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ISAKOS CONGRESS 2025

Proof of Concept of A Novel Surgical Technique To Improve The Treatment of Horizontal Cleavage Meniscus Tears

"The Quad Tendon Augmentation Technique"

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M.I; F.H: No disclosures

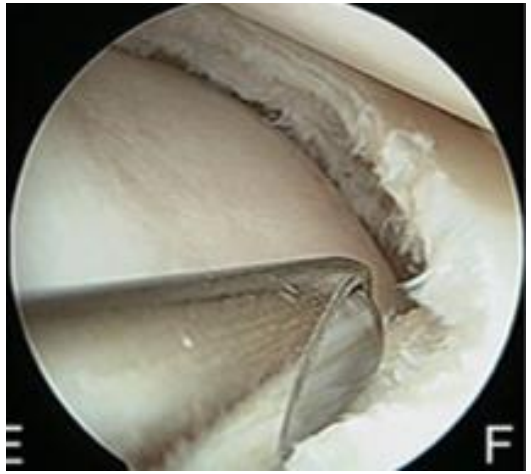
C.M.:

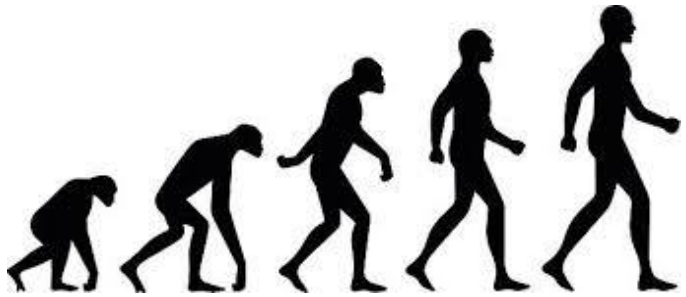
- *Chairwoman of ESSKA basic science committee*
- *Editorial board member: KSSTA; JEO*

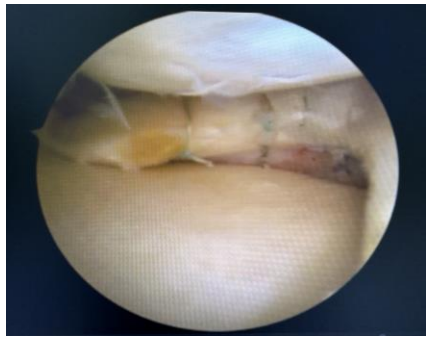
R.S.:

- *Research support: Virtamed*
- *Consultant: Smith & Nephew; Olympus & Amplitude*
- *Board Member/Advisory Panel: President LIROMS; Past president GOTS/ESSKA*
- *Chairman of THE MENISCUS 2022; Vice—chairman of ESSKA meniscus certification module*
- *Editorial board member: KSSTA, Arthroskopie, SOT*

Horizontal cleavage tears treatment has evolved







Why repair?

- **Success** rates similar to other types of tears

  (Ogawa et al, KSSTA 2020)

- **Healing** rates similar to other tear patterns

  (Systematic review; Kurzweil, Arthroscopy 2014)

- Restores contact pressures and contact area

  (Beamer et al, Arthroscopy 2017)

Proper indication!!!

Original Article

An All-Suture–Based Technique for Meniscal Repair Is Cost-Effective in Comparison to Partial Meniscectomy for Horizontal Cleavage Tears

