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CASE REPORT

BIPHASIC SYNOVIAL SARCOMA: A CASE REPORT

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ABSTRACT

Synovial sarcoma is a malignant neoplasm that can affect patients of any age and any anatomical region. It is caused by the translocation of the SS18 gene on chromosome 18 with the SSX gene on chromosome X. The biphasic subtype is characterized by variable areas of spindle cells and glandular-like epithelium. The common clinical presentation of synovial sarcoma is a slow-growing, painless mass that generates a false impression of benignity. Also, the symptoms can be confused with other inflammatory conditions, or even go unnoticed for a long period. The present case report showed a 33-year-old male patient who presented a soft tissue tumor in the right ankle, close to the anterior tibial nerve. The diagnosis of biphasic synovial sarcoma was made after immunohistochemical analysis.

KEYWORDS: SYNOVIAL SARCOMA; MALIGNANT TUMOR; SOFT TISSUE TUMOR.

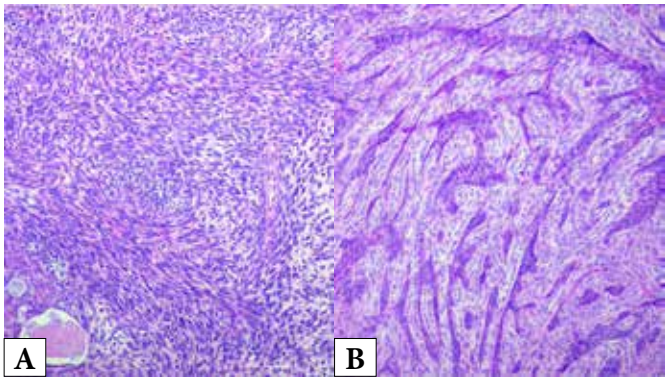
INTRODUCTION

Synovial sarcoma is a translocation-associated soft tissue tumor that affects most people between 15 and 35 years, but can occur in patients of any age. This tumor is found mainly in the arms or legs, especially in the thigh, popliteal fossa and feet, but it can be found anywhere on the body. It is a malignant mesenchymal neoplasm whose origin is not known for sure. It is caused by oncofusion involving the SS18 gene on chromosome 18 with the SSX gene on chromosome X, often SSX1 and SSX2, and rarely SSX4.[1] Synovial sarcoma can be morphologically classified into three main categories: the monophasic type, which is predominantly composed of spindle cell fascicles, the biphasic subtype, which is characterized by variable areas of spindle cells and glandular-type epithelium, and sarcoma poorly differentiated synovial, which commonly includes small round blue cell tissue.

The diagnosis of biphasic synovial sarcoma is based on a combination of findings, including its characteristic morphology, immunohistochemical profile, and identification of the mechanism of translocation.[2] In early stages, small synovial sarcomas can cause insignificant signs and symptoms. As the tumor grows, the patient may notice a mass or swelling in the affected region. In some cases the tumor may limit range of motion or cause numbness and/or pain if it presses on nearby nerves. The common clinical presentation is a slow-growing, painless mass that gives a false impression of benignity.[3] In some cases, the symptoms of a synovial sarcoma may be confused with other inflammatory conditions, such as bursitis or synovitis, or may remain unnoticed for a long period of time. Plain radiographs may show small calcifications within the mass. Synovial sarcoma should be suspected in the presence of characteristic signs and symptoms. Additional tests may be needed to determine the correct diagnosis and prognosis.[4,5]

CASE REPORT

Patient CFA, 33 years old, male, presented a soft tissue tumor in the right ankle, close to the anterior tibial nerve. Initially, the diagnostic hypothesis of Schwannoma was formulated. After performing the immunohistochemical analysis, biphasic synovial sarcoma was diagnosed (Figures A, B, C, D, E and F).



