

RECTUS FEMORIS DISTAL TENDON TEAR: A TYPICAL ASPECT

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ABSTRACT

The authors report the case of a 22-year-old professional footballer by profession who, following a “shoot” in a vacuum, presented a swelling of the anterior aspect of the thigh. An emergency ERM was performed showing a typical rupture of the femoral right tendon. Surgical suturing was performed.

KEYWORDS: Muscle tear; Rectus femoris; MRI.

MANUSCRIPT

The rectus femoris is the most anterior and medial muscle of the quadriceps and is involved in hip flexion and knee extension. Its proximal insertion involves two tendons: a direct tendon inserted on the anterior inferior iliac spine and an indirect tendon inserted on the supra-acetabular fossa. The union of these two tendons forms

the joint tendon. Its distal insertion is represented by the anterior blade of the quadriceps tendon.

The rupture of the rectus abdominis primarily affects the distal insertion of the muscle fibres. The most common mechanism of injury is the shoot-through. Clinically, the ruptured muscle forms a mass on the anterior aspect of the thigh with a distal defect reflecting the tendon tear.

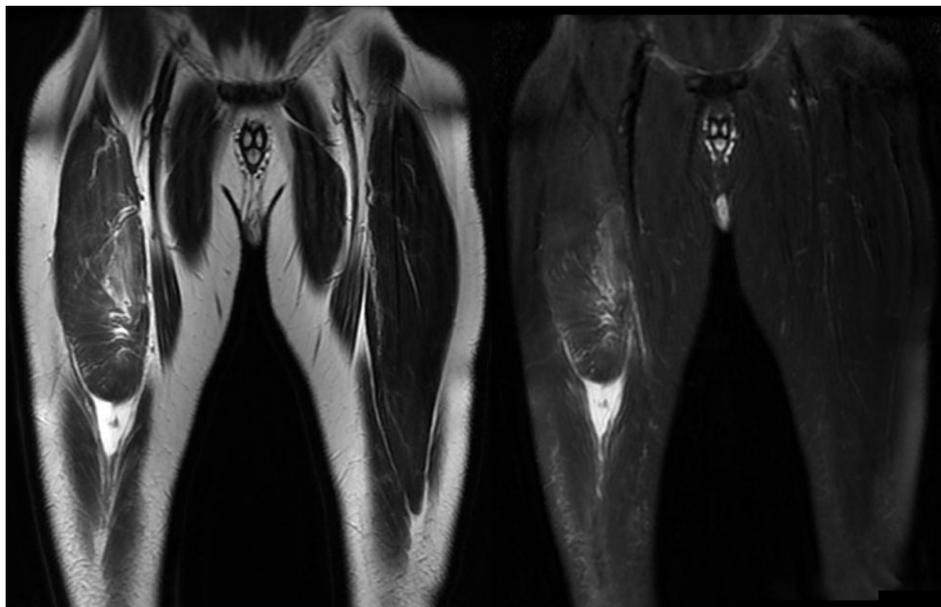


Fig. 1a

Fig. 1b

Figure 1: T2 coronal sections without (a) and with fat saturation (b), showing upward ascension of the rectus femoris muscle. Note the absence of visualization of the distal tendon insertion replaced by a fluid effusion.

