

TENDON PATHOLOGY

(Hamstrings, Gastrocnemius, Popliteus...)



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Thank you Philippe for the



DISCLOSURE

1. Royalties from Move Up
2. Consulting income from Arthrex, Move-Up and SBM
3. No Research and education support
4. Past-president of SFA



CENTRE
OSTÉO-ARTICULAIRE
DES CÉDRES



Hamstrings/Gastrocnemius Tendinitis

- Nothing in the literature!

PubMed.gov

Distal Hamstrings AND tendinitis

Advanced Create alert Create RSS

Filters Timeline Sorted by: Best match

239 results

Page 1 of 24

1 Sonographic landmarks in **hamstring muscles**.
Balius R, et al. *Skeletal Radiol*. 2019. PMID: 30997529 [Free PMC article](#). Review.

Therefore, it is important to know the specific ultrasound reference points that facilitate the location

04:54 pubmed.ncbi.nlm.nih.gov

National Library of Medicine
National Center for Biotechnology Information

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Gastrocnemius AND tendinitis

Advanced Create alert Create RSS

Filters Timeline

15,557 results

Page 1

1 Exercise for rotator cuff **tendinopathy**: a systematic review.
Littlewood C, et al. *Physiotherapy*. 2012.
PMID: 22507359 [Free article](#). Review.

BACKGROUND: Shoulder pain due to rotator cuff **tendinopathy** is a common problem. Exercise is one intervention used to address this problem.

2 Calcific **tendinitis** of the rotator cuff: state of the art in diagnosis and treatment.
Merolla G, et al. *J Orthop Traumatol*. 2016.

Snapping AND Distal Hamstrings

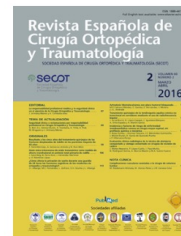
- I was very happy to find an article!

Rev Esp Cir Ortop Traumatol. 2016;xxx(xx):xxx-xxx



Revista Española de Cirugía
Ortopédica y Traumatología

www.elsevier.es/rot



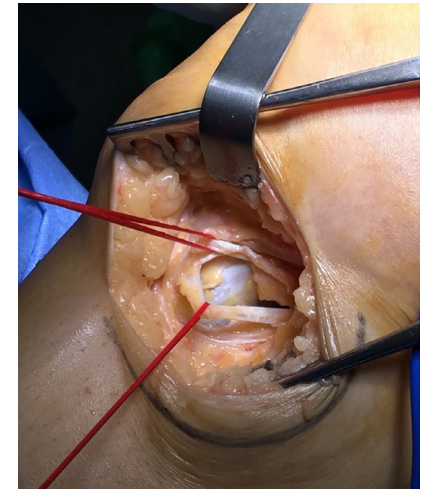
NOTA CLÍNICA

Rodilla en resorte interno por engrosamiento de la pata de ganso

B. de la Hera Cremades*, L. Escribano Rueda y A. Lara Rubio

Servicio de Cirugía Ortopédica y Traumatología, Hospital Universitario de Getafe, Getafe, Madrid, España

Recibido el 17 de enero de 2016; aceptado el 3 de julio de 2016



Rare cause of knee pain

- **Tendinopathy**
- **Partial ruptures**
- Complete ruptures
- **Calcit tendinitis**

