

An unusual case of cutaneous metastasis from a papillary urothelial carcinoma of the urinary bladder

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Abstract: Cutaneous and subcutaneous metastases are extremely rare in bladder carcinoma. The prognosis is generally poor.

The present paper reports an interesting and rare case of extensive metastasis of a high grade carcinoma of the bladder. It is a case of a 72-year old man who had undergone a radical cystoprostatectomy with construction of Bricker bladder for a high-grade papillary urothelial carcinoma of the bladder. Two months later, he developed cutaneous and subcutaneous nodules. A skin biopsy confirmed the diagnosis of cutaneous metastasis of papillary urothelial bladder carcinoma. Chemotherapy was started.

Clinicians should recognize the importance of thorough physical examination in patients with urothelial carcinoma.

Keywords - bladder, carcinoma, cutaneous metastasis, urothelial

I. INTRODUCTION

Bladder cancer has variable metastatic potential and almost any organ can be involved by metastasis. Lymph nodes, liver, lung, and bone are the most common metastatic sites of urothelial carcinoma of the bladder. Cutaneous and subcutaneous metastases are extremely rare associated with poor prognosis.

It occurs most commonly in the locoregional area and via lymphatic drainage. Skin metastasis of bladder carcinoma can present as nodular, inflammatory, and fibrotic type [1]. Nodular metastases are common and may be of solitary or multiple type [2].

In this case report, we present a patient with an urothelial carcinoma of the bladder who developed cutaneous nodular metastases 2 months after the diagnosis.

II. CASE REPORT

A 72 year-old man underwent radical cystoprostatectomy with cutaneous uretero-ileostomy ad modum Bricker and pelvic lymphadenectomy 2 months previously for an urothelial carcinoma. The tumor had showed to be a conventional high grade urothelial carcinoma infiltrating muscularis propria, the adipose tissue around the bladder with lymphatic spread.

Tumor invaded perivesical tissue macroscopically (pT3b), local metastasis were in two lymph nodes of 19 examined sized less than 2,5 centimeters in the greatest dimension (N2) and there were a prostatic adenocarcinoma with Gleason score 7. No other distant metastatic sites investigated by preoperative computed tomography scan and bone scintigraphy (M0) were found.

In the first postoperative month erythematous nodular lesions appeared in the base of the chest region.

Physical examination revealed many, rubbery and firm subcutaneous nodules located on the trunk in a variety of size ranging from 1 to 3 cm in diameter. (fig.1) Physical examination was otherwise normal. Laboratory findings were inconclusive.

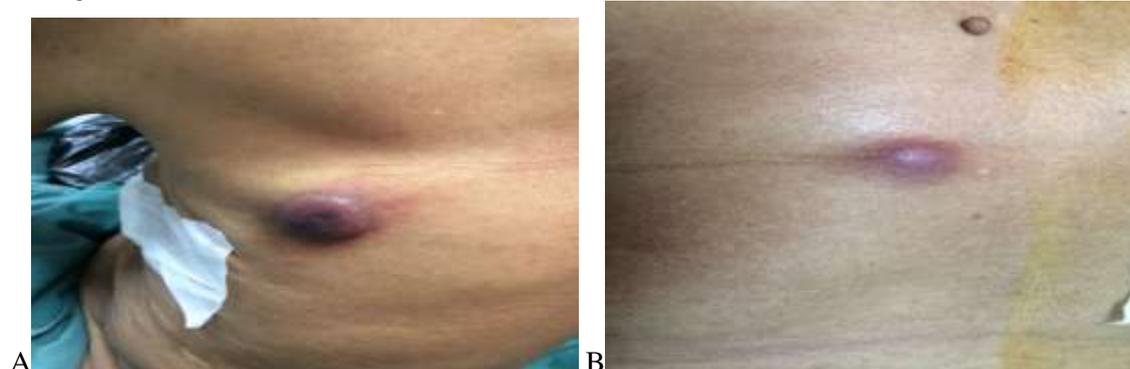


Figure1 Cutaneous metastatic nodules located on the trunk (A+B)

CT scan demonstrated a secondary liver lesion and multiple nodules of peritoneal carcinomatosis. A skin biopsy was then performed. Microscopic examination showed a diffuse dermal infiltration of atypical cells arranged in nests and cords without involvement of the epidermis. (fig2)

