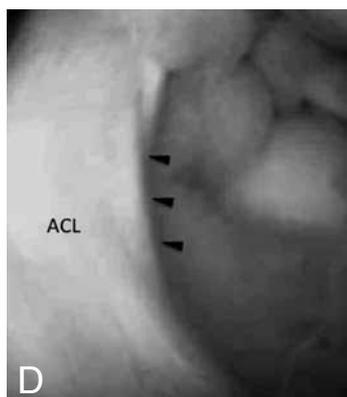
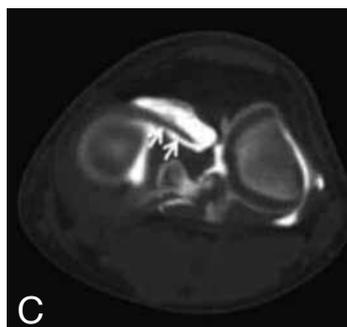


## IMAGES IN CLINICAL RADIOLOGY



### *Unusual cause of internal knee derangement*

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A 25-year-old man was referred to our department by the orthopaedic surgeon for intermittent pain at the medial compartment of his knee after a rugby match. There was no history of direct trauma. At clinical examination the internal compartment was tender. There was no instability or blockage at clinical tests. A computed tomography arthrography (CTA) examination was performed in order to rule out a lesion at the medial knee compartment.

A cord-like image is visible anteriorly to the anterior cruciate ligament (white arrows), extending from the anterior horn of the medial meniscus to the intercondylar fossa, alongside of the anterior cruciate ligament (Fig. A, B, C). Imaging findings were confirmed at arthroscopy (Fig. D).

#### *Comment*

The antero-medial meniscofemoral ligament (AMMFL) is a rare anomaly of the medial meniscus of the knee joint. It usually arises from the anterior horn of the medial meniscus and it runs anteriorly to the inferior two thirds of the anterior cruciate ligament (ACL). It inserts onto the postero-lateral side of the intercondylar fossa, just anterior to the ACL.

AMMFL is situated posteriorly to the ligamentum mucosum, which arises from the Hoffa-fat pad and inserts into the anterior outlet of the intercondylar notch.

The prevalence of AMMFL is not well known. It has been reported in 1,2% to 15% of general population in different studies. A number of accessory menisco-femoral ligaments (MFL) has been described. Most commonly, the posterior horn of the lateral meniscus is connected to the inner aspect of the medial femoral condyle by two MFL: the first passes anterior to the posterior cruciate ligament (PCL) and is known as the anterior menisco-femoral ligament (aMFL) of Humphry, while the other passes posterior to the PCL and is known as the posterior menisco-femoral ligament (pMFL) of Wrisberg. The presence of these ligaments is due to normal variants in the embryologic development of the knee.

Humphrey's and Wrisberg's menisco-femoral ligaments are very common with a prevalence of 74% and 69% respectively, while the AMMFL is rarely observed.

Notwithstanding the relative rarity of AMMFL, a detailed description of the attachment sites of the proximal and distal parts of the AMMFL has been reported in a small number of case reports. AMMFL has no attachment onto the tibia, neither directly nor through the synovium. Four types have been described: connected to the anterior transverse ligament, connected to the infrapatellar plica, connected to the transverse ligament and the infrapatellar plica, and connected to the coronary ligament (also known as the menisco-tibial ligament).

The typical complaint in patients with AMMFL is a pain of the medial compartment of the knee, clinically mimicking a meniscal tear. It has been speculated that medial compartment pain in patients with a AMMFL is related to the traction of AMMFL on the anterior horn of the medial meniscus in flexed position.

In our case due to the absence of any other pathological finding, we suggested in our report that the cause of the pain may be to the presence of a AMMFL.

On imaging, AMMFL must be distinguished from a torn ACL and displaced meniscal fragment.

AMMFL can be resected at arthroscopy in symptomatic cases.

#### *Reference*

1. Wan A.C.T., Felle P: The menisco-femoral ligaments. *Clin Anat*, 1995, 8: 323-326.