

## Case Report

# A Rare Case of Cutaneous Metastasis from Bladder Sarcomatoid Urothelial Carcinoma

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## Abstract

Skin metastases from urothelial cancers are relatively uncommon, with an incidence of about 0.84% to 3.6% and only 0.84% of skin metastases caused by urinary bladder malignancies. We report the case of a 52-year-old bladder cancer male patient who underwent bladder transurethral resection. The histopathological examination revealed sarcomatoid urothelial carcinoma without muscle invasion. One year later he presented with bladder mass and skin lesions. Skin biopsy confirmed metastasis from sarcomatoid bladder cancer.

**Keywords:** Urothelial Carcinoma; Cutaneous Metastasis; Urinary bladder malignancies

## Introduction

Bladder tumor is one of the most common genitourinary tract cancer. It is the fourth most frequent cancer in male patients and men women ratio is 3.8:1 [1-3]. The most common subtype is the urothelial cell carcinoma, also known as transitional cell carcinoma. Sarcomatoid urothelial carcinoma is an uncommon histological variant of urothelial carcinoma. The majority of sarcomatoid urothelial carcinomas are found in the urinary bladder [4].

Bladder carcinoma metastases rate is 4%-8% and the most common sites of metastases are lymph nodes, lung, liver, and bone [3,5]. Skin metastases from urothelial cancers are relatively uncommon, ratio is only about 0.84% to 3.6% [6].

The clinical presentation of cutaneous metastases is variable and infiltrated plaques or nodules are the most common clinical presentation [6]. We report a rare case of extensive nodular skin metastasis as the first metastasis site of sarcomatoid urothelial carcinoma from bladder.

## Case Presentation

A 52-year-old male patient presented with hematuria and transurethral resection of a bladder tumor was performed one year ago in another institution. The histopathological examination revealed sarcomatoid urothelial carcinoma without muscle invasion.

Initial stage was non metastatic disease. Patient didn't accept both treatment and follow up. He applied to our clinic with the complaint of massive bleeding from skin lesions in January 2018. On physical examination conjunctivae were pale and two ulcerated, red, raised lesions from the skin were obtained in the left scapular region and in the left upper abdomen (Figure 1). Staging was performed by F18-Fluorodeoxyglucose Positron emission tomography (18F-FDG PET CT) scan which revealed two tumoral masses, one of which was 90 mm x 53 mm in diameter with SUV max value (standardized uptake value) 20, located on the left upper quadrant of the anterior rectus abdomen is muscle and protruding to the skin. The other lesion was 78 mm x 50 mm in diameter with SUV max value 15.3, located on the left infraspinatus muscle and protruding to the skin. No additional metastatic findings were found on imaging except for slightly increased FDG uptake was detected in the bladder wall (Figure 2). The histopathological examination of transurethral resection of the bladder was consistent with sarcomatoid urothelial carcinoma. Furthermore, biopsy of the skin lesions was done and metastasis of sarcomatoid urothelial carcinoma was diagnosed. Immunohistochemical study results of both biopsies were as follows; PanCK, HMW-CK, CK7, P63, vimentin positive; S-100, Melan A, NSE, LCA negative. Ki-67 proliferation index was found to be 20% (Figure 3). External palliative radiotherapy, which was 15 fractions and 40 GY, and then followed three, cycles 1000 mg/m<sup>2</sup> gemcitabine

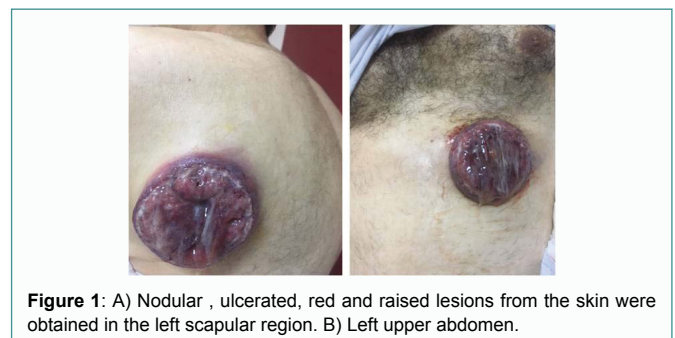
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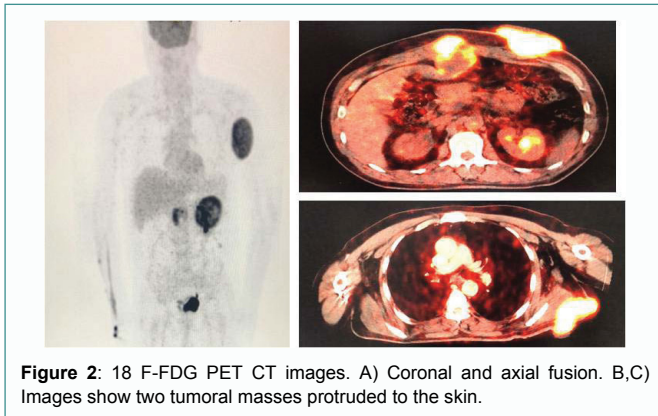
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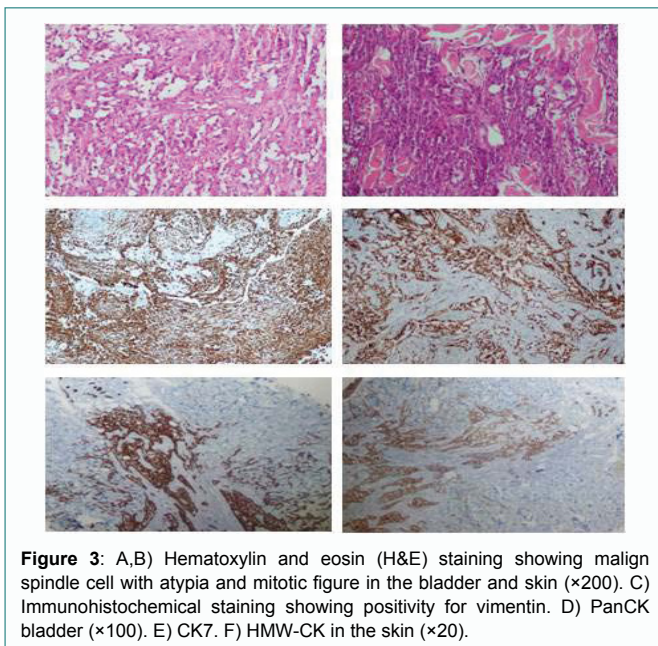
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**Figure 1:** A) Nodular, ulcerated, red and raised lesions from the skin were obtained in the left scapular region. B) Left upper abdomen.



