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Myositis Ossificans Circumscribed of the Knee: About a Case

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ABSTRACT

Myositis ossificans circumscribed (MOC) is a rare, benign condition characterized by heterotopic ossification of the striated muscles often occurring in young subjects. We propose to illustrate from an observation, the aspects realized by the ossification myositis circumscribed in conventional radiology, in tomo densitometry in order to avoid the potential diagnostic confusion with a malignant bone tumor.

Introduction

Myositis ossificans circumscribed (MOC) is a benign process of focal heterotopic ossification of the soft tissues, occurring in the young subject most often as a result of trauma. It is a rare pseudo-tumoral process, of rather poorly defined etiology, that occurs from interstitial connective tissue and not from skeletal muscle fibers. The clinical picture and the biology are not specific, which makes the imaging a fundamental role in the diagnosis of the disease. This was the case of our patient whose report we report.

Observation

This is a 15-year-old girl, with no particular pathological history, consults for a painful swelling of the right knee that has been evolving for 1 month prior to admission, with no notion of trauma. The clinical examination revealed a hemodynamically and respiratory-stable conscious patient with a walking dodging lameness, a hard, fixed swelling, opposite the posterolateral right knee, a sharp pain on the palpation of the knee. swelling, without inflammatory signs or limitation of the joint amplitude of the same knee. X-rays of the right knee showed periarticular calcifications in the posterolateral part of the right knee of the left arm (Figure 1). An ultrasound of the soft tissues was performed showing the presence, opposite the posterolateral side of the right knee, of calcifications organized in a ring measuring 26 * 17 mm and responsible for posterior shade cones, associated with a large infiltration of fat under as well as extensive lateral muscle infiltration and a thin intra-articular effusion of the right knee (Figure 2), with a slightly ascended infectious record (CRP at 10.33 mg / l, VS at 29 mm, white at 9410 element / mm3). We completed the assessment with a tomodensitometry of the right knee showing calcium density formations next to the posterolateral part of the right knee (Figure 3). We opted for a conservative treatment with a rest, analgesic treatment and anti-inflammatory oral with a good clinical evolution at the last follow-up at 6 months.

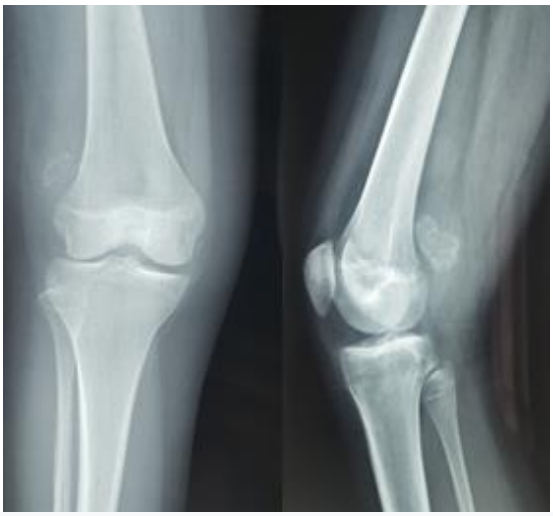

Figure1.X-ray of the right knee face and profile showing periarticular calcifications of the right knee

Figure2. ultrasonographic sections of periarticular calcifications of the right knee with posterior shadow cone

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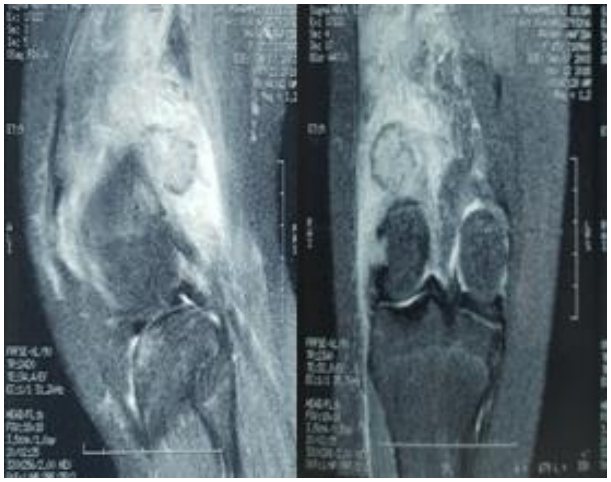

Figure3. Tomo densitometric sections: calcium-density formations in conglomerates involving the posterolateral region of the right knee

Discussion

Myositis ossificans circumscribed (MOC) is a benign, uncommon soft tissue pathology characterized by non-neoplastic heterotopic proliferation of bone and cartilage in the soft tissues at a distance from the periosteum. A hundred or so observations are reported in the literature [1]. This acquired condition is characterized by localized heterotopic ossification due to proliferation of fibrous tissue and neoformation of bone and cartilage in the soft tissues [2,3]. It is an extremely rare affection that especially affects the young subject without predominance of sex [4]. The involvement of the thigh is most frequent in the anterior compartment [5,6]. The involvement of the upper limb is rare [7]. Clinically, MOC manifests itself as a painful mass of the soft tissues, of sudden onset, of maximal volume immediately accompanied by inflammatory clinical and biological signs. The pain tends to decrease with the evolution, which makes the difference with the tumoral pathology. The radiological aspect changes in parallel and is superimposable on the histological maturation of the MOC lesion. In the early phase, X-rays are normal, at the second week there is a local increase in soft tissue density and volume with a possible periosteal neighborhood reaction and fine calcification [8]. Ultrasonography may show a well-defined hypoechoic oval mass with echogenic center in relation to the histological zone phenomenon. CT is the paraclinical examination of choice to characterize heterotopic mineralization by better demonstrating the zone phenomenon [9]. In the first two weeks the lesion appears as a relatively hypodense mass without central or peripheral calcification. At this stage the perilesional edema can be seen but is best appreciated by the MRI. The circumferential ring arrangement of calcifications is earlier and more easily highlighted than on simple snapshots. The underlying bone is not invaded but may have a notch or periosteal reaction [10]. Differential diagnosis in children with painful calcium images close to the diaphysis of long bones requires the removal of a malignant tumor [10, 11]. The MOC is spontaneously favorable. Surgical excision of osteomas is not systematic. Surgery is indicated in cases of neurological compression or joint stiffness. In this case, scintigraphy is essential to check the maturation of lesions [9].

Conclusion

The MOC is a rare and benign pathology, but serious because of its functional gene, its diagnosis is mainly anatopathological, the imaging plays a very significant role and its treatment remains essentially medical, it is rarely surgical.

Declaration of interest

The authors declare that they have no conflict of interest in relation to this article.

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