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CASE REPORT OF ISOLATED RECTUS FEMORIS ATROPHY

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Introduction: Non-traumatic neuromuscular lesions of only one muscular portion of the quadriceps are rare and poorly described in literature.

Aim: The goal of our study was to investigate the possible causes of this pathology and to objectively quantify the functional consequences of this isolated atrophy from the rectus femoris on the total muscular performances of the quadriceps.

Patient and Method: A male patient, 44 years old, presented an isolated atrophy of the right rectus femoris without pain nor history of previous traumatic event. He reported occasional paraesthesias on anterior right thigh. Electromyographic exploration of the lower limbs, imagery (echography and MRI) and isokinetic test were undertaken by the patient.

Results: Imagery explorations showed the atrophy of the right rectus femoris combined with fatty degeneration but this exam did not allow determining the actual etiology. Therefore, a precise diagnosis was not allowed, even if the EMG confirmed the presence of important signs of specific and isolated denervation only in the right rectus femoris. The isokinetic test, performed in the classical sitting position, highlighted symmetrical performances for flexors of the knee and a moderately decrease in the right concentric quadriceps torque (-10%). A complementary isokinetic assessment, in a lying supine position, demonstrated a more marked deficit of this right quadriceps (higher than -30%).

Conclusion: No precise etiology was shown for this isolated atrophy of the right rectus femoris. Nevertheless, we brought back the importance to lay the patient in a lying supine position in order to preferentially investigate the rectus femoris performances through an isokinetic test.