

CASE REPORT

Metastatic transitional cell carcinoma of the skin presenting as painful zosteriform eruptions

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Abstract

Metastatic skin disease is an uncommon manifestation of visceral malignancies and failure to diagnose this early may result in incorrect treatment. Here, we report a 65-year-old man with bilateral painful eruptions on the abdominal skin and a past history of transitional cell carcinoma of urinary bladder.

INTRODUCTION

Metastatic skin disease is an uncommon presentation in patients with metastatic cancer. Skin metastasis occurs in 0.3–9% of all patients with a metastatic disease [1–4]. Transitional cell carcinoma metastatic to the skin is seen in 1.6–8.2% of patients with a metastatic skin disease [2, 4], but only 0.23–0.84% of all patients with transitional cell carcinoma had skin metastasis [1, 4]. When a new skin eruption is discovered in a patient with a past history of cancer, one should always consider skin metastasis in the differential diagnosis, even in the absence of metastasis to other organs. Skin metastasis can be the first sign of metastatic disease or even the first presentation of visceral malignancy.

CASE REPORT

A 65-year-old man was admitted to Imam Khomeini Hospital Complex with abdominal pain and painful skin lesions.

The presenting symptoms started 3 months before admission with an acute onset of painful erythematous plaques around the umbilicus. He was seen by a general practitioner and a topical steroid was prescribed. A few days later, the pain was so intense

that herpes zoster was suspected. Gradually, the skin lesions spread all over the abdomen extending to both flanks; the abdominal pain increased to the extent that the patient required opiate analgesia. Exertional dyspnea, of functional class II, developed 2 months prior to admission. Pleural effusion was detected and attributed to heart failure and the patient received diuretics.

The patient had a past medical history of urinary bladder transitional cell carcinoma diagnosed 3 years previously. This was a poorly differentiated (grade II–III) carcinoma, with invasion of submucosa and no involvement of muscle coat that was treated with transurethral resection of the tumor followed by intravesical BCG therapy. The patient received frequent cystoscopy follow-up, with the last performed 10 months prior to admission, all demonstrating no evidence of recurrent tumor.

Physical examination at the time of admission revealed extensive involvement of the abdominal skin with highly tender erythematous and infiltrated plaques. The lesions were mainly located around umbilicus radiating bilaterally toward the flanks, imitating bilateral zosteriform eruptions, and upwards to the epigastrium and lower anterior chest. On the flanks, skin lesions were erythematous plaques with papulonodular components (Fig. 1). Chest examination showed reduced sounds at the base

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of right lung. Abdominal examination was limited due to significant pain experienced by the patient with superficial palpation. Otherwise, physical examination was insignificant.

A biopsy from the skin lesion on the right upper side of the abdomen was obtained. Microscopic examination revealed skin tissue infiltrated by neoplastic cells with atypical large

hyperchromatic nuclei and some with prominent nucleoli arranged in a diffuse pattern and small clusters (Fig. 2A). Several foci of perineural invasion were noted. The neoplastic cells were strongly positive for CK7 and thrombomodulin on immunohistochemical staining, and focal immunoreaction for P63 was also identified (Fig. 2B and C). CK20 was negative in tumoral

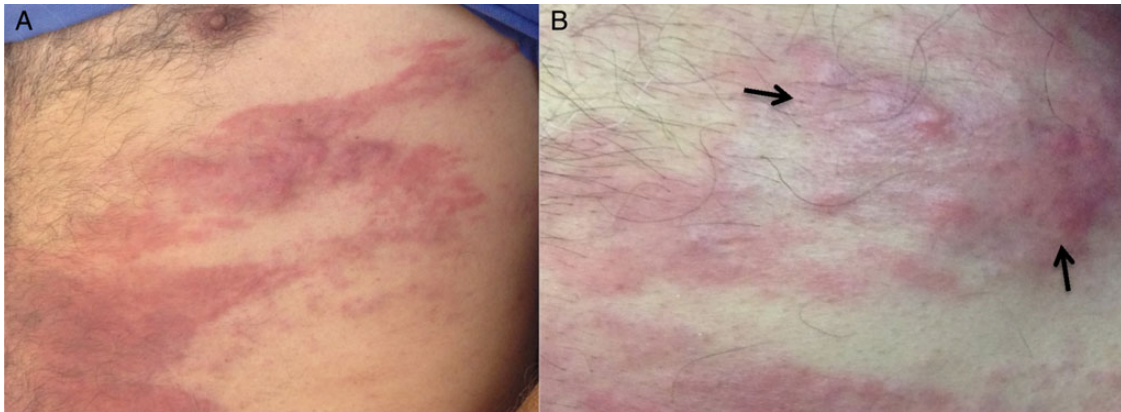


Figure 1: (A) Zosteriform distribution of metastatic skin lesions on the left side of the abdomen. (B) Erythematous plaques with papulonodular components (arrows) on the left flank.

