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Cutaneous Mesenchymal Tumors: About 126 Cases

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Case Report

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Abstract: Cutaneous mesenchymal tumors dermal and/or hypodermic are relatively frequent. They are characterised by extreme clinicopathological heterogeneity and dominated by benign tumors. About a series of 126 cases, we have studied the epidemiological, pathological and evolutive profile of these tumors. This is a retrospective study executed at the department of pathology of Moulay Ismail Military Hospital in Meknes-Morocco, between 2014 and 2016. Results: The average age was 41 years-old (15-84 years old). The sex ratio H/F was 1.2. The lower limb was the most frequent location (35%). The surgical pathologic study focused on biopsy material in 100% of cases. 92% of these tumors were benign. They were mainly represented by lipomatous tumors, followed by fibrous and fibro-histiocytic tumors and vascular tumors. 8 % of the tumors were malignant. These were mainly fibrous tumors, followed by vascular tumors. The immunohistochemical study was performed in 11 cases. Surgical treatment was executed in 65% of cases. The evolution was favorable for benign and majority of malignant tumors after a large surgical treatment. One case of death and one case of recidivism were noted. Benign cutaneous mesenchymal tumors have a good prognosis. However, the diagnostic and therapeutic management and the prognostic evaluation of cutaneous sarcomas remain difficult.
Keywords: skin, mesenchymal tumors, surgical pathology, prognosis

INTRODUCTION

Cutaneous mesenchymal tumors develop from elements of the cutaneous own connective tissue and its differentiated structures (blood vessels, fat, muscle, nerves) [1]. Embryologically, they derive mainly from the mesoderm. They are classified by WHO 2006 according to histogenetic bases [1, 5].

Benign cutaneous mesenchymal tumors are the most common [2, 5]. They are histologically reminiscent of normal tissue and have low local invasiveness or recurrence after conservative treatment [3]. However, skin sarcomas are relatively rare and are part of superficial soft tissue sarcomas. Their surgical pathologic diagnosis is difficult and their care, often problematic, is multidisciplinary [4]. The clinical presentation of cutaneous mesenchymal tumors makes them accessible, most of them for clinical examination and biopsy by the dermatologist. These tumors most often perform anatomo-clinical tables, hence the interest of the clinical context (the presentation, and the evolution of the lesion) [5, 6]. The object if of our study is to determine the epidemiological, pathological and evolutive profile of these tumors diagnosed in our department.

MATERIALS AND METHODS

This is a retrospective study on 126 cases of cutaneous mesenchymal tumors collected at the department of pathology of Moulay Ismail military hospital in Meknes-Morocco over a period of three years from 01/01/2014 to 31/12/2016. Data were collected from pathology reports and folders of patient hospitalized in oral-maxillofacial surgery, dermatology, plastic surgery and oncology.

RESULTS

We collected 126 cases of cutaneous mesenchymal tumors over a period of three years, which corresponds to an average annual rate of 42 cases/year. 92% of the tumors were benign. The average age of our patients was 41 years old with extremes ranging from 15 to 84 years old? The average

age was 48 and 61 years-old for benign and malign tumors respectively. The sex ratio (M/F) was 1.2. One of our patients was followed for Neurofibromatosis (NF) type 2. The patients consulted for nodular lesions in 80% of the cases. The predominant location was at the lower limb in 35% of cases. Associated cutaneous signs were found in three patients. These were coffee-milk tasks in a case of NF type 2, and two cases of Kaposi's sarcoma. For the extra-cutaneous signs, ganglionnar involvement was found in both cases with Kaposi's sarcoma. 65% of cases were a excisional biopsies and 35% of cases was a simple biopsies. The material was formol-fixed and paraffin-embedded. Hematoxylin eosin coloring was performed systematically.

The immunohistochemical study was performed in nine cases of Darier-Ferrand dermatofibrosarcoma (DFSDF) and two cases of Kaposi's sarcoma. The antibodies used were; vimentin, CD34, AML, PS100 and HHV8.

The surgical pathologic diagnosis is illustrated in figure 1. Lipomatous tumors were the most common (38%) followed by fibro-histiocytic tumors (35%), vascular tumors (23%), and nerve tumors (4%). They were mainly represented by benign tumors (figure 1). Surgical excision was performed in 65% of cases. Two patients with Kaposi's disease were treated with chemotherapy. Healing was noted at 114 patients. One case of death (Kaposi with positive HIV serology) and one case of recidivism (DFSDF with lesional limits) were noted. The other's patients having been lost sight of before or during the treatment.

