Intramuscular myxoma of the left thigh: a rare tumor

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ABSTRACT

Background: Intramuscular myxomas are rare tumors of mesenchymal origin and are usually presented in skeletal or cardiac muscles. They are of gelatinous texture and tend to reach large dimensions. They usually present as a painless mass which grows significantly with time, but rarely causing symptoms as pain or pressure to nearby structures. Intramuscular myxomas are usually diagnosed with ultrasound, computed tomography scan or magnetic resonance imaging scan, but the definite diagnosis is acquired by the histology report of the excised mass.

Case Presentation: We report a rare case of a large (4 × 4 cm) symptomatic myxoma of the left thigh in a 49-year-old female.

Conclusion: Intramuscular myxomas are rare tumors of mesenchymal origin, which can reach large dimensions. Excision is advised, even in smaller-sized masses, in order to have a definite diagnosis.

Keywords: Case report, myxoma, desmoid tumor.

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Background

Myxomas were first described by Virchow and Chance [1] in order to describe masses which their gelatinous substance resembled the texture of the umbilical cord. They are rare tumors originating from fibroblasts that lack the potential of producing collagen [2] and are usually presented in skeletal or cardiac muscles. They are of gelatinous texture and tend to reach large dimensions. They usually present as a painless mass which grows significantly with time, rarely causing symptoms as pain or pressure to nearby structures. Intramuscular myxomas are usually diagnosed with ultrasound, computed tomography (CT) scan or magnetic resonance imaging (MRI) scan, but the definite diagnosis is acquired by the histology report of the excised mass. We report a rare case of a large (4 × 4 cm) symptomatic myxoma of the left thigh in a 49-year-old female.

Case Presentation

A 49-year-old female presented to our hospital with an on growing pain in the left thigh and an on-and-off palpable mass on the site of maximum tenderness. The patient had a hereditary and personal history of autoimmune diseases, but otherwise she did not present with any other previous health issues. The clinical examination revealed deep-tissue swelling in the area that the patient defined as the point of maximum tenderness, which was more obvious with certain movements of the left limb (contraction of the rectus femoris muscle). The ultrasound revealed the mass, measuring 4 × 3 cm and the patient was investigated with an MRI scan of the left thigh. In MRI, a possible intramuscular myxoma measuring 40 × 31 × 25 mm in the left vastus lateralis and vastus medialis muscles was diagnosed, surrounded by diffuse edema in the superior and inferior muscle fibers (Figures 1 and 2).

The patient was operated under general anesthesia and an encapsulated round-shaped mass of about 5 cm diameter was excised (Figure 3). The mass had a white gelatinous structure and presented adhesions to the nearby muscle fibers (Figure 4). The operation and the postoperative course were uneventful and the patient was released on the same night.

The histopathology report stated that the tumor was markedly hypocellular and consisted of spindle cells with poorly defined cytoplasm, myxoid stroma, and minimal pleomorphism or mitotic activity, without any evidence of malignancy (Figures 5-7).

The patient is under regular follow-up after 7 months, without any evidence of recurrence and with complete resolution of pain.

Discussion

Intramuscular myxoma is a rare benign tumor, with a reported incidence of 0.1-0.3 per 100,000. They are

