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Case Report

Sarcomatoid squamous cell carcinoma of urinary bladder

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ABSTRACT

Among the urinary bladder malignancies, infiltrating urothelial carcinoma is the most common while sarcomatoid variant is a rare malignancy. As the literature shows only few published case reports, We present a case of polypoidal mass of urinary bladder which was excised by TURBT (Transurethral Resection of Bladder Tumor) procedure and histopathologically diagnosed as sarcomatoid squamous cell carcinoma.

1. Introduction

According to the WHO classification of urinary bladder, Urothelial carcinoma is the most common bladder neoplasm.[1] Sarcomatoid carcinoma is a rare variant of bladder carcinomas with aggressive behavior, accounting for only 0.1% to 0.3% of carcinomas.[2] These types of tumors were previously called as "carcinosarcoma" as the tumor has epithelial and mesenchymal component, but the recent WHO classification of urinary tract tumors uses the term "sarcomatoid carcinoma" for all these lesions. The epithelial component most commonly seen is urothelium, followed by squamous or small cell or adeno in nature, while sarcomatous component can be of homologous or heterologous differentiation.[2] We present a case of sarcomatoid carcinoma having a squamous epithelial component, which is very rare.

2. Case Report

A 65-year-old male, a farmer by occupation, complaints of dysuria for four months duration associated with hematuria and abdominal pain. Ultrasound abdomen revealed a well distended bladder with mixed echogenic mass arising from urinay bladder posterior wall measuring 7.9x4.6cm. TURBT was done and sent for histopathological examination.

Grossly Received multiple grey tan to grey-brown soft tissue bits altogether measuring 5x4x3cm. Microscopy Showed predominantly high-grade spindle cell component (70%) with myxoid stroma and moderate to poorly differentiated squamous epithelial component in solid nests and sheets (Figure 1). These tumor cells showed marked nuclear pleomorphism. Heterologous elements were not identified.

3. Discussion

Sarcomatoid carcinoma is uncommon and aggressive tumor of urinary bladder that occurs predominantly in elderly male smokers of the seventh decade. Most patients present with hematuria, dysuria, urinary retention and urinary tract infection.[3] A previous history of carcinoma treated by radiotherapy or exposure to cyclophosphamide therapy is common.[3]

Among the different neoplasms, sarcomatoid carcinoma has a unique aggressive pathway in its pathogenesis. The exact origin of this variant was not clearly explained till