- **Snapping**

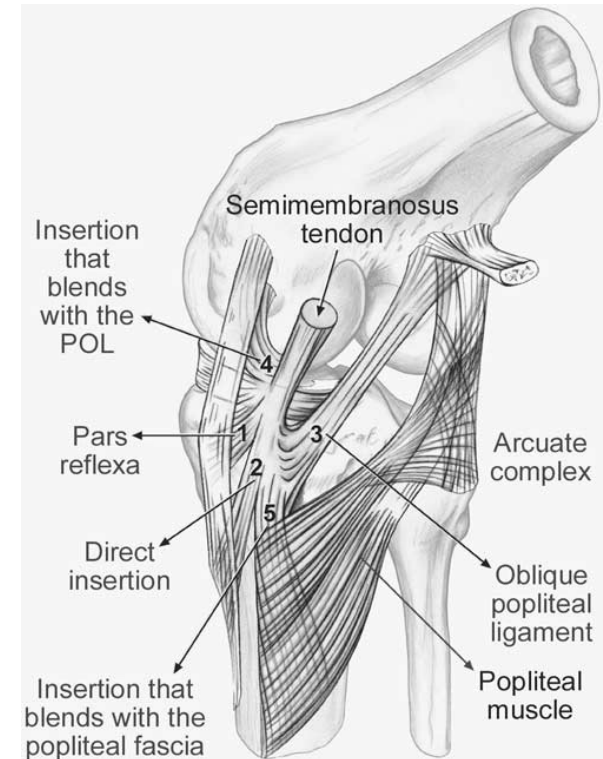
Under or over diagnosed clinically

**MRI not always contributive
Dynamic Ultrasound +++**

Semimembranosus

ANATOMY¹

- Posteromedial corner of the knee
- 5 distal divisions
 - 2 Direct heads
 - Reflected head
 - Oblique popliteal lig
 - Meniscotibial lig (Capsule + MM)
- Bursa
- Knee flexor and IR

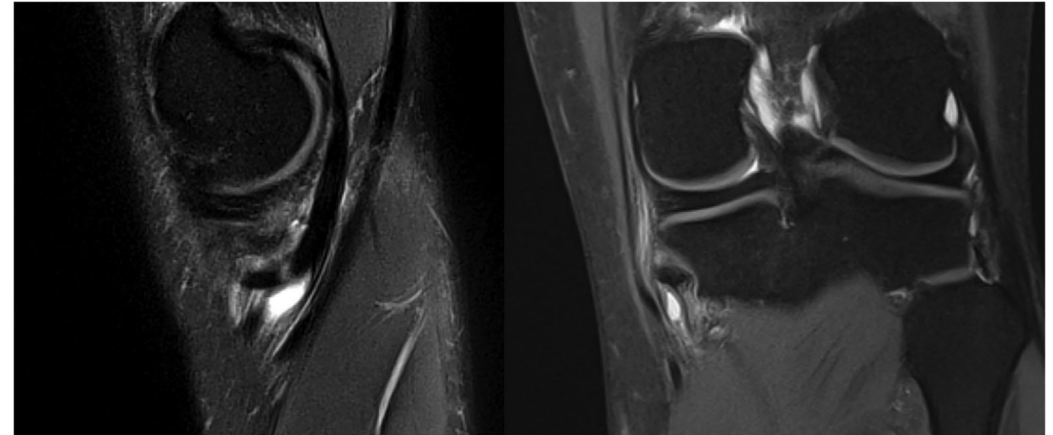


1. The Posteromedial Corner of the Knee Medial-Sided Injury Patterns Revisited [W.F. Sims and K.E. Jacobson Am J. Sports Med., 2004](#)

Semimembranosus

TENDINOPATHY¹

- Posteromedial knee pain
- Pars reflexa
- Overuse in runners/cyclers
- Genu valgum
- Osteoarthritis Tibial plateau
- Gait analysis
- Conservative TTT: no specific



1. Distal semimembranosus tendinopathy: A narrative review [M. Sederberg et al. PM&R: The Journal of Injury, Function and Rehabilitation. 2021](#)

Biceps femoris

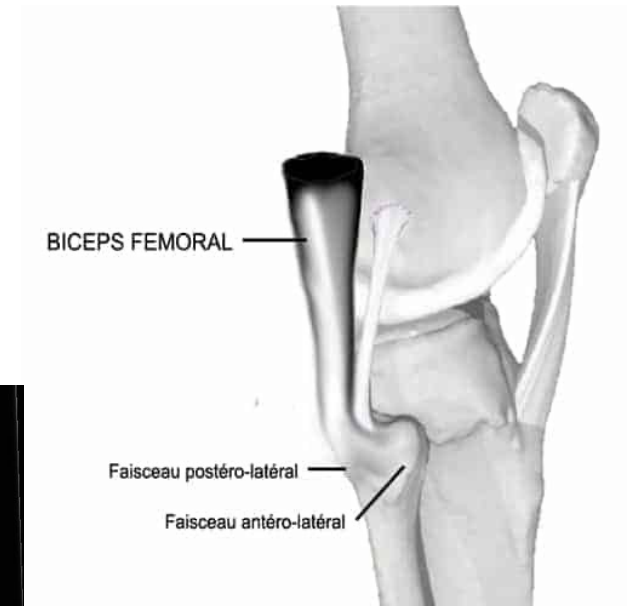
ANATOMY¹

- Posterolateral corner of the knee¹
- 2 distal divisions surrounding CFL
- Lateral rotator