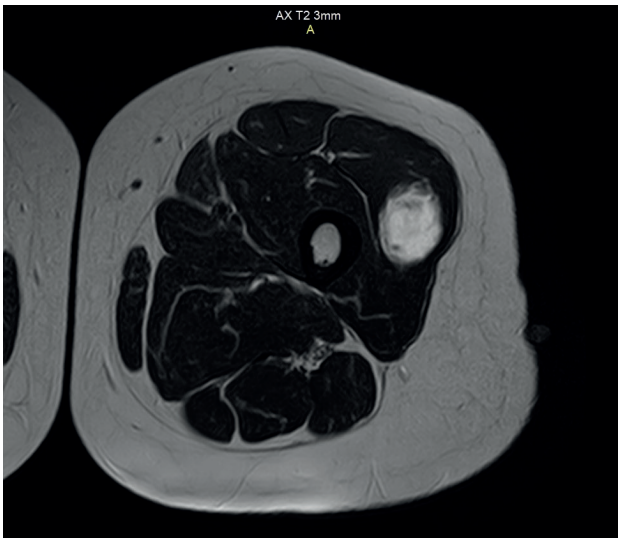

Figure 1. *MRI image of the tumor in T2 sequence.*

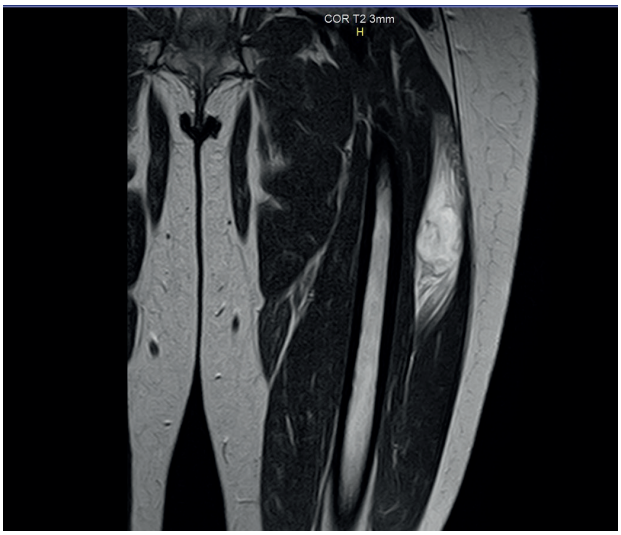

Figure 2. *MRI image of the tumor in T2 sequence.*

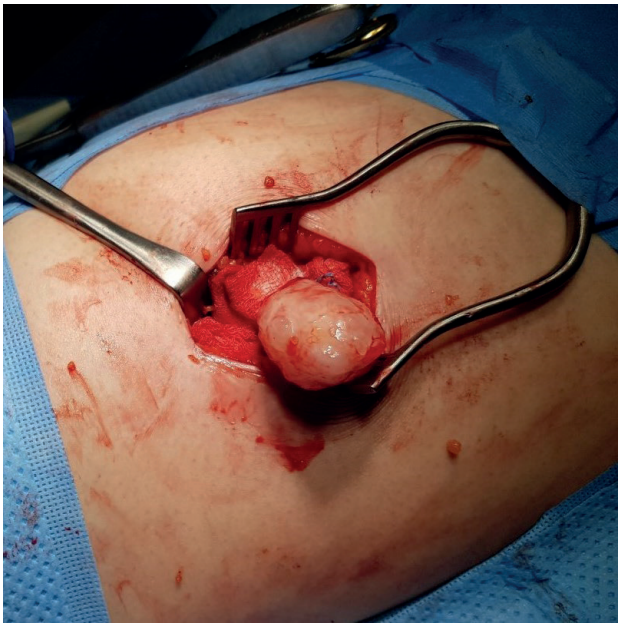

Figure 3. *Intraoperative image of the myxoma.*

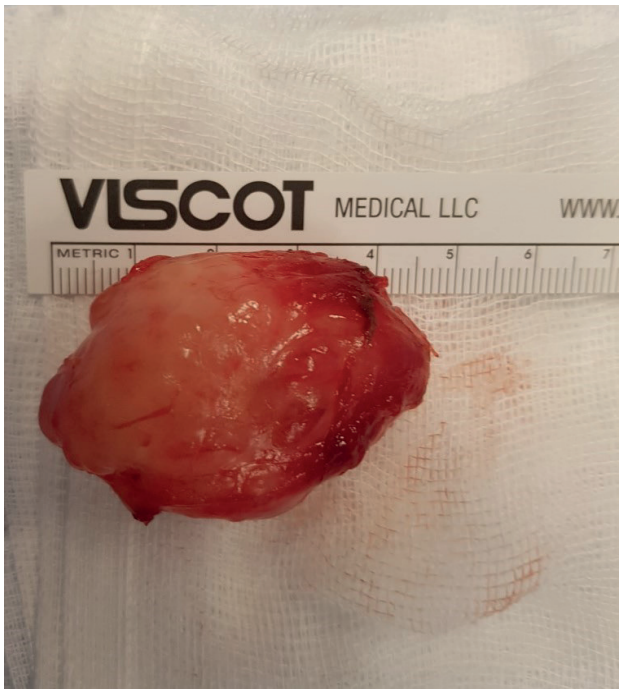

Figure 4. *The myxoma after excision.*

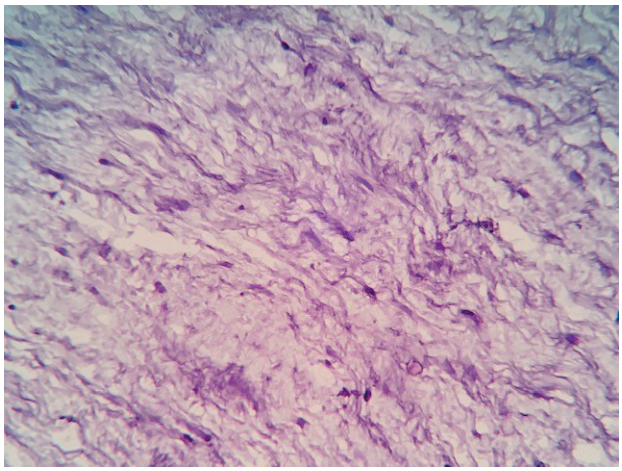

Figure 5. *Histological image of myxoma.*

accounted for 0.12% of all soft tissue tumors [3]. They usually affect female patients (3 : 2 rate in female : male ratio), between the 5th and 6th decades of life [4]. Most common sites of occurrence are the thigh, buttocks, shoulder, and upper extremity, as well as some of cardiac origin. More unusual locations are the area of the head and neck [5], paraspinal muscles, etc.

