





# Port Site Metastases After Incidental Upper Urinary Tract Urothelial Carcinoma: A Case Report

## İnsidental Üst Üriner Sistem Ürotelyal Karsinomu Sonrası Port Yeri Metastazı: Bir Olgu Sunumu

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### Abstract

Upper urinary tract urothelial tumors are rarely seen. Only 5% of all transitional cell carcinomas (TCCs) originate from the upper urinary tract. Although skin metastases in urinary tumors are quite rare, the incidence of skin metastases in upper urinary tract TCCs is not exactly known due to the lack of published research on this subject. In this article, we aimed to present a lesion consistent with TCC metastasis in the left inguinal region of a patient who was operated on for a renal pelvic mass. A 61-year-old male patient underwent left laparoscopic nephrectomy because of a mass reported as renal cell carcinoma (RCC) in the upper pole of the left kidney. After the pathology result reported the presence of left renal TCC, the patient underwent left ureterectomy plus cuff resection in another medical center. After this second operation, the skin lesion developing at the trocar entry site on the left inguinal region of the patient was reported as an abscess on imaging. The histopathology of the excised abscess was reported as TCC metastasis. There is no consensus on the treatment regimen for skin metastases of urothelial carcinomas, and these metastases have a relatively poor prognosis. One-year survival rate is generally 35%. The patient in our case received gemcitabine and cisplatin treatment and has been under oncology follow-up for twelve months.

**Keywords:** kidney cancer, metastasis, transitional cell carcinoma, skin

### Özet

Üst üriner sistem ürotelyal tümörleri nadiren görülür. Tüm transizyonel (değişici) hücreli karsinomların (TCC) sadece %5'i üst üriner sistemden kaynaklanmaktadır. Üriner sistem tümörlerinde cilt metastazları oldukça nadir görülmesine rağmen, üst üriner sistem TCC'lerinde cilt metastazı insidansı, bu konuda yayınlanmış araştırma eksikliği nedeniyle tam olarak bilinmemektedir. Bu makalede, renal pelvik kitle nedeniyle ameliyat edilen bir hastanın sol inguinal bölgesinde TCC metastazı ile uyumlu bir lezyonu sunmayı amaçladık. Altmış bir yaşında erkek hastaya sol böbrek üst polde renal hücreli karsinom (RHK) olarak rapor edilen kitle nedeniyle sol laparoskopik nefrektomi uygulandı. Patoloji sonucu sol renal TCC olarak bildirildikten sonra, hastaya başka bir tıp merkezinde sol üreterektomi artı kaf rezeksiyonu yapıldı. Bu ikinci ameliyattan sonra hastanın sol inguinal bölgesinde trokar giriş yerinde gelişen cilt lezyonu görüntüleme apse olarak rapor edildi. Eksize edilen apsenin histopatolojisi TCC metastazı olarak raporlandı. Ürotelyal karsinomların cilt metastazları için tedavi rejimi konusunda bir fikir birliği yoktur ve bu metastazlar nispeten kötü prognoza sahiptir. Bir yıllık sağkalım oranı genellikle %35'tir. Olgumuz gemitabin ve sisplatin tedavisi almıştır ve on iki aydır onkoloji takibindedir.

**Anahtar kelimeler:** böbrek kanseri, metastaz, transizyonel hücreli karsinom, deri

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## Introduction

While TCC is most commonly seen in the bladder, it is also rarely seen in the upper urinary tract. Upper urinary tract TCC accounts for 5% of all TCCs [1]. Treatment approach for these TCCs generally involves open-laparoscopic or robotic nephroureterectomy and cuff resection. Laparoscopic surgery, which was first defined as a minimally invasive procedure by Clayman et al. in 1991 [2], has become quite frequently applied due to milder postoperative pain, shorter hospital stay, and faster recovery compared to open surgery. On the other hand, non-surgical treatment approaches may be given priority in metastatic disease.