TENDINOPATHY¹

- Football+++ cyclist, horse ridding
- Varus
- No specific med. Ttt

CALCIT TENDINITIS²



1. Tendinopathies rares du genou [A. Wajsfisz et D. Petrover](#) **Microtraumatologie du sport de la clinique et de l'imagerie au traitement 2019**
2. Calcific tendinitis of biceps femoris: an unusual site and cause for lateral knee pain [W. Chan et al.](#) **BMJ Case report 2016**

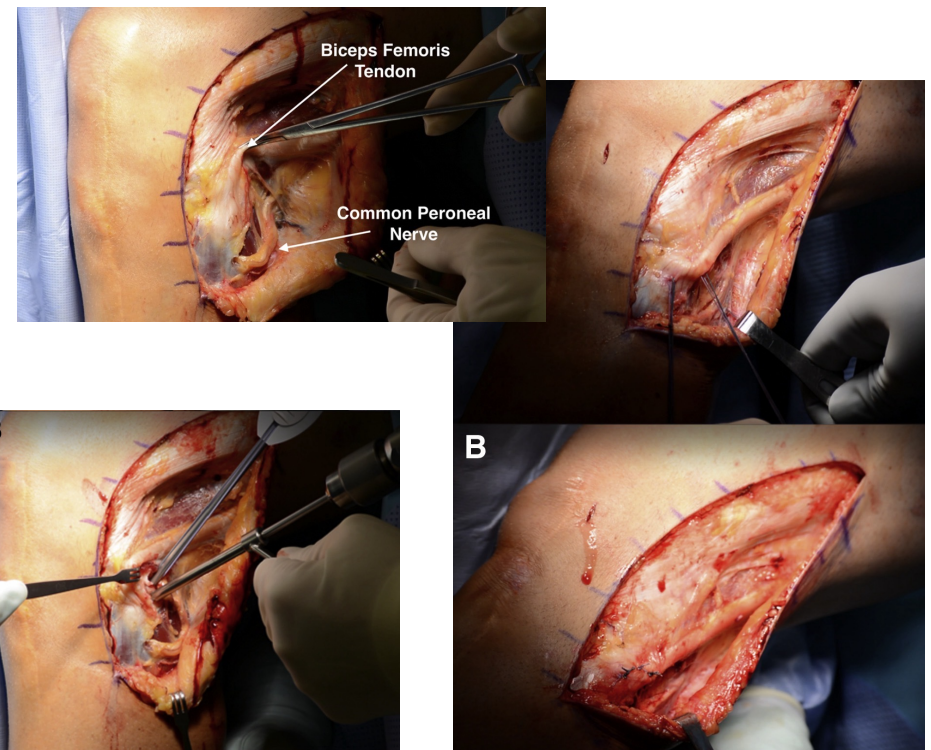
Biceps femoris

SNAPPING

- abnormal biceps femoris tendon insertion; fibular head morphology; or direct trauma
- Snap when performing squats
- Surgical TTT
 - CPN neurolysis
 - Detachment off the fibular stiloid
 - Reattachment / ancrs
 - 6 w immob and no WB

RUPTURE

- Rare cause of pain + and sudden impos. continuing physical activity

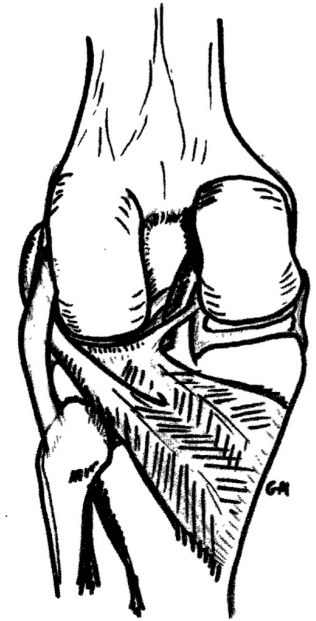
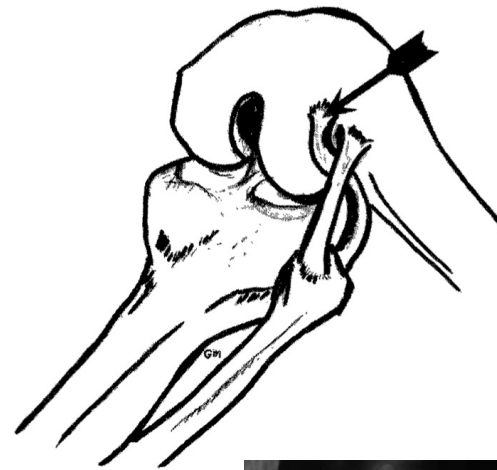