Table-1: Distribution of tumors according to their histogenetic origin and their benign or malignant nature

	Benign tumors (number of cases)	malignant tumors (number of cases)
Lipomatous tumors (38%)	49	0
Fibrous and fibro-histiocytic tumors (35%)	35	9
Vascular tumors (23%)	27	2
Nerve tumors (4%)	4	0
Muscle tumors (0 %)	0	0

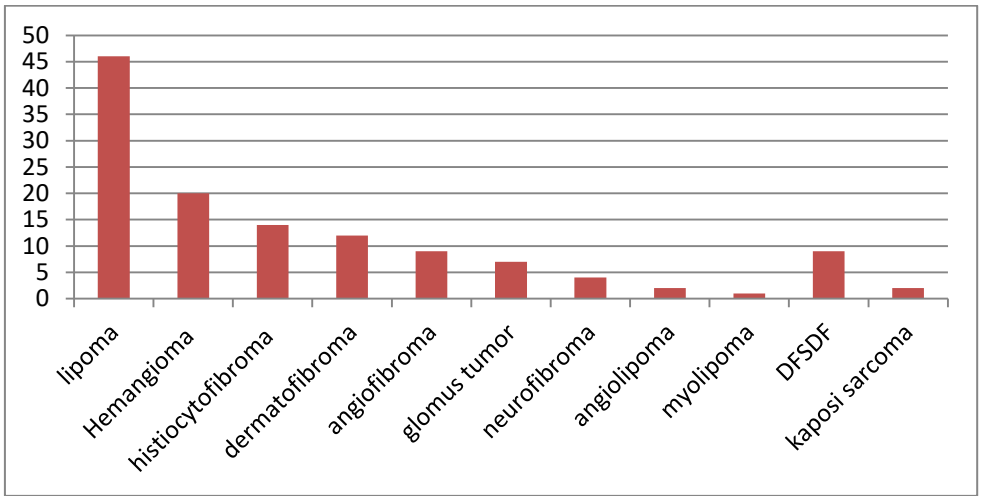

Fig-1: Distribution of patients according to the histological type diagnosis

DISCUSSION

Cutaneous mesenchymal tumors are a heterogeneous group of tumors reported in the literature. Their actual impact remains to be clarified [5]. Apart vascular tumors whose 40% occur before the age of 20, benign skin tumors occur at any age [6, 7]. Our results are consistent with those of the literature. According to our study, the average age for malignant tumors was 61 years (52-84 years). DFSDF was the most common skin sarcoma. The sex ratio was 1.2 with a clear male predominance. The pathogenesis of these tumors is poorly known [4, 5]. However, genetic, field-related, or environmental risk factors are reported in the literature [5, 6]. In our study, we reported two cases of histiocytofibromas occurring on superficial wound scars and one on insect bite scars. Only one case of NF type 2 has been noted. Only one case of viral infection (HIV) was found. However, no case of burns and irradiation was found.

Cutaneous nodules are the main reason for consulting these tumors [7]. In our study, 80% of patients consulted for cutaneous nodules. The predominant localization of the limbs in our study can

be explained by the predominance of fibrohistiocytic tumors [7, 8]. The associated skin signs meet mainly in the context of genodermatoses and Kaposi's disease [5]. In our study, it was mainly coffee-milk tasks in a case of NF type 2. Ganglionnar involvement is often related to Kaposi's disease related to acquired or iatrogenic immunodepression [8]. Histologically, these tumors are dominated by benign tumors [9]. In our study, 92% of our patients had benign tumors and 8 % were followed for malign tumors. Benign lipomatous and fibro-histiocytic tumors are the most common [10, 11], wich concords with our results shown in figure 1 and 2.

The most common malignant tumors in our serie were those of fibrous origin, followed by vascular tumors. The most common malignant fibrous tumor was DFSDF, followed by Kaposi's sarcoma; most common malignant vascular tumor [5].

Surgery is the main treatment of cutaneous mesenchymal tumors. In our serie, surgical excision was performed in 65% of patients. For these malignant tumors, the prognosis depends essentially on the depth of the lesion; the pure dermal lesions with small size have an excellent prognosis [12, 13].

CONCLUSION

Cutaneous mesenchymal tumors constitute a heterogeneous and complex spectrum in cutaneous tumoral pathology. This study, although limited in our institution, helped us to draw up the epidemiological, pathological and evolutive profile of these tumors. Cutaneous sarcomas, for their part, can pose problems of surgical pathologic diagnosis, prognostic evaluation and therapeutic strategy. Indeed, more studies focused on cutaneous mesenchymal tumoral pathology independently of the general tumoral pathology of the soft tissues, are imperative. These must also take into account the molecular biologic of these tumors in order to lead to new therapeutic or even preventive means.

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