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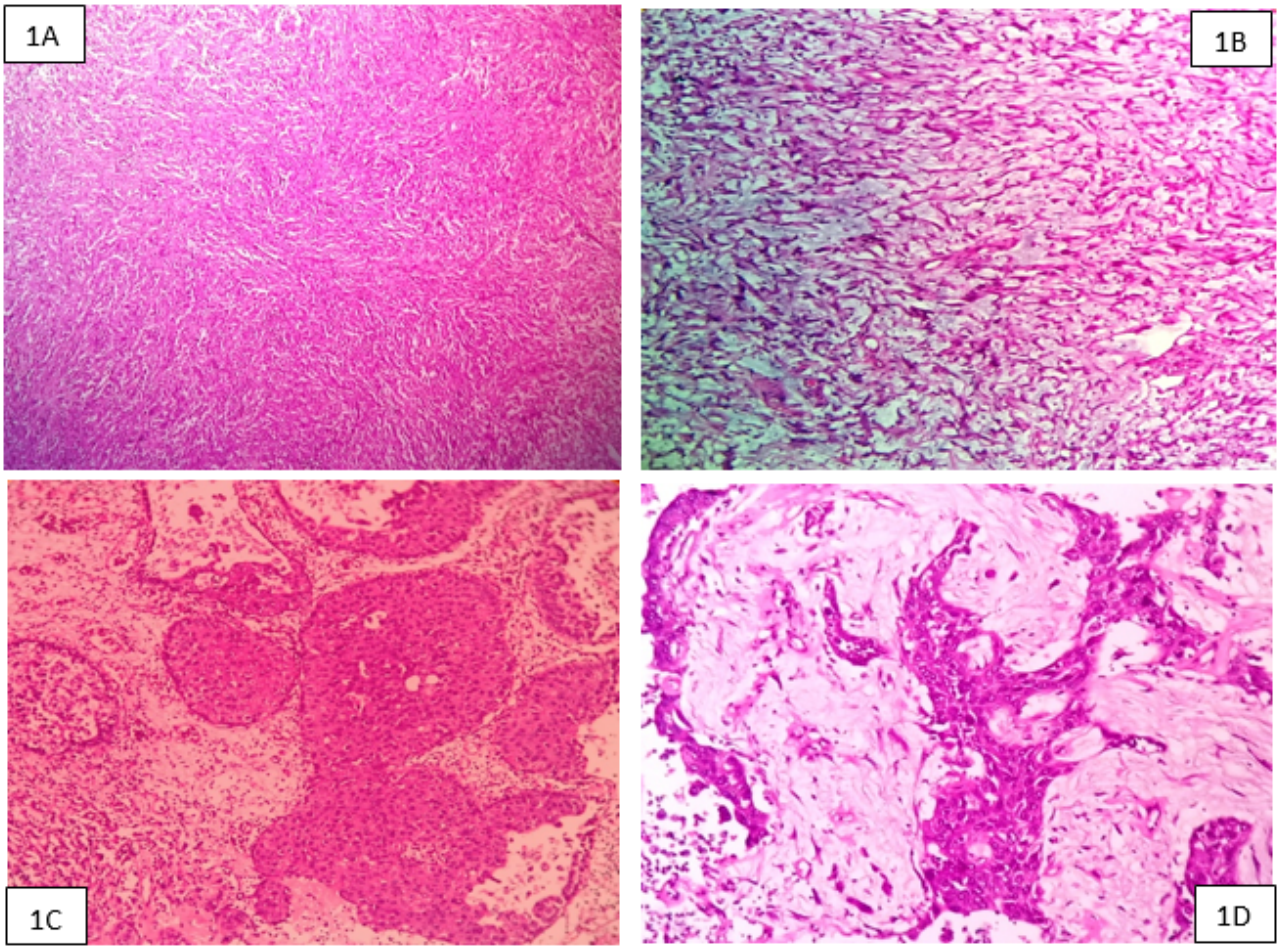

Fig. 1: A: Highly pleomorphic spindle cells arranged in fascicles; **B:** Spindle cells admixed with myxoid stroma; **C:** Neoplastic squamous epithelium in solid islands; **D:** Squamous sheets with intervening myxoid stroma

date. Some authors believe that it is due to synchronous appearance of two independent monoclonal neoplasms, whereas others suggest that they originate from a single neoplastic cell but shows epithelial and mesenchymal differentiation, which was also supported by recent molecular studies.[4]

Urinary bladder lateral walls are the common sites of its origin. Grossly they have a red fungating growth into the lumen of the bladder. Microscopically the tumor shows divergent differentiation with epithelial and mesenchymal components.[5] Majority of the areas in these lesions show mesenchymal differentiation having high grade spindle cells in most of these tumors. The epithelial component is usually in the form of invasive urothelial carcinoma. The other uncommon epithelial components being squamous cell carcinoma, adenocarcinoma, or small cell carcinoma. While, osteosarcomatous component is the most common heterologous differentiation, others being chondrosarcomatous, rhabdomyosarcomatous, leiomyosarcomatous, liposarcomatous and angiosarcomatous elements but does not have prognostic significance.[6,7] Immunohistochemistry is useful in difficult cases.

The poor prognosis of carcinosarcoma is because of advanced stage of the disease at the time of presentation and high-histological grade and this is usually worse than prognosis of high grade invasive urothelial carcinoma.[8,9] The appropriate standard treatment has not yet been defined because of its rarity; however, the aggressive behavior suggests radical therapy whenever possible.[8] Total cystectomy, often followed by radiation therapy and/or chemotherapy, seems to be the preferred treatment.[10] The effectiveness of these treatments is not known because of the varying results of each case. The factors predictive of long-term survival at the time of presentation are negative surgical margins and the absence of metastatic disease.[9] Unfortunately, cases with metastasis have a very poor prognosis. Studies with a larger number of cases are needed to establish standard protocols for the treatment of sarcomatoid carcinoma of the urinary bladder

4. Conclusion

Sarcomatoid carcinomas are rare and aggressive neoplasms of urinary bladder, having two malignant components; epithelial and mesenchymal differentiation, with a note on heterologous elements. As this disease has very poor prognosis, immediate diagnosis, and treatment help in increasing the survival period for the patients.

5. Source of Funding

None.

6. Conflicts of Interest

None declared.

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