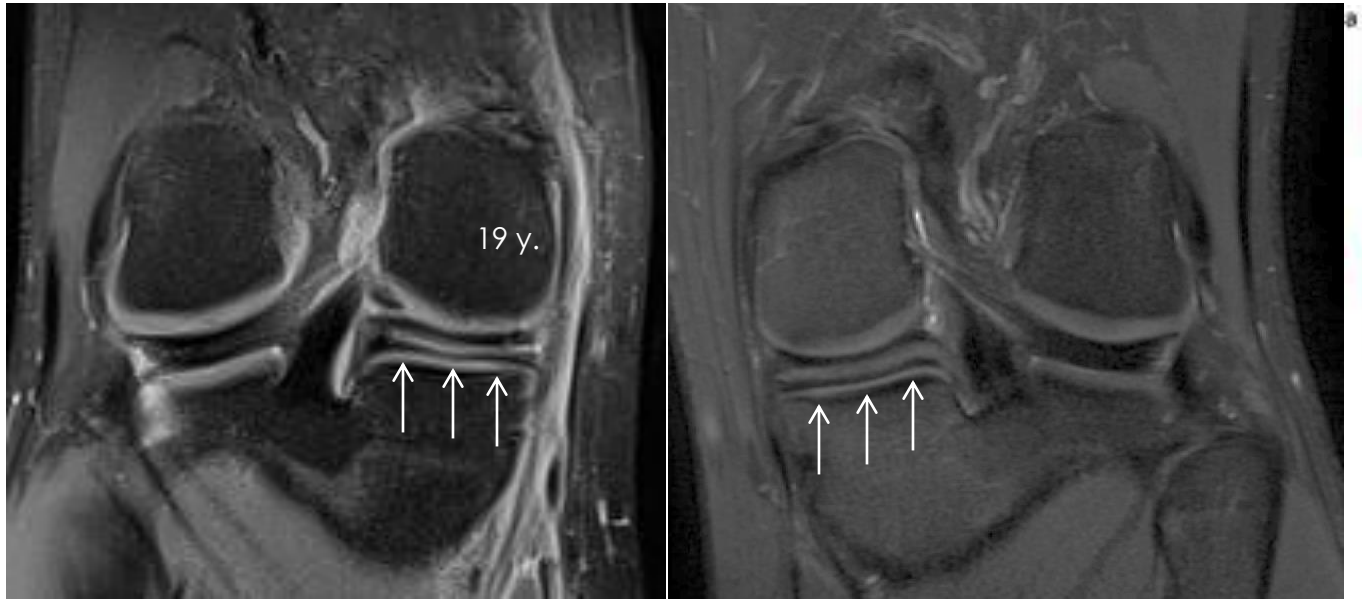
Seth L. Sherman, M.D., Neil Askew, M.Sc., Leo M. Nherera, Ph.D., Richard J. Searle, Ph.D., and David C. Flanigan, M.D.

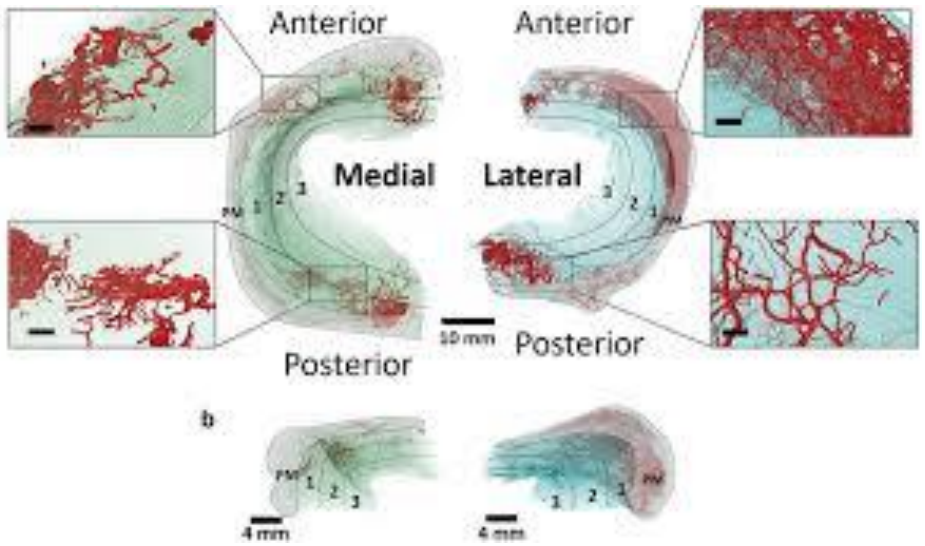
(Sherman SL. et al, Arthroscopy 2023)

Editorial Commentary: Repair of "Degenerative" Horizontal Cleavage Meniscus Tears Is Cost-effective, Is Chondroprotective, and Shows Healing Rates Similar to Other Meniscal Tear Patterns

Cory Meixner, M.D., Jelle P. van der List, M.D., Ph.D., Editorial Board, and David C. Flanigan, M.D.