Most of the cases are sporadic cases, although some of them are part of the Mazabraud's syndrome [6]. In these cases, the myxomas are multiple and are accompanied by fibrous dysplasia of bones. The typical appearance of a myxoma is a painless, palpable tumor, which is firm and sometimes movable, with a history of growing between months and years. In our case, the mass was symptomatic, causing local pain and accompanying edema of the surrounding muscles.

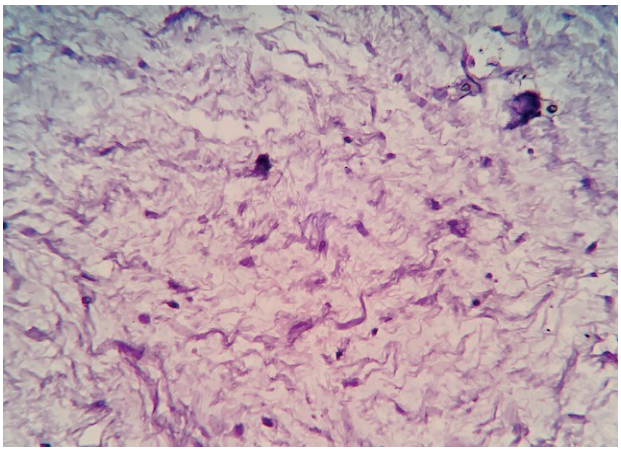

Figure 6. *Histological image of myxoma.*

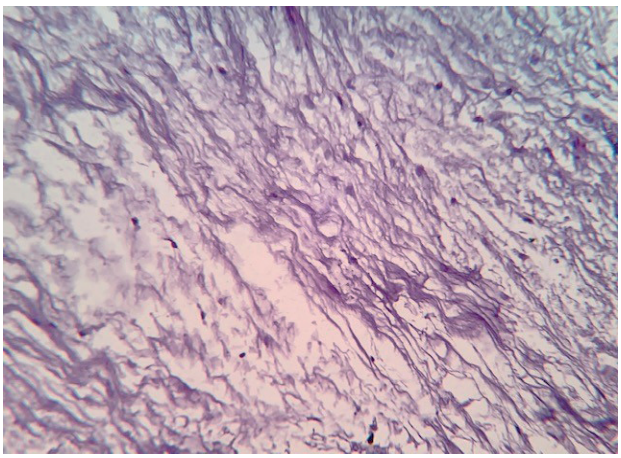

Figure 7. *Histological image of myxoma.*

Histologically, myxomas are hypocellular and hypovascular, with myxoid stroma and basophilic using the hematoxylin-eosin stain [7]. The investigation algorithm includes an ultrasound [8], CT scan or, most preferably, MRI scan of the affected site, which can in most of cases distinguish myxomas from other type of mesenchymal tumors. In MRI, it appears as high signal intensity in T2 and low signal intensity in T1. In recent years, myxomas are also identified accidentally in positron emission tomography/CT scan, carried out for other reasons [9]. Differential diagnosis includes other benign or malignant tumors of mesenchymal origin such as lipomas, hemangiomas, desmoid tumors, sarcomas, or other similar tumors with myxoid degeneration. Although fine needle aspiration cytology and core biopsy can be carried out, the definite diagnosis will be given by the complete excision of the tumor, which is almost in every case curative. The rate of recurrence is extremely rare and in these cases, the histology report must be reevaluated, in case of a false first diagnosis of malignancy as benign disease.

What is new?

A rare case of a thigh intramuscular myxoma in a 49-year-old female.

List of Abbreviations

CT Computed tomography
MRI Magnetic resonance imaging

Funding

None.

Conflict of interests

The author declares that there is no conflict of interest regarding the publication of this article.

Consent for publication

Informed consent was obtained from the patient for this case to be published in a medical journal.

Ethical approval

Ethical approval is not required at our institution to publish an anonymous case report.

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Summary of the case

1	**Patient (gender, age)**	49-year-old female
2	**Final diagnosis**	Intramuscular myxoma
3	**Symptoms**	Palpable mass
4	**Medications**	-
5	**Clinical procedure**	Surgical removal
6	**Specialty**	General surgery