**Figure 2:** 18 F-FDG PET CT images. A) Coronal and axial fusion. B,C) Images show two tumoral masses protruded to the skin.



**Figure 3:** A,B) Hematoxylin and eosin (H&E) staining showing malign spindle cell with atypia and mitotic figure in the bladder and skin ( $\times 200$ ). C) Immunohistochemical staining showing positivity for vimentin. D) PanCK bladder ( $\times 100$ ). E) CK7. F) HMW-CK in the skin ( $\times 20$ ).

and 75 mg/m<sup>2</sup> cisplatin chemotherapy were administered. After completion of the treatment; 18 F-FDG PET CT scan showed decrease of the size and metabolic activity of the skin lesions, on the other hand new metastatic lung lesions were detected that evaluated as progression. Second-line treatment was planned.

## Discussion

Urothelial cell carcinoma is different from normal epithelium as it presents with a papillary aspect and loss of cellular architecture and polarity [7]. The sarcomatoid bladder carcinoma is a rare neoplasm composed of malignant epithelial tissue (carcinoma) and mesenchymally origins arcomatoid tissue while carcinosarcoma is biphasic mixture of carcinoma and sarcoma [8,9]. The presence of a sarcomatoid component has been associated with a poor prognosis and an increased risk of metastasis. Previously reported cases of urothelial carcinoma with sarcomatoid differentiation exhibited systemic metastasis to bone, liver, lung and lymph nodes [10].

The most common primary tumors that metastasis the skin change by gender, in women breast (69%), followed by colon (9%), lung (4%) and ovary (4%) whereas in men lung (24%), followed by colon (19%) and head and neck tumors (12%) [11-13]. Skin metastases from urothelial cancers are relatively uncommon, with an incidence of about 0.84%-3.6% and only 0.84% of skin metastases caused by urinary bladder malignancies [6,14].

Direct invasion from a neoplasm of underlying tissue (contiguity); iatrogenic implantation on the surgical wound; lymphatic dissemination and hematogenic dissemination are mechanism of skin metastases [6,12].

Clinically, skin metastases of urothelial neoplasms appear as plaques or either single or multiple nodules, erythematous, infiltrated, with an ulcerated or necrotic aspect [6,15]. In our patient ulcerated nodular lesions protruding to skin were examined.

The histological diagnosis is done based on the hematoxylin-eosin test and immunohistochemical study; cytokeratins for epithelial component and vimentin, desmin HHH-35, SMA or S100 for mesenchymal component [8]. In our case both of bladder and skin biopsies showed PanCK, HMW-CK, CK7 positivity for epithelial component and vimentin positivity for mesenchymal component.

In metastatic bladder cancer patients methotrexate, doxorubicin, vinblastine or cisplatin can be used as single agent chemotherapeutic have response rate in 15% to 25% of patients, while in combination chemotherapy regimens this increases to 50% to 70% of cases [16]. Prognosis of skin metastatic bladder cancerpatientsis generally poorer and median survival is less than 1 year.Treatment options in cutaneous metastasis of bladder carcinoma consist of systemic therapy with cisplatin-based chemotherapy, localized therapy to the cutaneous metastasis with electrochemotherapy using bleomycin and localized radiation [15]. Craig et al. represent a case with complete clinical resolution of two metastatic skin lesions in a patient treated by cystoprostatectomy for bladder carcinoma, using local irradiation [17]. Kubata et al. also report complete resolution of a case obtained with bleomycin electrochemotherapy [18].

In our patient the first and only site of metastasis was skin, which was present at the first visit. The patient was treated with palliative radiotherapy to skin lesions and as systemic therapy cisplatin-gemcitabine chemotherapy was applied. Skin lesions responded to the treatment, but the general course of the disease was evaluated as progression. The patient will be followed-up with second-line treatment.

## Conclusion

In conclusion the cutaneous metastasis of urothelial neoplasms has poor prognosis. It occurs mostly in late phases of the tumor and is the first sign of dissemination rarely. For the patients with urologic malignancies, physicians should do physical examination of the skin carefully, because skin lesions canbe the first sign of silent or recurrent urologic malignancies.

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