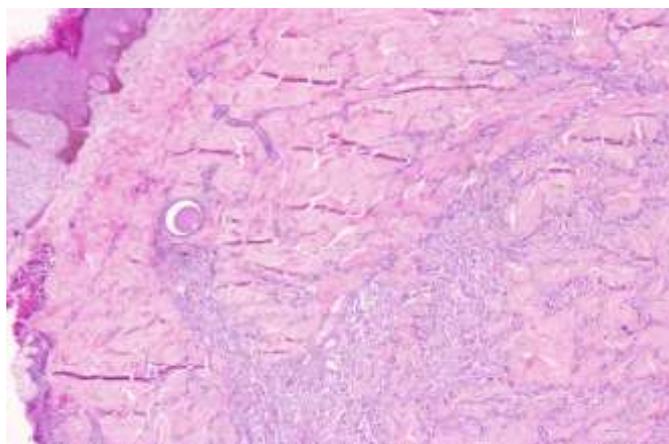


Figure 2 Microscopic view of skin biopsy taken from a cutaneous nodule on the left chest showing skin infiltration from a high-grade urothelial carcinoma (Hematoxylin and Eosin stain X100)

Immunohistochemistry revealed a strong and diffuse positivity for p63 in the skin neoplastic cells, concluding to their urothelial origin. (fig3)



Figure 3 Metastatic cells showing immunohistochemical positivity for p63

The lesions were considered to be cutaneous metastasis of bladder urothelial carcinoma and chemotherapy with carboplatin and gemcitabine was started.

III. DISCUSSION

Urothelial carcinoma of the bladder is usually multifocal, frequently shows clinical relapses along the genitourinary tract [3] and it is characterized by immunohistochemical positivity for CK20, CK7, p63 and p53. [4-5]

The main primary sites for metastatic bladder carcinoma are liver, lung and bone. [1]

Dermatological spread from primary genitourinary malignancies is very rare and occurs in 1% of patients with advanced disease. [1] Metastatic infiltration of the skin may be due to direct tumor invasion or hematogenous or lymphatic spread. It can also be a result of iatrogenic procedures, such as partial cystectomy, suprapubic cystotomy, pyelotomy and laparoscopy which are the most common causes of seeding of transitional cell carcinoma outside the urinary tract. [4-5]

Cutaneous metastases of bladder carcinoma are more commonly seen in male population.

They rarely occur at the time of the diagnosis and they may clinically mimic many common dermatologic disorders. [3] However, it can be differentiated with skin biopsy. Immunohistochemically positive cytokeratin expressed from the uroepithelial tissue in skin biopsy can be useful in differential diagnosis. More than 90% of bladder carcinoma cases with cutaneous metastasis consist of transitional cell histopathology. [5]

In our patient, cutaneous and liver (asymptomatic) metastasis occurred 2 months after the diagnosis of primary disease. Considering that up to 20% of patients with bladder cancer have lymphatic or vascular spread, primary skin metastasis is quite rare, as noted in our patient. [6]

Similar to our case, Swick and Gordon [7] have reported a 69-year-old male with previously resected superficially invasive primary transitional cell carcinoma of the bladder who presented with distant cutaneous and central nervous system metastases associated with recurrent bladder cancer. The previous history of operated bladder tumor suggested the possibility of transitional cell carcinoma metastasis in our case.

The topography of skin metastases is usually related to the site of primitive tumor, as a result of the lymphatic invasion; therefore the urothelial tumors often metastasize in genital area and low abdomen. [1-2]

Cutaneous metastases may morphologically resemble the primary tumor. However, they are often poorly differentiated, thus immunohistochemical investigation is often required to determine the primary origin. [1-7]

In our case, the histological morphology of skin lesions was highly suggestive for secondary localization of cancer owing to the lack of involvement of the epidermis and its appendages, and to the widespread infiltration of the dermis with parallel arrangement of cords and nests suggestive of endo-lymphatic diffusion. The immunohistochemical study confirmed this hypothesis, since cells were positive for p63.

The expression of CK7 has been recognized as a marker for cutaneous sweat gland tumours and it may be a useful marker of poorly differentiated glandular tumors. [8]

P63 is a member of the p53 gene family and its expression may be an immunohistochemical marker for undifferentiated and poorly differentiated tumors of epithelial cell origin.

This case makes dermatologists aware to consider skin metastases in differential diagnosis of non specific cutaneous lesions in patients with a history of primary visceral malignancy.

The treatment of cutaneous metastases is a real challenge for clinicians. There are options of radiotherapy and chemotherapy for skin metastases. [1-2]

For single metastasis, combination of wide local surgical excision and systemic chemotherapy give satisfactory results in the control of skin disease. [9]

The prognosis of patients with cutaneous spread of bladder cancer is generally poor and the median survival is less than 12 months. [10]

IV. CONCLUSION

Despite treatment, cutaneous metastasis of bladder carcinoma is an indicator of poor prognosis; median disease-specific survival is less than 6 months. Therefore, clinicians should recognize the importance of a thorough physical examination in patients with urothelial carcinoma. Skin biopsy should be performed for differential diagnosis and chemotherapy should be started considering that these patients have a poor prognosis if metastasis is found.

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