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RESEARCH ARTICLE

FOREFOOT MYOPERICYTOMA: A CASE REPORTAND REVIEW OF THE LITERATURE

Fahd Idarrha, Youness Aznague,Yassine Fathlkhir, Brahim Demnati, Abass Guedi Omar, Mohammed Amine Benhima, Imad Abkari and Halim Saidi

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Abstract

Background: Myopericytoma (MPC) is term that describe a rare group of perivascular tumours of soft tissue and show a range of histological growth patterns. Only a few cases describing MPC have been reported.
Aims: To document and investigate the clinical and histopathological characteristics and differential diagnosis of myopericytoma.
Patients/methods: The present study reports a unique case of myopericytomas found in the 2nd and 3rd inter-toe spaces of a 54-year-old patient.
Results: a 54 year old female patient, presents in our department for a painless mass on the dorsal surface of the right forefoot of progressive installation over 2 years.The mass was firm, non pulsatile and mobile, with no sign of inflammation, evolving in a context of conservation of the general state. The X-ray of the right forefoot did not reveal any notable bone abnormality. An MRI was subsequently performed, which objectified an infiltrating tumor mass of probable sarcomatous origin. The mass was excised surgically, and a pathological and immunohistochemical examination was performed afterward, the diagnosis of myopericytoma was confirmed. No recurrence was found in the follow-up of 12 months.
Conclusions: MPC is a rare and mostly benign tumor that presents as spindle cells in a concentric perivascular growth model with an immunohistochemical staining positive for smooth muscle actin. Local recurrences and rarely metastases may occur in atypical and malignant neoplasms.

Introduction:-

Myopericytoma is a rare soft tissue tumor described as a well-circumscribed and non-encapsulated nodular proliferation composed of ovoid and spindle-shaped myopericytic cells with concentric perivascular arrangement ofthin-walled vessels [1, 2]. Only a small number of series describing MPC have been reported in the literature [3].

Patient And Observation:-

This is a 54-year-old patient, with no particular pathologicalantecedents, presented in our training for a painless mass on the dorsal face of the right forefoot of progressive installation over 2 years. Physicalexaminationshowed a well-limited oval mass of 2cm * 2cm at the level of the 2nd and 3rd web space (Figure 1). The mass was firm, non-pulsatile and mobile, with no sign of inflammation, evolving in a context of preservation of general condition. The

Corresponding Author:- Fahd Idarrha

X-ray of the right forefoot did not reveal any notable bone abnormality. An MRI was subsequently performedshowing an infiltrating tumor mass of probable sarcomatous origin.

The patient underwent a biopsy of the tumor mass with anatomopathological study, on two fibrous-adipose fragments removed, objectifying a spindle-shaped morphological appearance of a cell of moderate density and of concentric perivascular arrangement (Figure 2). Immunohistochemical staining was positive for anti AML, anti-caldesmone and anti -stat6 ac, consistent with perivascular myopericytic differentiation. Subsequently, a total resection of the mass was performed 2 months later, with anatomopathological study of the surgicalsample.

The patient was seen in consultation several times, in a total period of 12 months without any sign of recurrence.

Discussion:-

The term "myopericyte", was first described by Dictor et al [4], to denote "atypical pericytes surrounded by bundles of sclerotic smooth muscles connected to staghorn vessels". In 2002, the World Health Organization classified myopericytoma as an independent tumor entity "pericytic (perivascular) tumor neoplasm" [5].

Myopericytoma usually occurs in adults, but can occur at any age with a peak after age 50. It is more frequently localized at the extremity, but other atypical locations have been described, in particular oral [6], vertebral [7], thoracic [8] and renal myopericytoma [9]. Our case had a single, painless, well-circumscribed, slow-growing solid mass in the extremity of the lower limb. These symptoms are the typical clinical features of myopericytoma. Unusual intravascular myopericytomas of the extremities usually manifest as painful nodules [10], or multi-center, multiple nodules [10]. Although malignant myopericytomas are rare, a few cases have been reported [2, 11]. McMenamin and Fletcher reported three cases of malignant myopericytomas of the extremities, and two of them presented as large, deep painful masses with an infiltrating and metastatic course [12].

The pathologic differential diagnosis of myopericytoma includes myofibroma, angioleiomyoma and glomus tumor due to histologic overlap [2]. On microscopic examination, myopericytomas contain elongated, thin-walledblood vessels concentrically surrounded by spindle-shaped myoid tumor cells with eosinophilic cytoplasm. Most myopericytomas have thin-walled vessels and are negative for desmin [2]. The other immunohistochemical characteristics of myopericytomas are positivity for vimentin, smooth muscle alpha-actin (αSMA), muscle specific actin (MSA) and often for caldesmon [2,13], which was the case in our patient.

Most myopericytomas are benign tumors and are treated by complete excision with a margin of safety. Recurrences are most often caused by incomplete excision of the tumor [2]. We believe that surgicalexcision is sufficient for thetreatment, after pathological diagnosis of benign myopericytoma [10,14,15].

Conclusion:-

We present the case of a patient with a myopericytoma of the forefoot, a rare and most often benign tumor, which is described as spindle cells in a concentric perivascular growth model with a positive immunohistochemical staining for the smooth muscle actin. Usually, these lesions are surgically excised [10,14,15]. Pathological evaluation and immunohistochemical staining are important for the diagnosis.