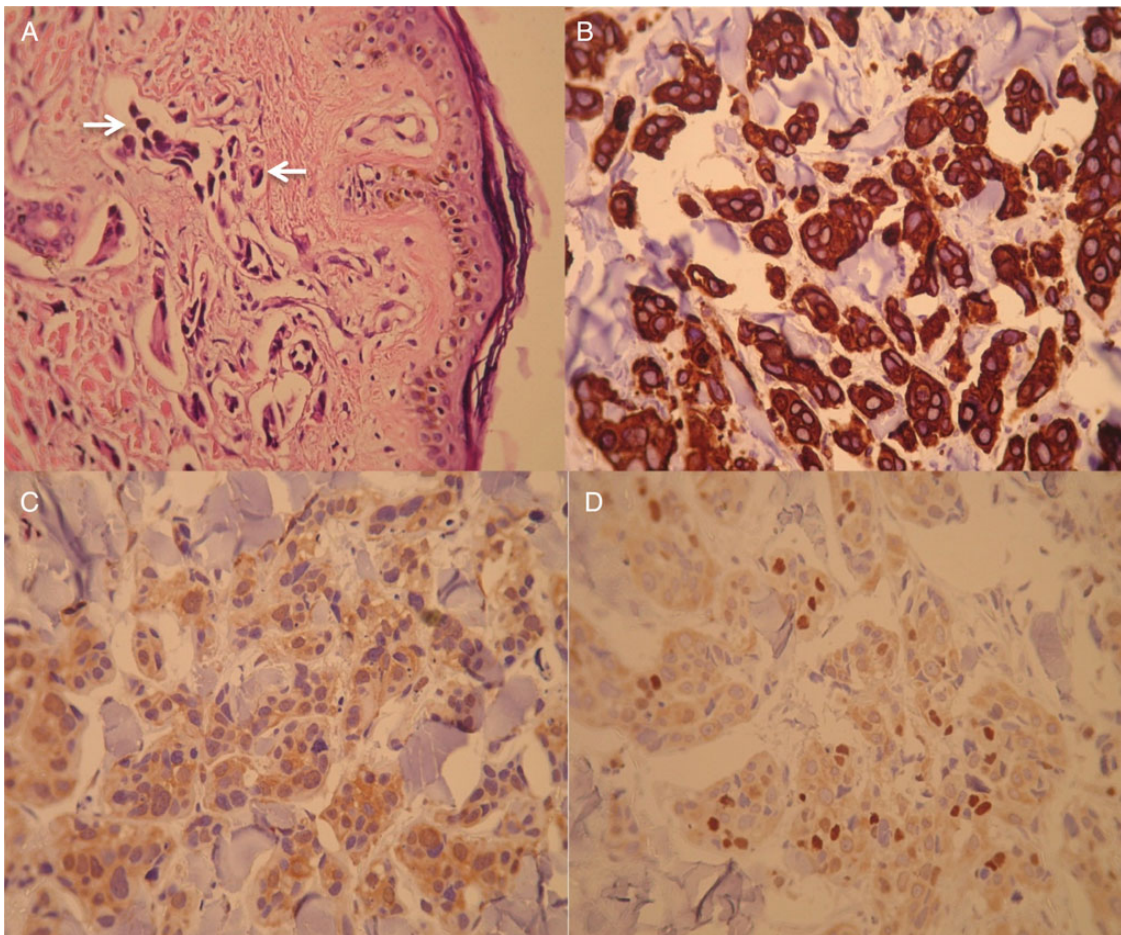


Figure 2: (A) On hematoxylin and eosin staining infiltration by neoplastic cells with atypical large hyperchromatic nuclei and some with prominent nucleoli is seen (arrows); on immunohistochemistry, it was strongly positive for CK7 (B) and thrombomodulin (C), but focal immunoreaction for P63 (D).

cells. CK20 reactivity in urothelial cell carcinoma varies from 15 to 97% in different studies [5]. Immunohistochemical results for thyroid transcription factor 1, prostate specific antigen and neuroendocrine markers were all negative (Fig. 2D). Metastatic carcinoma from urothelial origin was considered the most probable diagnosis.

