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Case Report

A Rare Case of Pancreatic Metastasis of Synovial Sarcoma

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Abstract

Synovial sarcoma is a rare mesenchymal tumor of soft tissue and has high metastatic potential. The most common sites of metastases are the lungs, lymph nodes and bones. The pancreatic location of a synovial sarcoma is very rare. Histological and immunohistochemical examinations are essential to confirm the diagnosis. We report the case of a 57-year-old patient treated for (SS) of pulmonary localization 2 years ago and who currently presents with pancreatic localization.

Keywords: Pancreatic, metastasis, synovial sarcoma, pancreatic malignancy, case report.

INTRODUCTION

Synovial sarcoma (SS) is a malignant tumor that constitutes up to 10% of all soft-tissue sarcomas [1, 2]. Because of the aggressive potential of SS, metastasis occurs in approximately 50% of patients; the most frequent sites of metastasis are the lungs, lymph nodes, and bone [3]. Pancreatic metastasis is quite rare; only 8 cases have been reported worldwide to date. We report another case of pancreatic metastasis from a synovial sarcoma in a 57-year-old woman.

CASE REPORT

We report the case of a 57-year-old patient initially treated for pulmonary synovialosarcoma. After 3 courses of neoadjuvant chemotherapy, she underwent a left upper lobectomy with lymph node dissection, then the patient received adjuvant radiotherapy, without secondary localization on imaging (figure 1). The histological examination and immunohistochemical profile were in favor of a monophasic synovial sarcoma with spindle cells in fascicular arrangement.

After 2 years of regular clinical and radiological follow-up, the patient presented for consultation with anemia, fatigue, cramps, constipation and minimal bleeding. Chest-abdominal CT scan showed a mass in the head of the pancreas (figure 1).

A biopsy under scanner was performed and the histological examination showed a spindle cell proliferation, arranged in diffuse cell sheets. The cells are elongated, monomorphic, with an oval nucleus that is moderately anisokaryotic and hyperchromatic (figure 2). The mitotic count finds 7 mitoses / 10 fields. The immunohistochemical study shows positive marking of tumor cells by Bcl2 (figure 3 A), EMA (figure 3 B) antibodies and negative marking for PS100, CD34, CD99, AE1/AE3. This made it possible to retain the diagnosis of monophasic spindle cell synovialosarcoma Grade II of FNCLCC.

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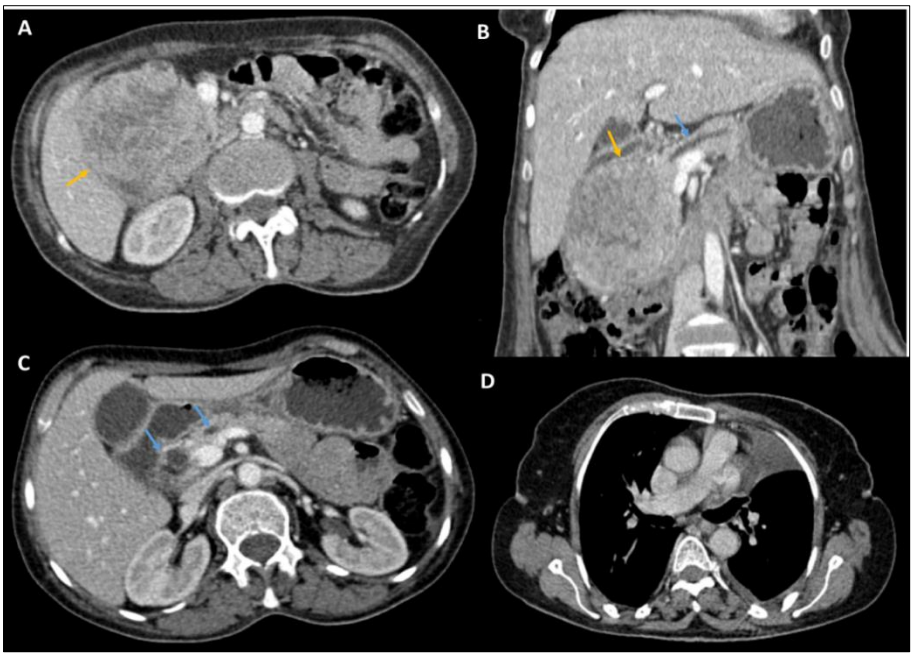

Figure 1: Thoraco-abdominal CT scan images in axial (A, C, D) and coronal reconstruction (B) reveal a large, well-defined, oval mass in the head of the pancreas (yellow arrow) with lobulated contours and heterogeneous density containing liquid areas, which enhances after contrast injection. This mass is responsaible of a double-duct dilation (blue arrow) and atrophy of the corporeo-caudal pancreatic parenchyma

