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Case Report

Contribution of MRI During Inflammatory Myopathies About a Case

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Abstract: Muscle MRI is a valuable aid in the positive and differential diagnosis of myopathy. We report the case of a patient in whom MRI made it possible to make the diagnosis, and we will report through this observation the MRI aspects of these pathological groups.

Keywords: Muscle MRI, Myopathy, Differential Diagnosis.

INTRODUCTION

Primary inflammatory myopathies include polymyositis, dermatomyositis and inclusion body myositis. The diagnosis of this pathological entity is essentially based on muscle biopsy. Muscle MRI of the thighs is a fundamental tool in the diagnosis and monitoring of myopathies [1]. We report the case of a patient in whom MRI allowed the diagnosis to be made, and we will report through this observation the MRI aspects of these pathological groups.

OBSERVATION

This is a 54-year-old patient, hypertensive and diabetic, with a waddling gait and difficulty running and jumping. The clinical examination reveals a proximal and to a lesser degree distal motor deficit of both lower limbs, with retractions of the ankles and knees. The examination of the cranial nerves, sensitivity is normal as well as the cognitive assessment. The clinical evolution is progressive towards an accentuation of axial and proximal motor weakness, fatigability and motor deficit of the proximal muscles of the lower limbs. Paraclinical examinations including biological assays are normal. Imaging in the form of muscle MRI (Figure) compatible with myopathy. Muscle biopsy confirmed the diagnosis of dermatomyositis.

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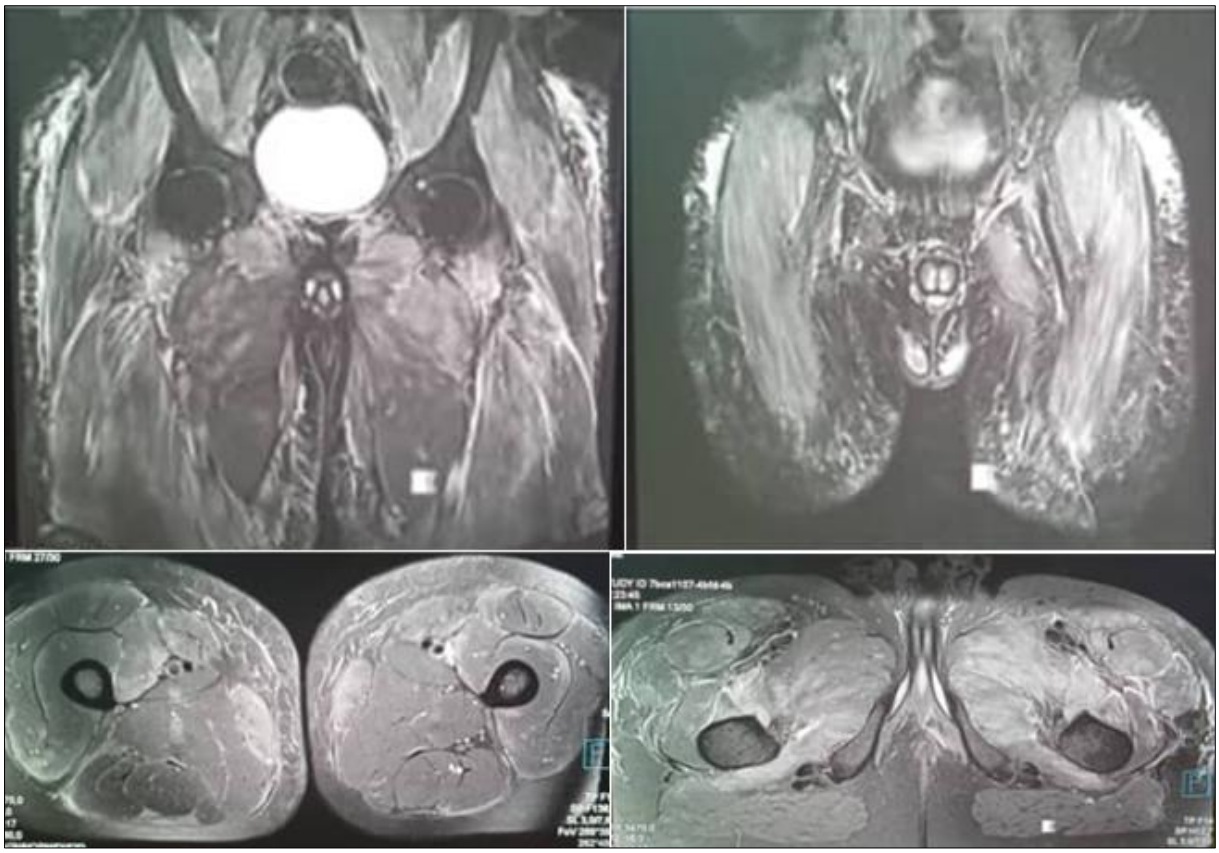

Figure: Axial and Coronal STIR and SE-T1 after injection of contrast product and fat suppression, of both thighs showing large areas of hypersignal visible in the three muscle groups on the STIR sequence, with enhancement of the same areas after injection of contrast product

DISCUSSION

Myopathy is characterized by skeletal muscle damage. It may be caused by muscle, nerve, or circulatory system impairment. Myopathy may be congenital or acquired. It may be temporary or chronic.

Inflammatory myopathies associate with a myopathic syndrome, a dys-immune inflammatory attack of the striated muscle, with a significant heterogeneity both clinical and anatomopathological exist between them. The diagnosis is based particularly on the clinic, the dosage of muscle enzymes, the exploration of the electromyogram and especially the realization of the muscle biopsy [1-3].

Muscle imaging is a valuable aid in the diagnosis of myopathy.

Muscle MRI of advanced inflammatory myopathies, objectifying several types of semiological signs such as fatty infiltration, atrophy and/or inflammation. Fatty involution presents as hypodensity on CT or hypo-intense on T1 on MRI, begins at the periphery of the muscles, particularly in the thigh muscles, especially the vastus lateralis and the leg, particularly the soleus and gastrocnemius muscles. This hypodense crown clearly outlines the contour of the muscles. Central hypodensity of the rectus femoris muscle is also quite typical. When fatty atrophy does not allow analysis of the lower limbs, whole-body MRI objects this characteristic type of fatty involution within proximal muscles such as the infraspinatus or subscapularis [4].

There was no difference between these myopathies in the distribution and extent of MRI abnormalities. However, isolated inflammatory lesions, without fatty infiltration or atrophy, are more common in dermatomyositis than in polymyositis.

Treatment depends primarily on the cause of the muscular myopathy. For inflammatory myopathies, treatment is based on corticosteroids, polyvalent immunoglobulins in severe forms, as well as in inclusion body myositis [5].

CONCLUSION

Magnetic resonance imaging makes it possible to highlight areas of inflammation, atrophy and fat infiltration in the muscle tissue and plays an important role in providing the elements of differential diagnoses between these myopathies.

Conflict of Interest: The authors declare that they have no conflict of interest.

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