

Rare Presentation of Cancer Bladder

Ramy Ibrahim^{1*}, Mazen M Salama², Jayang Shah³, Mariana William³

¹Medical Director, Premier Medical Associates, The Villages, Florida, USA

²Director of informatics and innovations MD MSc CPDS, Premier Medical Associates, The Villages, Florida, USA

³Research Coordinator for Premier Medical Associates, The Villages, Florida, USA

***Corresponding Author:** Ramy Ibrahim, Medical Director, Premier Medical Associates, The Villages, Florida, USA.

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Abstract

Bladder cancer with cutaneous metastases is an extremely rare and late manifestation of the primary disease. This case describes the incidental finding of cutaneous metastasis of bladder cancer in a previously healthy 58-year old male with a 25 pack-year smoking history, who originally presented to the hospital with sepsis and skin abscesses. Further radiologic investigation in this patient was unable to localize the primary tumor. This manifestation is a late presentation of systemic spread in patients with bladder carcinoma, and typically cutaneous metastasis occurs in < 1% of all patients with carcinoma originating from the bladder. Those patients have a poor prognosis associated with six months median survival rate.

Keywords: Sepsis; Abscess; Transitional Cell Carcinoma; Bladder Cancer; Cutaneous Metastasis

Introduction

Transitional cell carcinoma represents more than 90% of the overall cases of bladder cancer, followed by squamous cell carcinoma at 5% and adenocarcinoma at 2% of cases [6]. Nearly 80% of patients with transitional cell carcinoma have tumors, which are restricted to the mucosa and sub mucosa [6]. At the time of diagnosis, almost 30% of transitional cell carcinomas will have invaded the muscular layer of the bladder [5]. Bladder cancer with cutaneous metastases is an extremely rare and late manifestation of the primary disease [5]. Cutaneous manifestation of tumor cells can imitate other common skin pathologies [4], in the case of this patient; the metastasis was able to invade into abscesses present on the skin.

Case Presentation

A previously healthy 58-year old male patient with a 25 pack year smoking history presented to the emergency department complaining of a high fever, generalized weakness and malaise for the past two days. Further examination of this patient revealed two abscesses, a 2 cm x 3 cm lesion on the face and another 3 cm x 4 cm lesion on the right groin, the rest of the physical examination was otherwise unremarkable. Vitals on admission were: blood pressure 110/70, heart rate of 113 - 120 bpm, respiratory rate of 20 - 22 breaths/min, 102F temperature, O₂ saturation of 98% and BMI of 24.6. This patient denied any history of similar lesions; he also denied any family history or any other past medical history.

Sepsis was suspected in this patient and labs revealed a CBC which showed leukocytosis of 21,000/mcL with a pnl of 88% but otherwise within normal limits. CXR was mostly normal except for atherosclerosis of the aorta. Urine analysis showed microscopic hematuria

but no evidence of any infection. CMP, PT/PTT, EKG were within normal limits. Two sets of blood were drawn and sent for culture as well. This patient was then started on empiric IV Vancomycin in the emergency department and surgery was consulted about management of the lesions. Consequently, the patient then underwent incision and drainage of the lesions. The following day, the cultures came back negative for MRSA, so patient was switched to augmentin 875/125 PO BID x 5 days with probiotics.

The patient improved clinically by the 5th day of his treatment, however, pathologic analysis of the lesions reported findings of poorly differentiated carcinoma originating from the bladder. Further investigation with a Pan-CT and cystoscopy was not able to localize any primary malignancy, however, urine cytology was highly indicative of a neoplastic process. Furthermore, a PET-CT failed to reveal any uptake except at the initial sites where the abscesses were located.

Discussion

At the risk of causing antibiotic resistance, generally antibiotics are not recommended in the treatment of immunocompetent patients and in these cases surgical intervention plus warm compresses for drainage will provide optimal therapy [1]. However, empiric antibiotics should be considered in immunocompromised patients or patients who present with complications such as, a large surrounding cellulitis, systemic toxicity, or lymphangitis [2]. The Infectious Diseases Society of America (ISDA) recommends the following guidelines when considering adding antibiotics to the management of an abscess: patients with temperature higher than 38°C or lower than 36°C, tachypnea of more than 24 breaths/minute, increased heart rate of > 90 beats/minute or a WBC count of > 12,000 or < 400 cells/mcL [1]. Trimethoprim-sulfamethoxazole, tetracyclines, clindamycin or doxycycline are the most commonly prescribed antibiotics as they generally have good coverage over MRSA [1,2].

When it comes to the care of our patient, we clearly saw improvement in the patients' status after surgery and IV antibiotic therapy for his systemic infection. However, the analysis of the samples obtained during the incision and drainage were highly indicative of metastatic carcinoma with bladder origin. Further imaging and cytology confirmed the presence of cancer cells in the urine but the original tumor was unable to be localized.

Cutaneous involvement by metastatic lesions is an extremely rare occurrence and carries a poor prognosis in these patients [3]. The most common sites of metastasis in urologic malignancies are to the regional lymph nodes, liver, lungs and bones [3]. There are several ways metastatic lesions can manifest on the skin, namely, direct invasion from the tumor, lymphatic spread, hematogenous spread, or most commonly, as a consequence of iatrogenic implantation of the tumor cells [3,5].

A retrospective cohort study done in 2004 by the department of urological oncology at the fox chase cancer center determined that in the past 10 years from the 81,618 cases of primary solid visceral malignancies, there have been 2,369 reported cases of cutaneous metastases for an overall rate of 2.9% [7]. During this study, it was also determined that dermatologic spread from primary urologic malignancies of the kidney, bladder, prostate, or testes was noted in 116 of 10,417 cases [7]. Thus, the conclusion can be drawn that cutaneous involvement of a primary urologic malignancy is extremely rare, occurring at a rate of around 1.3% of all cases [7]. More specifically, the incidence of cutaneous metastases of bladder origin was calculated to be 0.84% of all bladder malignancies [7]. The same study determined that the median rate of survival in these patients was 6-months from the onset of cutaneous involvement [7].

Conclusion

We can conclude that based on previously reported cases, the presentation of cutaneous spread of bladder malignancy is a highly improbable late stage presentation of the disease and carries a poor prognosis in affected patients. This patient in particular presented with skin lesions consistent in presentation of abscesses. Physicians should consider and evaluate the possibility of malignant cutaneous invasion of the skin in patients who have been diagnosed with cancer of urologic origin.

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