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Letter to the editor

Ultrasonographic Imaging of the medial and lateral pouches in the knee: EURO-MUSCULUS/USPRM protocol(s) revisited



Dear Editor

The EURO-MUSCULUS/USPRM knee scanning protocol suggests starting the examination, as for other joints, by checking for the presence of articular fluid [1]. This is done by placing the probe longitudinally (sagittal plane) in the midline of the knee to scan the suprapatellar recess, with the patient supine and the knee joint in mild flexion to separate the synovial layers and visualize even a small amount of fluid. The protocol indicates that with the knee in full extension, the joint fluid would be displaced and better observed in the medial and lateral pouches [1].

In this regard, here we give a brief description for further scanning the para-patellar synovial recesses of the knee (medial and lateral pouches), which might be necessary to identify knee effusion and/or any selective synovial hypertrophy or plicae in this region.

The individual is positioned supine with the knee in full extension. Starting from the medial side, we first identify the bony

landmarks [2] – in this case, the medial femoral condyle and the patella in the transverse plane (Fig. 1). Small movements of the probe (shifting and tilting) can allow for easily localizing the medial patello-femoral ligament as a fibrillar structure and the underlying triangular fat pad (Fig. 1A). Deep to these structures, the medial para-patellar recess can be identified as V-shaped, hypoechoic, with the tips directed towards the deep part of the patello-femoral joint (Fig. 1A). Similarly, on the lateral side, the bony landmarks (i.e., lateral femoral condyle) and the patella can be localized first. Again, with fine movements of the probe, the lateral patello-femoral ligament and the underlying triangular fat pad can be scanned (Fig. 1B). Underneath can be seen the lateral para-patellar recess as V-shaped, hypoechoic, with the tips directed toward the deep part of the patello-femoral joint (Fig. 1B). Of note, the 2 aforementioned ligaments (also called “wing ligaments”) are fibrous lamellae that function as passive stabilizers of the patello-femoral joint. The lateral one is shorter and continues laterally with the femoral fascia, and the medial one is longer and thicker because it is subjected to greater mechanical stress during walking and running [3].

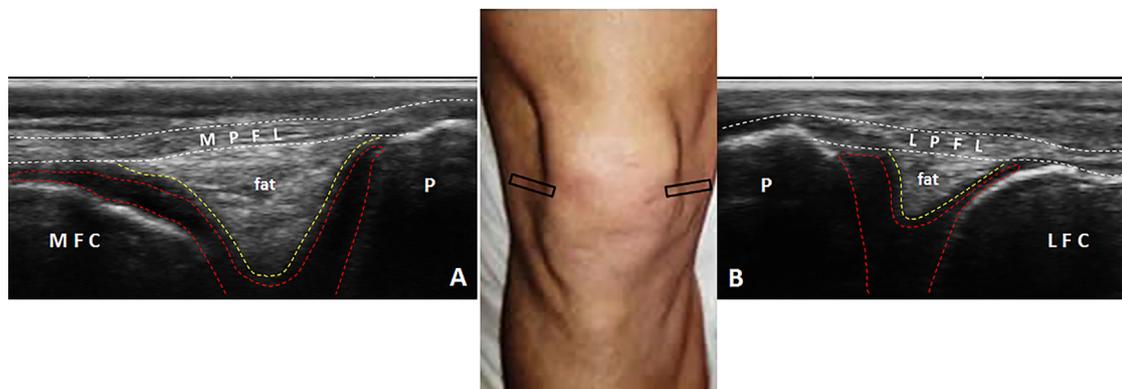


Fig. 1. Central photograph shows the probe positions on the medial and lateral parts of the knee in the transverse plane. Corresponding ultrasound images of the medial (A) and lateral (B) sides of the knee show the ligaments in white dotted lines, the triangular fat pads in yellow dotted lines, and the para-patellar recesses in red dotted lines. MFC: medial femoral condyle; P: patella; MPFL: medial patello-femoral ligament; LFC: lateral femoral condyle; LPFL: lateral patello-femoral ligament.

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Disclosure of interest

The authors declare that they have no competing interest.

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