radial tear repair failure that required surgical revision in 2 patients (4.0%)

Results

- Radial repair with vs without concomitant ACL reconstruction
 - Concomitant ACL patients were significantly younger
 - ACL group, 26.0 ± 10.9 y; non-ACL group, 36.6 ± 16.7 y; $p = 0.03$
 - Outcomes did not differ significantly
 - But zero retears of radial meniscus repairs in patients with concomitant ACL reconstruction

Conclusions

- Radial meniscal tear repair results in low rates of repair failure, especially in the setting of concomitant ACL reconstruction
- Radial tear repair future directions
 - Patient-reported outcome measures
 - Long-term outcomes (e.g., development of osteoarthritis)
 - Comparative trials of repair versus partial meniscectomy

Significance of Findings

- Radial meniscus tear repair results in overall good outcomes utilizing modern repair techniques
 - Consideration should be given to repair of radial tears, especially in the setting of concomitant ACL reconstruction, to preserve meniscus tissue

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