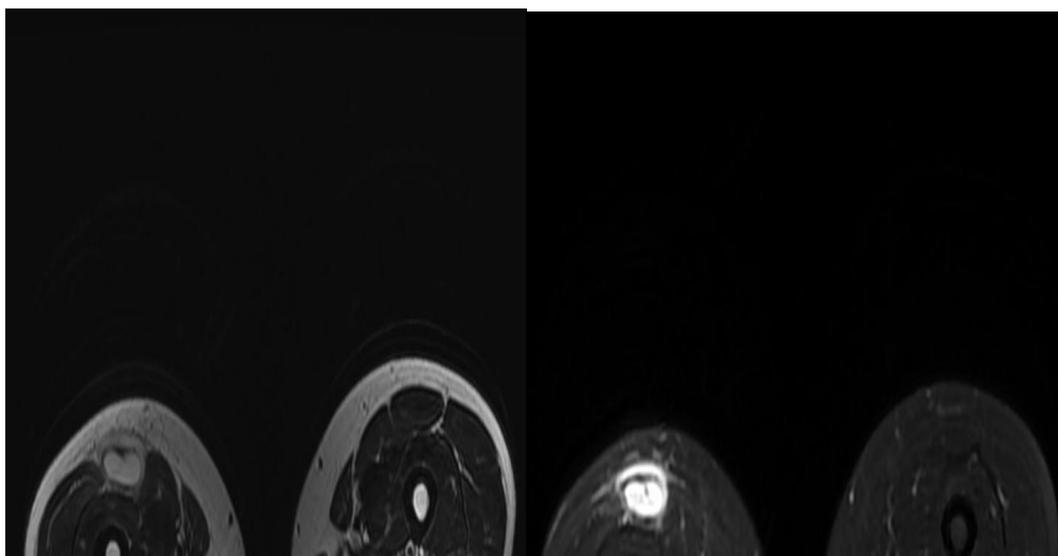


Fig 2a

Fig 2b

Figure 2: T2 axial sections without (a) and with fat saturation (b): compared to the breast side, the rectus femoris is not individualised on its anatomical site due to retraction of the myotendinous stump. The tendon sheath is empty, filled by a fluid effusion in frank T2 hypersignal (a), more evident on the fat saturation sequences (b). The vastus muscles show a normal appearance and signal.

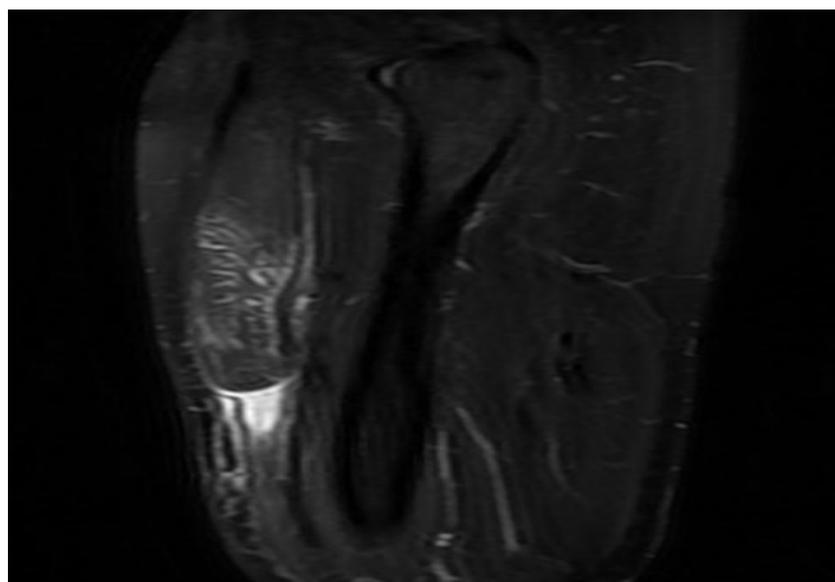


Figure 3: Sagittal T2 section with fat saturation, showing the distal tendon lesion of the rectus femoris tendon with muscle retraction. The lesion only involves the tendon.

Ultrasound showed retraction of the myotendinous stump with rupture of the tendon and a subaponeurotic fluid collection opposite.

MRI is much more sensitive to the oedematous phenomenon,^[1] and allows a better analysis of the musculo-tendinous structures and to assess the severity scale.^[2]

In the typical form, the muscle retracts and appears upwardly elevated (Fig. 1,2). At its distal insertion, the anterior band is no longer distinct, but is replaced by a fluid hypersignal on the T2 and STIR sequences related to the effusion (Fig. 1,3).

Given the extent of the retraction, surgical repair is indicated for optimal functional recovery.

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