(Meixner, Cory et al.l, Arthroscopy 2024)





Degenerative tear, loss of midsubstance tissue, poor biology

Volume decrease

Poor healing potential

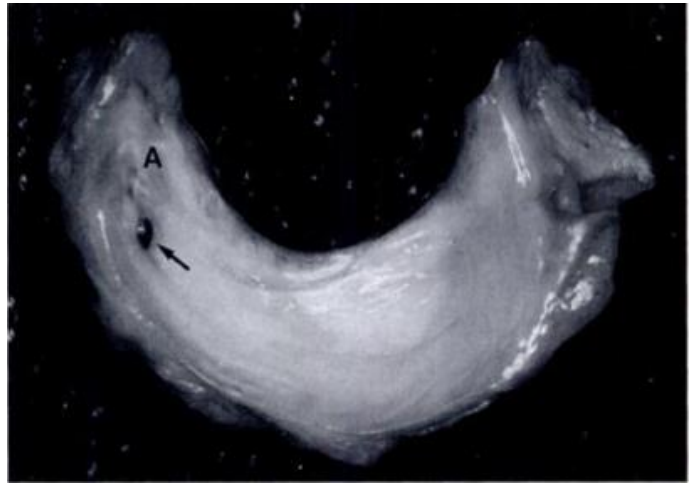
Quadriceps tendon graft

MEDIAL MENISCUS REPLACEMENT BY A TENDON AUTOGRAFT

EXPERIMENTS IN SHEEP

D. KOHN, C. J. WIRTH, G. REISS, W. PLITZ, H. MASCHEK, W. ERHARDT, N. WÜLKER

From the Medical School of Hanover, the Ludwig-Maximilian University and the Technische University of Munich



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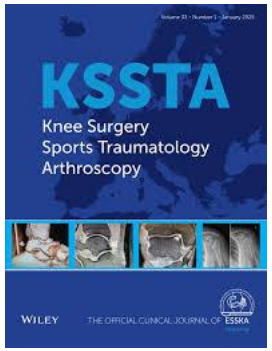

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Autologous semitendinosus tendon graft could function as a meniscal transplant

Erik Rönnblad[1] · Pierre Rotzius[2] · Karl Eriksson[2]

Current Concepts Review

The potential of tendon autograft as meniscus substitution: Current concepts

Youngji Kim [a,b], Eriksson Karl [c], Muneaki Ishijima [a], Sylvain Guy [b], Christophe Jacquet [b], Matthieu Ollivier [b,*]

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[b] *Institut du Mouvement et de l'appareil locomoteur, Hôpital Sainte-Marguerite, Aix-Marseille Université, Marseille, France*
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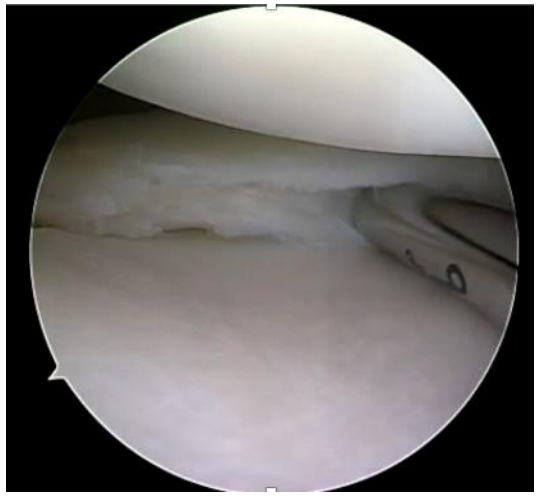