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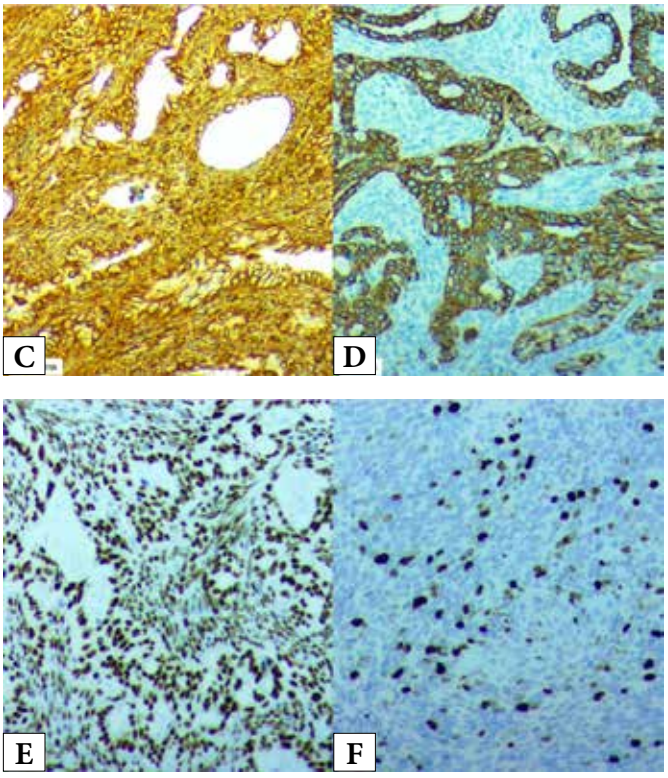

A: H&E staining. B: H&E staining. C: Vimentin staining. D: Staining by CK8/18. E: TLE-1 staining. F: Ki-67 staining.

DISCUSSION

It is known that in the case in question, Schwannoma was suspected in the presentation of the history of the current disease. This tumor has a benign character, encapsulated, slow and usually solitary growth. However, the histopathological findings corroborated the definition of the diagnosis of biphasic synovial sarcoma. In the present case, the patient's age group of 33 years coincides with the prevalence of this comorbidity, as it primarily affects middle-aged individuals[2]. Furthermore, it is a tumor prevalent in the extremities of the body, and in this report, the tumor was located in soft parts of the right ankle. It is important to emphasize that this neoplasm has an undetermined origin[1].

From a histological point of view, this neoplasm can present itself in two types: monophasic and biphasic. This classification is based on the presence or absence of epithelial glandular differentiation close to spindle tumor cells[1]. The biphasic sarcoma, present in the case reported here, presents this coexistence of epithelial and spindle cells. However, monophasic sarcoma, due to its growth pattern similar to other tumors, may demonstrate greater difficulty in histopathological diagnosis.

Classically, the immunohistochemical pattern of this sarcoma demonstrates positivity for Vimentin, epithelial membrane antigen and cytokeratin. In addition, it is generally negative for the S100 protein[5]. In addition to this analysis, cytogenetic analysis of the tumor can also be used. In about 90% of synovial sarcoma cases, the classic t(x;18) (p11; q11) translocation can be identified. It involves the SYT gene from chromosome 18q11 and two genes, SSX1 and SSX2 from chromosome Xq11 [5].

In this report, the immunohistochemical findings were sufficient to characterize the diagnosis, as it presents itself as the biphasic subtype, which presents less difficulty in making sense of it.

CONCLUSION

Synovial sarcoma is a malignant soft tissue tumor that can affect patients of any age, anywhere in the body. Diagnosis is based on a combination of findings, including its characteristic morphology, immunohistochemical profile, and identification of the mechanism of translocation. In the present case report, we present a 33-year-old male patient with a soft tissue tumor in the right ankle adjacent to the anterior tibial nerve. At first, a Schwannoma-type tumor was suspected. However, after immunohistochemical analysis, a diagnosis of biphasic synovial sarcoma was performed.

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