Conflicts of interest

The authors declare no conflict of interest

Authors' contributions

Fahd Idarrha: authorship, work design, data acquisition, interpretation of data for work, writing and bibliographies
Youness aznague: co-author, writing, data acquisition, bibliographies
Brahim demnati: co-author, writing, data acquisition, bibliographies
Yassine Fathlkhir: co-author, writing, data acquisition, bibliographies
Abass Guedi Omar: co-author, writing, data acquisition, bibliographies
Mohammed Amine Benhima: co-authoring, critical review, editing and evaluation
Imad abkari: co-authoring, critical review, editing and evaluation
Halim saidi: co-authoring, critical review, editing and evaluation

Tables and Figures:-

Figure 1:- Clinical aspect of the new formation.

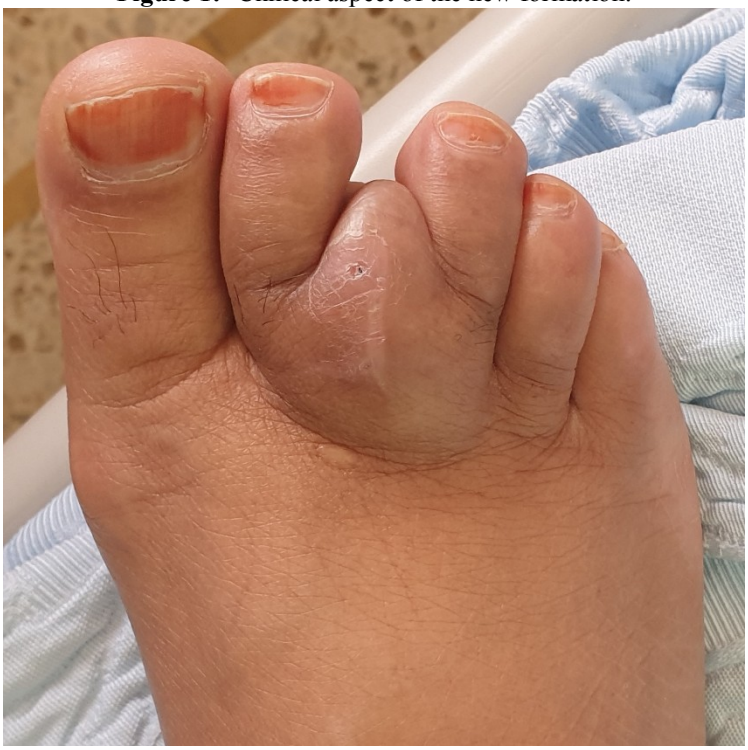
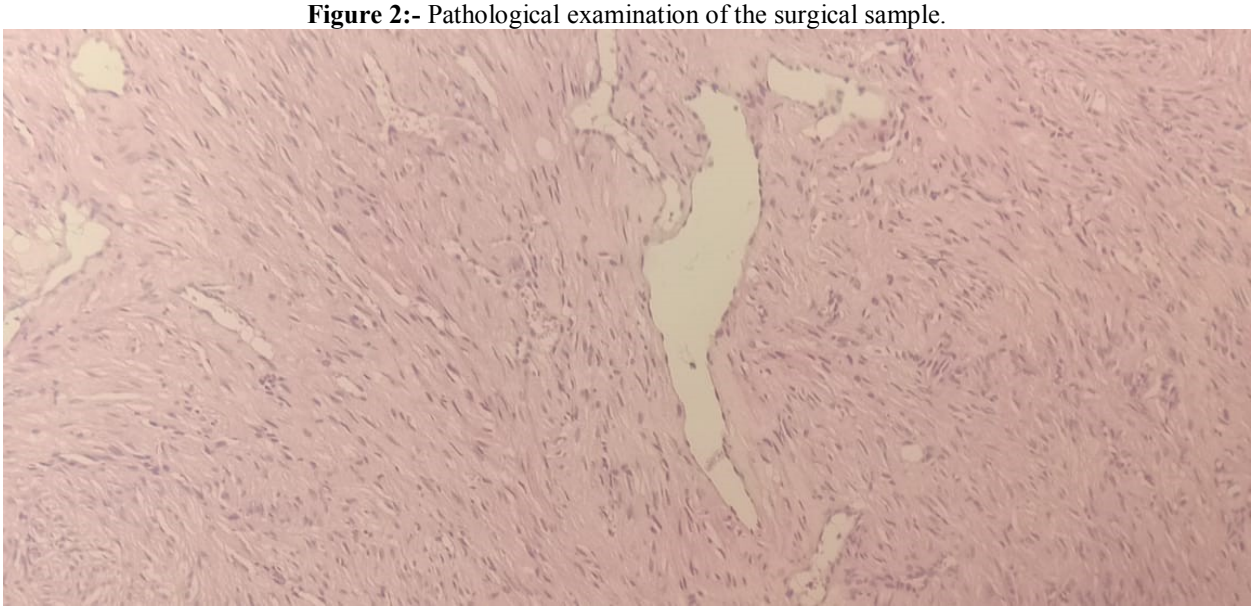


Figure 2:- Pathological examination of the surgical sample.



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