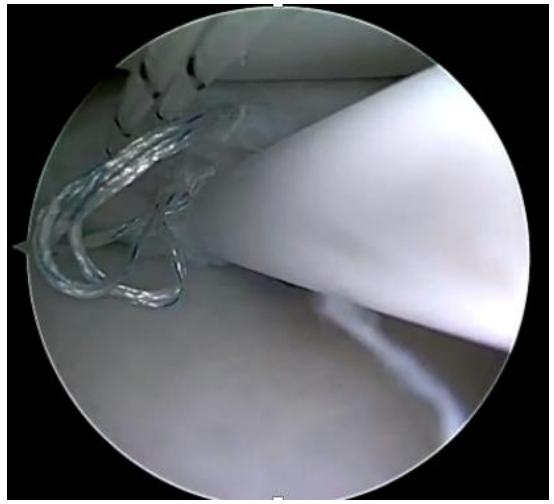

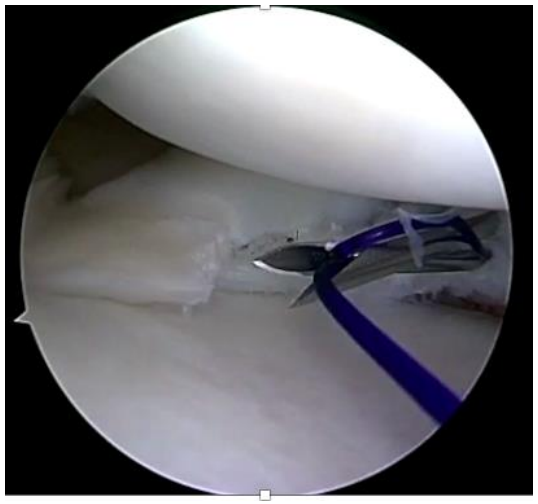
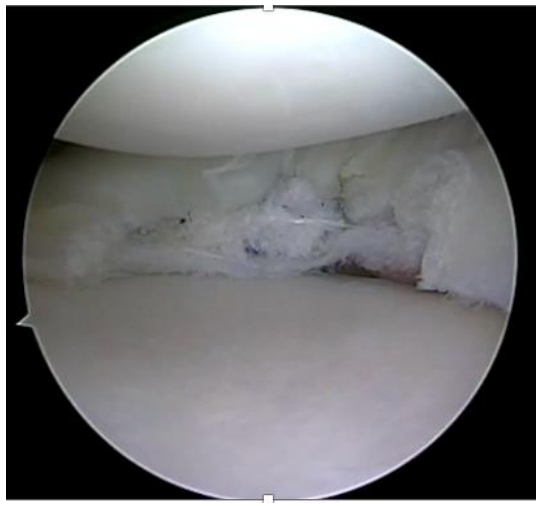

