Imaging for Residents - Quiz

A Runner with Right Lateral Knee Pain

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Section 1 - Quiz

This is the case of a 45-year-old male without known systemic disease. He participated in a few marathons and triathlons in the past 2 years. However, he gradually felt dull and discomfort just over his right lateral knee in the last 4 months, especially the days after his running or bicycling. He reported no known significant trauma or contusion over his right knee. He described his pain as being poorly localized, deep, and occasionally aching. On examination, muscle strength, sensation, and deep tendon reflexes of the bilateral lower limbs were normal and symmetric. Knee range of motion was full, without significant evidence of intra-articular effusion. Meniscal tests were negative, and on palpation, the most tender point seemed to be over the proximal tibiofibular joint (PTFJ).

He was then referred to the physiatrist clinic for a musculoskeletal ultrasonography to better assess the area of tenderness at the anterolateral knee.

Biceps femoris

Biceps femoris

Fibula

Femur

Femur

3

Figure 1: Right biceps femoris in the long axis, with a multilobulated cystic lesion deep to the biceps femoris, measuring 6.7 mm \times 5.7 mm with anechoic content

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The significant findings were a 6.7 mm × 5.7 mm × 9.0 mm cystic multilobulated lesion with anechoic content emerging both anteriorly and posteriorly from the right PTFJ [Figures 1-5]. Power Doppler was negative [Figure 2], and the cyst was noncompressible. No cortical irregularity was noted at the PTFJ. The remainder of the right knee ultrasound examination was within normal limits, including evaluation of the iliotibial band and biceps femoris.

Magnetic resonance imaging was performed within a month to confirm the diagnosis [Figures 6-8].

With the information provided, the reader should be able to make the diagnosis and establish potential treatment options.

WHAT IS THE DIAGNOSIS? Declaration of patient consent

The authors certify that they have obtained appropriate patient consent form. In the form, the patient has given

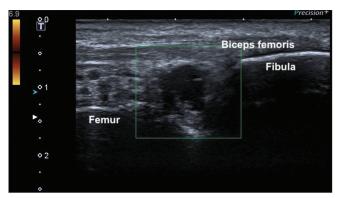


Figure 2: Right biceps femoris in the long axis, with power Doppler activated over a cystic lesion deep into the biceps femoris

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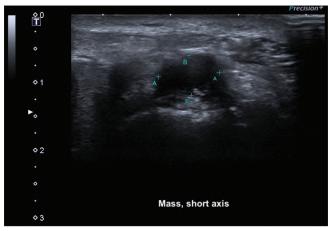


Figure 3: Transverse view of the cystic lesion, measuring 9.0 mm \times 5.9 mm in this axis



Figure 5: Longitudinal view of the multilobulated cystic lesion overlying the proximal anterior tibia



Figure 7: Coronal cut of the right knee on magnetic resonance imaging

his consent for his figures and other clinical information to be reported in the journal. The patient understands that his name and initial will not be published, and due efforts will be made to conceal his identity, but anonymity cannot be guaranteed.

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Nil.

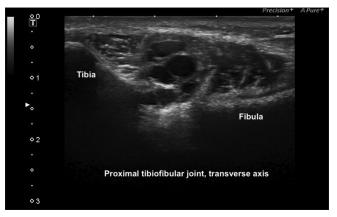


Figure 4: Lobulated cystic lesion seen emanating from the proximal tibiofibular joint in the transverse axis

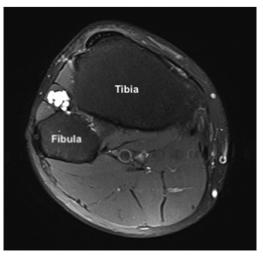


Figure 6: Transverse cut of the right proximal leg on magnetic resonance imaging



Figure 8: Sagittal cut of the right lateral knee on magnetic resonance imaging

Conflicts of interest

There are no conflicts of interest.