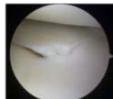


4th Advances Course on Knee Surgery
Val d' Isere, France
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When and How I do Meniscal Repairs

Christopher D. Harner, MD
Blue Cross Endowed Professor
Medical Director, Center for Sports Medicine
Department of Orthopaedic Surgery
University of Pittsburgh Medical Center



This is a big problem!

Rationale

#1 goal:

Preserve the meniscal
and articular cartilage



Save the
Meniscus!

Overview

- General philosophy meniscus repair
 - Indications
 - Techniques
- Case examples



University of Pittsburgh

My Philosophy on Indications

- All meniscal tears are potentially repairable!
- The younger the patient, the more "aggressive" I am
- Much of my philosophy is driven by my 20+ year experience with meniscal transplants (that is another story for another meeting)

Philosophy on Technique

I use an inside out technique for repairs

- Prefer vertical mattress sutures
- 2-0 ticon (non absorbable). I do not recommend "fiber wire"
- Occasionally "all inside"
 - Very expensive
 - Not as versatile

Philosophy on Technique

- I use fibrin clot for “isolated” meniscal repairs (ACL is intact)
- Post op rehab is slow
 - 4-6 wks on crutches
 - 4-6 months before returning to sports

Equipment

Inside-out Repair



2-0 Ticon
Not fiber wire – it cuts!

Equipment

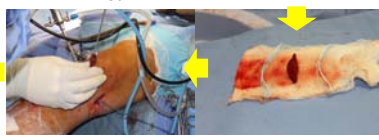
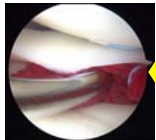
Fibrin Clot (very inexpensive)



60cc venous blood

Beaker, frosted stir rod

Gauze Compression



Cannula Introduction

Final Clot

Equipment

Incisions



Lateral



Medial



Case Examples

- 15 yo Isolated **Lateral Meniscus Radial Split Tear**
- 19 yo **Displaced Lateral Meniscus Tear**
- 54 yo **Medial Meniscus Root Tear**
- 19 yo **ACL Tear + Displaced Medial Meniscus Tear**
- 21 yo **ACL Tear + Medial Meniscus Root Tear + Lateral Meniscus Root Tear + Lateral Meniscus Radial Split Tear**

Lateral Meniscus Radial Tear

Case Example


- 15 soccer player
- **Dx: Radial Tear, Lateral Meniscus**



Lateral Meniscus

Surgical Technique


- Arthroscopy
- Rasp
- Inside out repair
 - 3 sutures
- Fibrin clot



Lateral Meniscus

Case Example

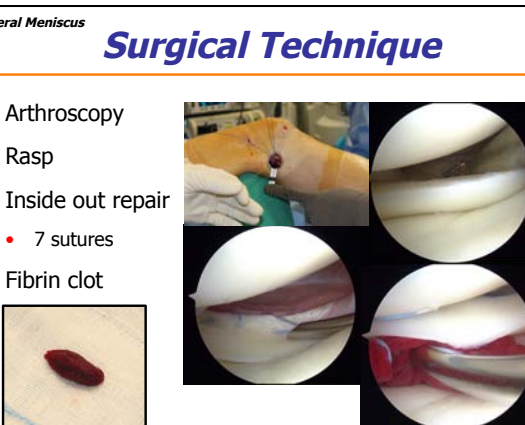
- 19 yo female
- Hx: Knee locked while rising from deep squat
- **Dx: Displaced lateral meniscus tear**
- Initial ROM 15-90deg
 - Reduction in clinic
 - Knee immobilizer



Lateral Meniscus

Surgical Technique

- Arthroscopy
- Rasp
- Inside out repair
 - 7 sutures
- Fibrin clot




Root tear

Case Example


- 54 y/o male
- Medial "pop" while playing tennis
- **Dx: Medial meniscus root tear**

This is a devastating injury to the medial compartment



Root tear

Surgical Technique



Root tear

Surgical Technique




JBJS 2008

Root tear

Surgical Technique


- Visualize Root
- **Reverse Notchplasty**
- Insertion Site Preparation
- Suture Tunnel
- Suture Passage
- AO post Fixation
- Tie $\sim 45^\circ$ of flexion



Root tear

Surgical Technique

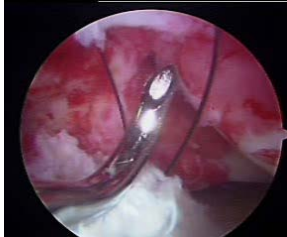
- Visualize Root
- Reverse Notchplasty
- **Insertion Site Preparation**
- **Suture Tunnel**
- Suture Passage
- AO post Fixation
- Tie $\sim 45^\circ$ of flexion



Root tear

Surgical Technique



- Visualize Root
- Reverse Notchplasty
- Insertion Site Preparation
- Suture Tunnel
- **Suture Passage**
- AO post Fixation
- Tie $\sim 45^\circ$ of flexion



Root Tear

Surgical Technique

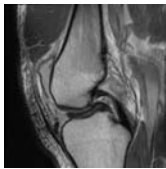

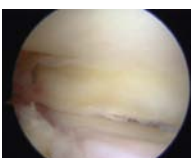
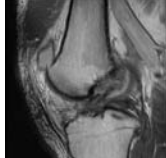
- Visualize Root
- Reverse Notchplasty
- Insertion Site Preparation
- Suture Tunnel
- Suture Passage
- **AO post Fixation**
- **Tie ~ 45 extension**

ACL/MMT

Case Example



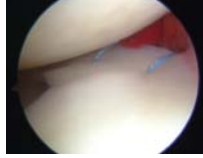
- 19 y/o college wrestler
 - 6'4", 250lbs
 - (1.93m, 115kg)
- Twisting injury
- Knee range of motion 10-90
- **Dx: Acute Gr III ACL, displaced medial meniscus tear**

ACL/MMT

Case Example

- Arthroscopy
- Rasp
- Inside out repair
- Fibrin clot
- Stage ACL

ACL, MMRT, LMRT, LMT

Case Example

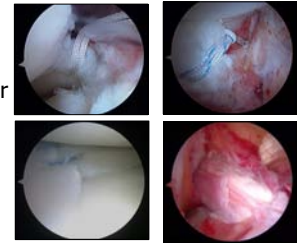
- 21 yo female collegiate volleyball player
- Noncontact injury
 - Reinjury later in match
- **Dx: ACL, medial root, lateral root, lateral meniscus tear**
- ROM 0-115 deg



ACL, MMRT, LMRT, LMT

Surgical Technique

- ACL reconstruction
 - HS autograft
- Lateral root repair
- Medial root repair
- Lateral meniscus repair
 - Inside out, 2 sutures



Thank you!