1. Surgical Repair of Dynamic Snapping Biceps Femoris Tendon [M.I. Kennedy et al. Arthroscopy technique 2018](#)

Popliteus

ANATOMY¹

- Posterolateral corner of the knee
- monoarticular
- Proximal tendon
- Internal rotator and flexor (propulsion phase of running)
- Downhill walking/running
- Resist to ER & varus stress in squats (dancers)²

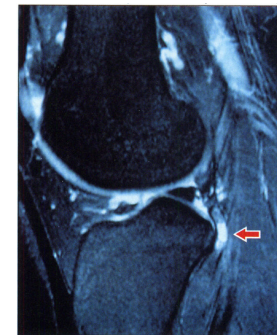
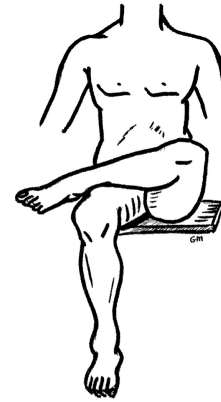


1. Popliteus tendon synoviatis [W. Gerald et al. Am J. Sports Med. 1977](#)
2. Relationship of Popliteus Sulcus Depth and Tibiofemoral Rotational Alignment with Popliteus Tendinitis in Professional Folk Dancers Exposed to Turnout Positions [E.K. Aumann et al. Med. Probl Perform Art 2019](#)

Popliteus

TENDINITIS

- Morphotype in ER & recurvatum
- Posterolateral knee pain
- tenderness along the proximal aspect of the popliteus tendon.(fig of 4)¹
- Garrick test (IR resistance at 90° of knee flexion + palp tendon course)²
- MRI²
- rest, eccentric strengthening of the quadriceps, NSAIDs, and localized corticosteroid injection²



1. Popliteus tendon synoviatis [W. Gerald et al. Am J. Sports Med. 1977](#)

2. Popliteus tendinatis Tips for diagnosis and management [T.S. Petsche et al. THE PHYSICIAN AND SPORTS MEDICINE 2002](#)