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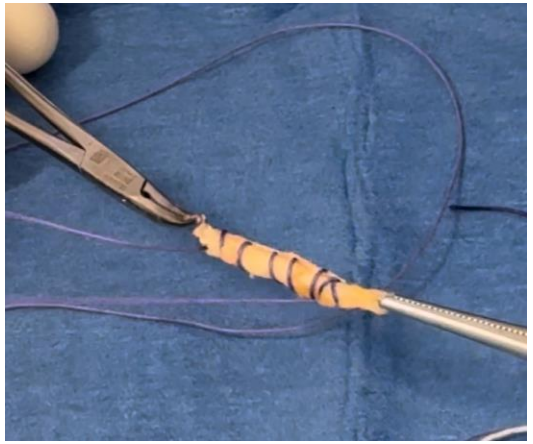
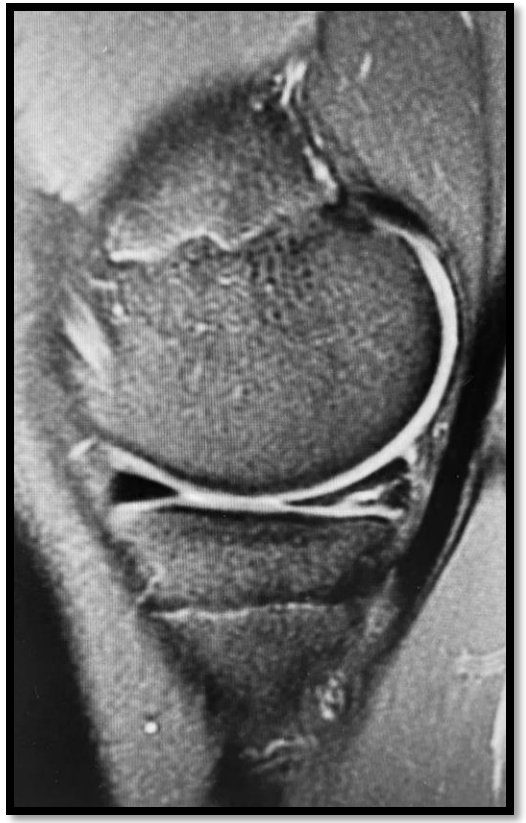
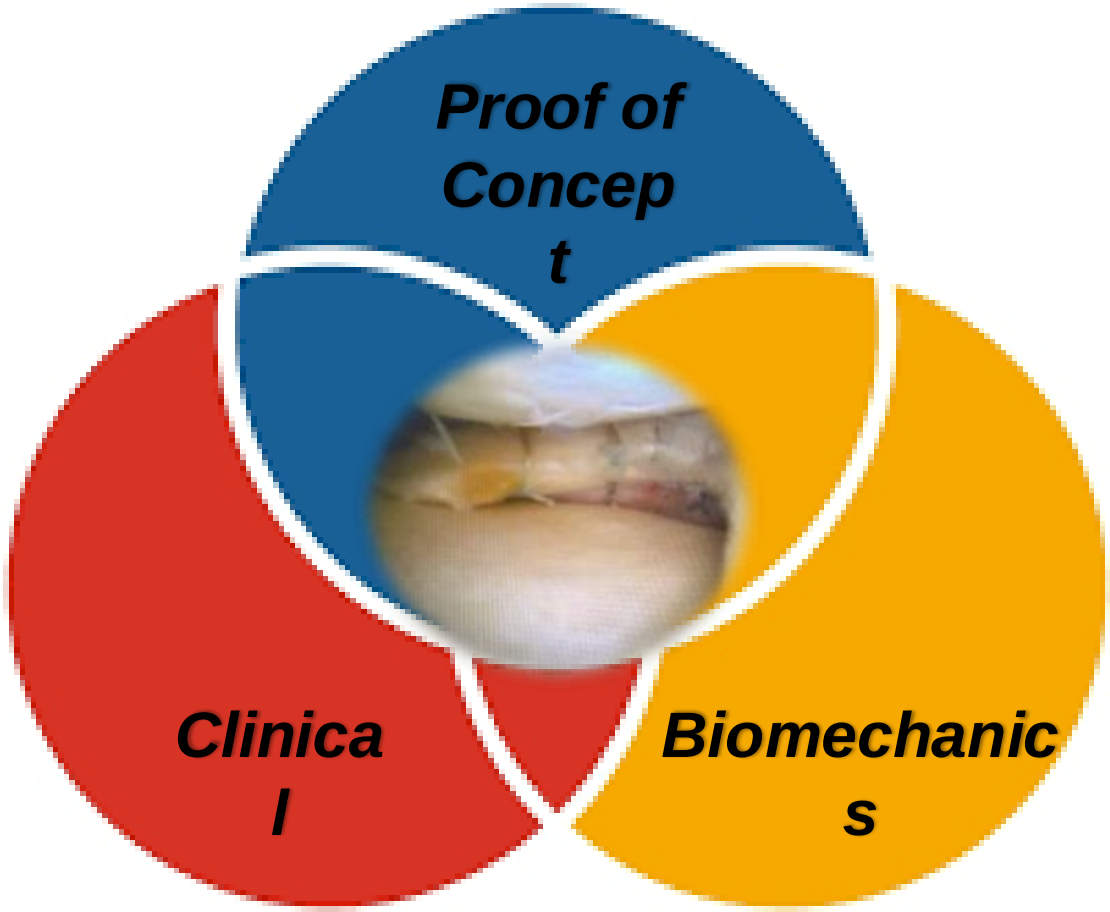
Tips & Tricks



- Assess if the augmentation is possible
- Measure the defect
- Most superficial layer of the quad tendon
- Use traction sutures (if needed) to put the graft in place
- Notch reaming

Future Directions





In Summary

- Simple, safe, **reliable** technique.
- Restores the **height**, **volume**, and **tightness** of the meniscus
- Autograft avoids foreign or synthetic material and **enhances tissue healing**
- *Advanced skills in arthroscopic surgery*
- *Small incisions to perform graft harvesting and minor donor site morbidity*

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