Melorheostosis: About A Case and Reviewed the Literature

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Article History
Received: 23.07.2018
Accepted: 05.08.2018
Published: 30.08.2018

DOI:
10.21276/sjmcr.2018.6.8.5

Abstract: Melorheostosis is defined as progressive bone dysplasia, which can lead to painful complications and deformities. The most common symptoms are pain and limitations of joint mobility due to bone and soft tissue deformities. The diagnosis is based on radiology. Here we report the case of a 39-year-old woman who has been consulting for left ankle pain of increasing intensity for two years, in whom standard radiographs were characteristic of melorheostosis. MRI was performed to better study the behavior and extent of lesions.

Keywords: Melorheostosis, bone dysplasia, osteopathy.

INTRODUCTION

Melorheostosis is defined as progressive bone dysplasia, which can lead to painful complications and deformities [1]. The most common symptoms are pain and limitations of joint mobility due to bone and soft tissue deformities [2]. The diagnosis is based on radiology [3,4]. Its appearance is characterized by linear cortical hypercondensation in “candle casting” [5] on standard radiography. MRI allows specifying the nature, the seat and the extension of the lesions, in particular with the soft parts as well as the evaluation of the bone deformations for a possible surgical correction.

CASE REPORT

A 39-year-old woman who consults for left ankle pain of increasing intensity for two years. Standard radiographs were characteristic of melorheostosis with extended left lateral monomelic involvement on the left lower limb axis. These lesions took the appearance of cortical osteoconductive flows, relatively well limited, parallel to the major axis of the femur and the fibula. In addition to these lesions, there are multiple foci of nodular osteosclerosis in the tarsal bones, particularly the calcaneus and the fibula head. Ossification of the external pararticular soft tissues of the left knee are clearly visible on the left knee X-rays.

MRI shows the presence of multiple nodular hyposignal formations on all sequences at the posterolateral side of the lateral femoral condyle, extending to the pararticular soft parts to the head of the fibula. It associates a perilesional hypersignal on the T2 sequences involving the muscular structures. MRI also shows a thickening of the cortical fibula in irregular nodular signal and responsible for a more or less significant reduction of the medullary cavity. These signal lesions extend along the soft parts of the lateral surface of the foot with calcaneal and tarsometatarsal involvement. The diagnosis of melorheostosis was already retained on standard radiographs. MRI was performed to better study the behavior and extent of lesions.

Fig-1 and 2: Ankle x-rays showing melorheostosis
DISCUSSION

Melorheostosis is a rare pathology that affects both sexes. Described for the first time by Leri and Joanny in 1922 [3,4]. This osteopathy begins in childhood with rapid growth during adolescence [5, 6-9]. Its incidence is estimated at 0.9 per million inhabitants [8, 10]. Its etiology remains unknown. However, some authors suggest that it comes from an attack of one or more sensitive nervous territories (sclerotomes); an attack that may be infectious vascular, degenerative, inflammatory or embryonic [7, 8, 10-12]. Melorheostosis mainly affects membranous ossification and, to a lesser extent, enchondral ossification in a mono, polyostotic or monomelic manner [9].

With an insidious onset, marked by pain such as neuralgia or arthralgia [2], this pathology gradually settles causing joint stiffness and deformity [2, 4, 7, 8, 10-13]. Soft tissue lesions are frequently associated with osteoarticular structures; cases of band scleroderma have also been reported [2,8]. Associated vascular malformations were reported in 17% of cases [10], an angiodysplasia underlying bone involvement [1, 8, 13].

The diagnosis of melorheostosis is radiological; it is a linear hypercondensation in "candle casting" characteristic along the bones [5, 6]. This condensation has a metameric distribution [5]. This osteosclerosis often reaches the cortex with a possible...
Melorheostosis is a rare condensing bone dysplasia, its diagnosis is based on imaging, especially standard radiographs. MRI offers a new semiology to be added to the standard radiology-scintigraphy pair.

REFERENCES

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