Knee Surgery and Sport Traumatology Unit

Chief: P. Volpi     Co-Chief: M. Denti
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TRATTAMENTO DELLE LESIONI DEL MENISCO LATERALE NEGLI ATLETI:

TRATTAMENTO CHIRURGICO ARTROSCOPICO

( meniscectomie & suture)

CORRADO BAIT, MD
MENISCECTOMY & MENISCAL REPAIR

- Menisci has an important role in joint loading, stability, proprioception and lubrication of the knee.

- Few outcomes published in Meniscal Repair in the Elite Athletes but we believe that this approach is important in young, active and high demand population.

  Mintzer et Al. – Am J Sp Med, 1998
  Bizzini et Al. – Orthop Sports Phys, 2006
  Logan et Al. – Am J Sp Med, 2009
MENISCECTOMY & MENISCAL REPAIR

- Not all patients with meniscal symptoms need surgery
- Not all tears can be repaired in order to tear location, type, etiology, concomitant injury and patient profile
LATERAL MENISCETOMY OR MENISCAL REPAIR IN ATHLETES?

To be, or not to be: that is the question!
Professional football player 32 y (15 y - 300 match)
23 y lateral meniscectomy laterale
24 y microfractures LFC
LATERAL MENISCECTOMY OR MENISCAL REPAIR?

Management of Meniscus Tears that Extend into the Avascular Region
Frank R. Noyes, MD, Sue D. Barber-Westin, BS*

Biologic Enhancement of Meniscus Repair
Laura E. Scordino, MD, Thomas M. DeBerardino, MD*

Return to Sport After Meniscal Repair
Anthony M. Barcia, MDa,*, Erick J. Kozlowski, BS, ATCa, John M. Tokish, MDa

Indications for Meniscus Repair
Travis G. Maak, MD*, Peter D. Fabricant, MD, Thomas L. Wickiewicz, MD
LATERAL MENISCECTOMY OR MENISCAL REPAIR?

Meniscal Repair in the Elite Athlete

Results of 45 Repairs With a Minimum 5-Year Follow-up

Martin Logan,*† MD, FRCS(Tr&Orth), Mark Watts,†‡ BSc (Hons), MPhil, James Owen,† FRCS(Tr&Orth), and Peter Myers,† MBBS, FRACS
From the †Brisbane Orthopaedic and Sports Medicine Centre, and the ‡Institute of Health and Biomedical Innovation, Queensland University of Technology, Brisbane, Queensland, Australia


Snapping knee caused by a popliteomeniscal fascicle tear of the lateral meniscus in a professional Taekwondo athlete.

Park JH, Ro KH, Lee DH.
Department of Orthopedic Surgery, Korea University Anam Hospital, Korea University College of Medicine, Seoul, Korea.

Long-term Evaluation of Posterior Lateral Meniscus Root Tears Left In Situ at the Time of Anterior Cruciate Ligament Reconstruction

K. Donald Shelbourne, Troy A. Roberson and Tinker Gray
DOI: 10.1177/0363546511398212
MENISCUS TEARS

Anterior third

Posterior third

Middle third

Popliteus tendon

RR RW WW
INDICATIONS FOR MENISCAL REPAIR

- Meniscus tear with T/F joint line pain
  - Active patient under 60 years
  - Stable knee, no varus-valgus
- Meniscus tear reducible, good tissue integrity
- Peripheral and middle third region (RR – RW)

CONTRAINDICATIONS

- Meniscus tear located in inner region (WW)
- Chronic degenerative tear with poor quality tissue
  - Longitudinal tear less than 10 mm in length
  - Incomplete radial tear do not extend into the peripheral region
- Patient over 60, sedentary or unwilling to follow rehab program

MENISCECTOMY & MENISCAL REPAIR

Many factors must be considered during decision-making process.
MENISCECTOMY & MENISCAL REPAIR

Many factors must be considered during decision-making process:

- Age
- Tear location
- Tear type
- Tear etiology
- Concomitant injury
- Patient profile
MENISCAL REPAIR TECHNIQUES

INSIDE-OUT

nonabsorbable sutures attached at each end of 2 long flexible needles are placed through the meniscus tissue (horizontal or vertical) until the joint capsula and tight

suture (stitch) - pulled through and tied outside the knee (under the skin)

arrow (shot into the substance of the meniscus (bio-absorbable)
spinal needle is placed percutaneously under scope view through the peripheral meniscus rim and inner torn portion; a monofilament suture (PDS 0) can be passed and retrieved
MENISCAL REPAIR TECHNIQUES

ALL-INSIDE

decrease the risk of neurovascular injury using different devices and is best suited for posterior horn meniscus tears. Can be rigid or self-adjusting suture-based implants.
MENISCECTOMY & MENISCAL REPAIR

POSTERIOR LATERAL MENISCUS ROOT TEAR

- **Partial excision when:**
  poor quality tissue – not reduce to the root location – significant chondral disease

- **Root repair when:**
  Young patient, reduce to the root location, during ligament surgery or isolated tear with stable knee – patient compliance

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**Meniscus Root Avulsion**

John M. Marzo, MD

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*Long-term Evaluation of Posterior Lateral Meniscus Root Tears Left In Situ at the Time of Anterior Cruciate Ligament Reconstruction*

K. Donald Shelbourne, Troy A. Roberson and Tinker Gray


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CONSIDERATIONS

• Inside-out & Outside-in suture techniques still have a role in meniscus repair, especially with tears located in anterior meniscal areas.

• The first generation of All-inside devices (rigid) exhibited promising results but the risk of complication and declining success rates have led to their replacement by the self-adjusting suture-based devices.

• The new devices include a suture composed at least in part of high strength ultra-high molecular weight polyethylene, anchor’s that are completely extra-articularly, elimination of knots or rigid components left on the meniscal surface, permitting horizontal or vertical orientations and decrease the risk of chondral lesions.
RETURN TO SPORT

• It’s a process which comprehensively prepares the athlete for return to the playing field and may play as much or more of a role in a successful outcome as the surgical intervention itself

  • There is a trend toward accelerated rehab protocol

  • Return to sport is a multifactorial endeavor that must be individualized to the injury, biology, demands and goals of the athlete

• To effectively guide an athlete from injury to return to competition, the involved physicians, physical therapist, athletic trainers and coaches must work together as a team
TAKE HOME MESSAGE

• Identification of repairable meniscal tears is crucial to healing success and improve outcomes

• Careful consideration should be given to the factors that may contribute to or inhibit meniscal healing including age, tear location, type, etiology, concomitant injury and patient profile

• Treatment of all identified repairable meniscal tears should be managed carefully to maximize the healing potential after repair

• For these reasons we have an aggressive approach to repairing meniscal tears as soon as possible above all in Lateral Meniscus
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4° Congresso Nazionale
Società Italiana di Chirurgia del Ginocchio, Artrrosopia, Sport, Cartilagine e Tecnologie Ortopediche
Napoli, 10-12 ottobre 2012
Hotel Royal Continental

Grazie

Corrado Bait