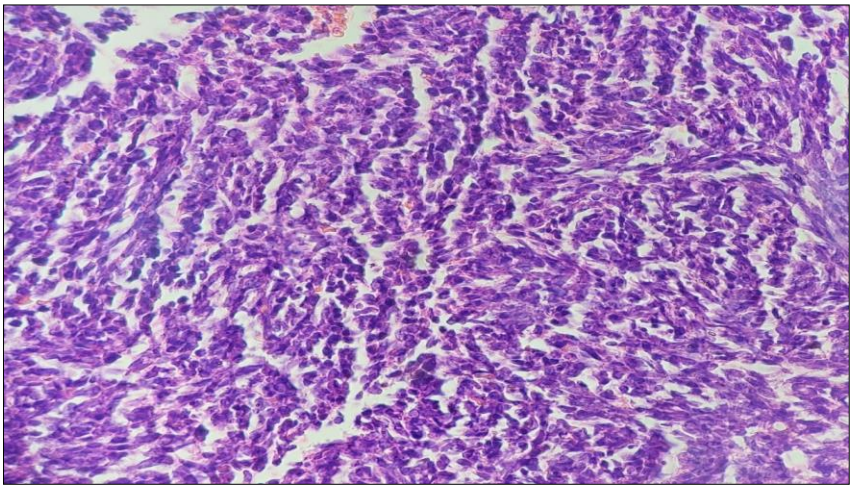

Figure 2: Monophasic synovial sarcoma: fascicles of spindle cells, nuceli are hyperchromatic, monotonous and tightly packed together. (HE x 200)

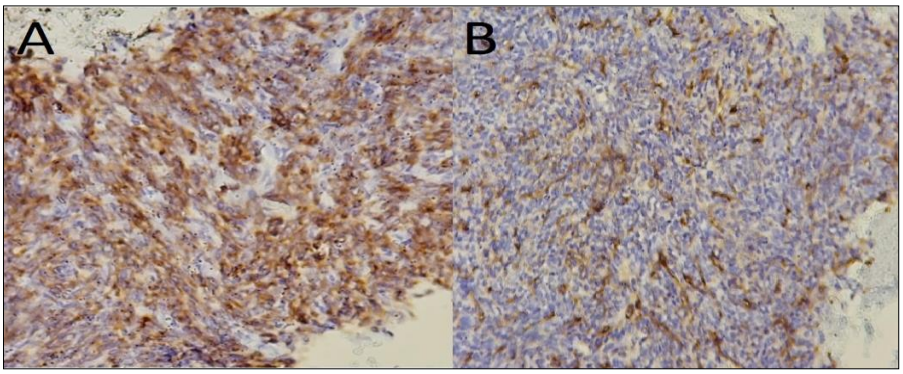

Figure 3: Immunohistochemistry of pancreatic synovial sarcoma: (A) Spindle cells showing immunoreactivity for EMA (IHC x 200). (B) Spindle cells showing immunoreactivity for Bcl2 (IHC x 200)

DISCUSSION

Soft tissue sarcoma is a rare mesenchymal neoplasm that accounts for about 1% of all adult cancers [4]. SS, a malignant soft tissue tumor, forms up to 10% of sarcomas in soft tissue and has a high metastatic potential.

Because of the aggressive potential of SS, metastasis occurs in approximately 50% of patients; the most frequent sites of metastasis are the lungs (74–81%), lymph nodes (3–23%), and bone (10–20%) [5].

The pancreas is an uncommon metastatic site, accounting for around 2% of pancreatic cancers [6]. The most usual primary malignancy of pancreatic metastasis is renal cell cancer, colorectal cancer, melanoma, and lung cancer [7]. Pancreatic metastasis of SS is extremely rare; only 8 cases have been reported worldwide, including our case [8].

The diagnosis of synovial sarcoma generally starts with imaging examinations. On contrast-enhanced CT/MRI, synovial sarcoma is typically depicted as a heterogeneously enhanced, well-circumscribed mass [9]. Because these imaging findings are not specific for synovial sarcoma, however, histological analysis is necessary for the diagnosis [10]. Synovial sarcoma is histologically divided into 3 subtypes: the monophasic type composed only of spindle cells (50%–60%), the biphasic type composed of both epithelial and spindle cell elements (20%–30%), and the poorly differentiated type (15%–20%) [9].

Synovial sarcoma is histologically divided into 3 subtypes: the monophasic type composed only of spindle cells, the biphasic type composed of epithelial elements and spindle cells, and the poorly differentiated type.

On immunohistochemistry, synovial sarcoma is positive for epithelial markers (e.g., keratins and EMA), bcl-2, and transducin-like enhancer of split-1, and negative for skeletal muscle markers (e.g., desmin and α-SMA) and CD34 [11].

These lesions may have a long, indolent course followed by late metastases, which occur in approximately half of cases. Pancreatic metastasis by sarcomas is uncommon and is most frequently diagnosed in patients with widespread metastatic [3].

Metastatic sarcomas present a diagnostic and therapeutic challenge due to their rarity.

CONCLUSION

Pancreatic mesenchymal tumors are rare. Additional tests, such as immunohistochemistry, are useful for diagnosis. Due to the rarity of reported cases, treatment modalities are still limited.

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