Popliteus

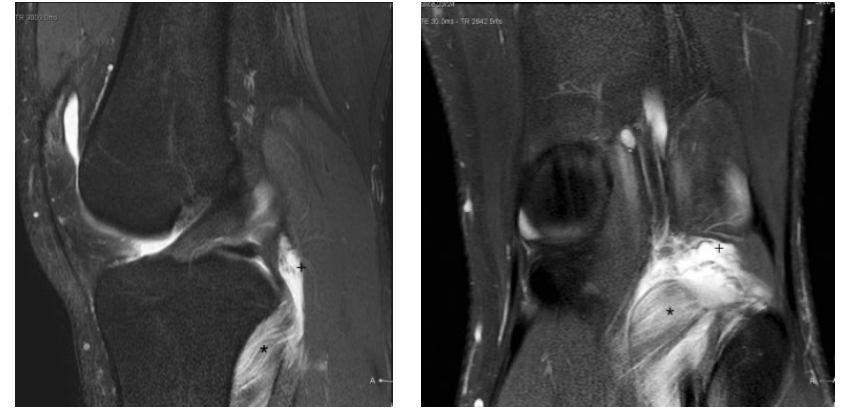
SNAPPING

- On LC osteophyte is rare¹

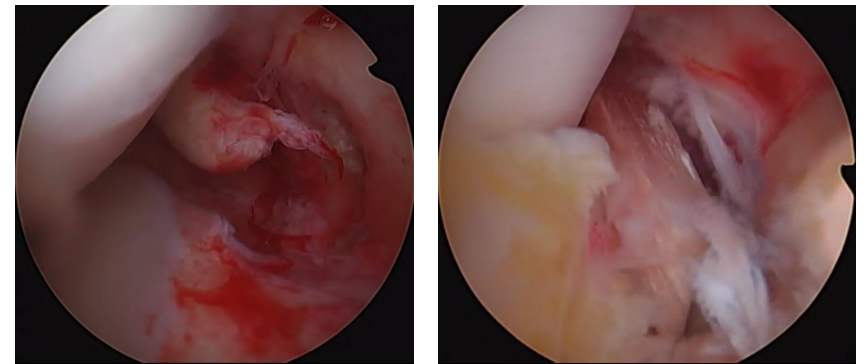
RUPTURE² Myotendinosis unit

- Rugby: isolated : conservative²
- Discovered during ACL-R

Professionnal football player: bypass



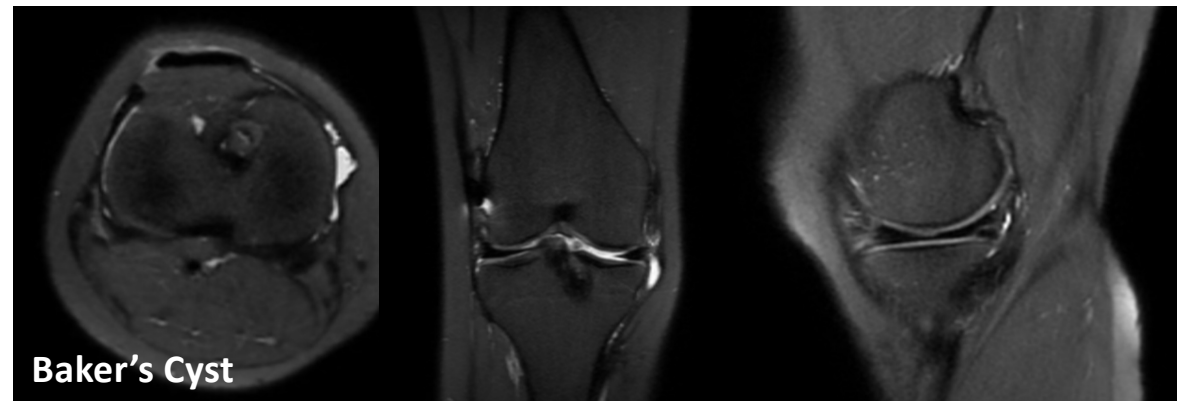
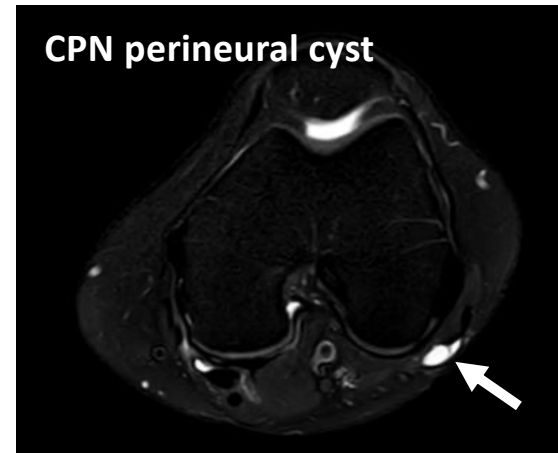
Courtesy Bertrand Sonnery Cottet



1. Relationship of Popliteus Sulcus Depth and Tibiofemoral Rotational Alignment with Popliteus Tendinitis in Professional Folk Dancers Exposed to Turnout Positions [E.K. Aumann et al. Med. Probl Perform Art 2019](#)
2. Isolated Popliteus Rupture at the Musculo-tendinous Junction [J.F. Quinlan et al. THE JOURNAL OF KNEE SURGERY 2011](#)

Differential diagnosis

- Osteoarthritis or osteochondral injury
- Medial/ lateral meniscus injury/tear
- Medial/ lateral collateral ligament sprain
- Lumbar radiculopathy
- Perimeniscal or ganglion cyst
- Baker cyst
- Pes anserine bursitis
- Thrombophlebitis
- Myofascial pain
- Bone stress injury
- Lymphadenopathy
- Genicular nerve entrapment
- Neoplasm



Conclusion- Take Home Message

Rare cause of knee pain

Under or Over-diagnosed

Remember your anatomy!

Eliminate differential diagnosis

Most of the time non-op TTT

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Thank You !

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