Computerized tomography (CT) of the chest showed right-sided pleural effusion. On abdominal CT scan, an enhancing mass in the left and posterior wall of bladder with extraperitoneal extension and involvement of anterior mesorectal fascia was observed. Pleural paracentesis was exudative with positive cytology for malignant cells. The patient passed away 2 weeks after admission due to respiratory failure.

DISCUSSION

Cutaneous metastases originating from urologic malignancies are not common, but should always be considered in a patient with a past history of urologic cancer and a new eruption. Drug eruptions, infections, including herpes zoster, and other dermatoses are more common dermatologic problems seen in this group of patients, especially in those undergoing medical treatment [1]. Metastatic transitional carcinoma to the skin can present at the site of surgical scars or at remote sites, most commonly involving abdominal skin via lymphatic spread [2]. Clinical presentations can include single (or multiple) nodule(s), lymphatic malformations, cellulitis, lymphoma, radiation dermatitis, herpes zoster or prurigo nodularis [6–10], but the most common initial manifestations are urticarial and macular rashes [1]. Diagnosis in these patients is commonly delayed for many months and nonspecific topical therapies are prescribed. Skin biopsy is the most helpful diagnostic test to confirm metastatic skin disease. In our case, diagnosis was made 3 months after initial dermatologic manifestations. Perineural invasion seen on morphologic examination of the biopsy may possibly explain the intense pain experienced by the patient.

COMMENT

Metastatic skin disease is an uncommon finding in late-stage transitional cell carcinoma. When faced with a new eruption in a patient with a past history of visceral malignancy, metastasis to the skin should be considered in the differential diagnosis. In

the absence of any definite dermatologic diagnosis, performing a skin biopsy is the most important step in confirming the diagnosis.

CONFLICT OF INTEREST STATEMENT

None declared.

REFERENCES

- Mueller TJ, Wu H, Greenberg RE, Hudes G, Topham N, Lessin SR, et al. Cutaneous metastases from genitourinary malignancies. *Urology* 2004;**63**:1021–6.
- Lookingbill DP, Spangler N, Helm KF. Cutaneous metastases in patients with metastatic carcinoma: a retrospective study of 4020 patients. *J Am Acad Dermatol* 1993;**29**:228–36.
- Sittart JA, Senise M. Cutaneous metastasis from internal carcinomas: a review of 45 years. *An Bras Dermatol* 2013;**88**:541–4.
- Hu SC, Chen GS, Wu CS, Chai CY, Chen WT, Lan CC. Rates of cutaneous metastases from different internal malignancies: experience from a Taiwanese medical center. *J Am Acad Dermatol* 2009;**60**:379–87.
- Jiang J, Ulbright TM, Younger C, Sanchez K, Bostwick DG, Koch MO, et al. Cytokeratin 7 and cytokeratin 20 in primary urinary bladder carcinoma and matched lymph node metastasis. *Arch Pathol Lab Med* 2001;**125**:921–3.
- Schmiedecke R, Perry A, Satter EK. Cutaneous metastasis of a transitional cell carcinoma. *Dermatol Online J* 2014;**20**:8.
- Atmaca AF, Akbulut Z, Demirci A, Belenli O, Alici S, Balbay DM. Multiple subcutaneous nodular metastases from transitional cell carcinoma of the bladder. *Pathol Oncol Res* 2007;**13**:70–2.
- Blalock TW, Haun PL, Leshner JL. Cutaneous metastases of transitional cell carcinoma clinically mimicking lymphatic malformation. *J Am Acad Dermatol* 2011;**65**:e112–4.
- Ando K, Goto Y, Kato K, Murase T, Matsumoto Y, Ohashi M. Zosteriform inflammatory metastatic carcinoma from transitional cell carcinoma of the renal pelvis. *J Am Acad Dermatol* 1994;**31**:284–6.
- Lin JT, Wang WH, Yen CC, Yu IT, Chen PM. Prurigo nodularis as initial presentation of metastatic transitional cell carcinoma of the bladder. *J Urol* 2002;**168**:631–2.