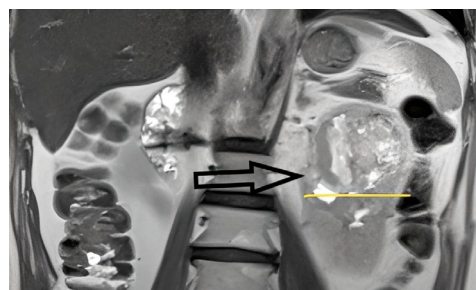
Skin metastases originating from renal cell carcinoma (3.4-4.0%) bladder carcinoma (0.84-3.6%), prostate carcinoma (0.36- 0.7%), and testicular germ cell tumors (0.4%) have been reported at indicated incidence rates [3]. The incidence rates of skin metastasis in TCCs originating from the upper urinary tract are not completely known. Port site metastasis (PSM), which is rare after laparoscopic surgery, is defined as a recurrent tumoral lesion in one or more trocar entry sites on the abdominal wall [4]. In urology practice, PSM was first reported in 1994 by Stolla et al. in a patient with bladder tumor [5]. After this first report, more than 50 urological PSM cases have been reported to date [6].

In this article, we present a case of TCC metastasis at the left inguinal port site three months after the patient's first operation for renal tumor.

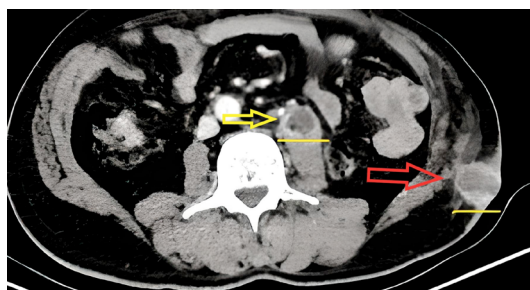
## Case

A 61-year-old male patient with a renal stone who had undergone endourological surgery five years ago was admitted to our outpatient clinic with complaints of intermittent hematuria, and left flank pain. The hematuria was thought to have resulted from the stone. However, since the most recent ultrasonography (USG) of the patient revealed the presence of a solid lesion in the upper pole of the left kidney, contrast-enhanced abdominal magnetic resonance imaging (MRI) was performed which disclosed a 6 cm solid lesion in the upper pole of the left kidney, consistent with a renal cell carcinoma (RCC) (**Figure 1**).

When the computed tomography (CT) scans of the patient performed within the previous 5 years were examined, it was observed that a lesion, which had been mostly reported as a kidney cyst, remained in situ for a long time Left laparoscopic



**Figure 1.** Preoperative MRI image: Approximately 6 cm solid lesion in the left kidney



**Figure 2.** Control CT image after three months: 3 cm lesion on the left psoas muscle (yellow) and a 3 cm lesion on the skin in the left lower quadrant (red)



**Figure 3.** Control CT image after twelve months:Regression of the lesion in the lateral psoas

nephrectomy was performed because the patient's most recent MRI revealed a lesion consistent with an RCC in his left kidney. Histopathology results revealed the presence of stage pT3a TCC with surgical margin negativity which invaded beyond muscular layer into peripelvic fat or renal parenchyma and also demonstrated lymphovascular invasion. Two months after nephrectomy, the patient underwent left laparoscopic ureterectomy and cuff excision in another center. The pathology results of the second operation revealed the presence of a benign lesion.

When the patient reapplied to our clinic three months after laparoscopic left ureterectomy and cuff excision, he complained of a painful swelling at the port site on the left inguinal region for three months. A contrast-enhanced CT scan reportedly demonstrated a mass lesion with a diameter of 3 cm localized lateral to the left psoas muscle, and another lesion with a diameter of 3 cm in the subcutaneous tissue of the left inguinal region consistent with an abscess (**Figure 2**). However, at this time, the patient had no fever, and inflammation markers were negative. Surgical excision was performed because fluid collection was not observed in the superficial USG performed for the lesion due to the presence of a suspect abscess. The pathology result of the surgical specimen was reported as metastatic lesion of TCC with surgical margin positivity. However, the lesion located lateral to the psoas muscle was not operated. The patient, who received 8 cycles of gemcitabine and cisplatin treatment, has been under oncology follow-up for 12 months. His current CT showed regression of the lesion localized lateral to the psoas muscle (**Figure 3**).

## Discussion

Urinary system TCCs generally metastasize to the lungs, liver, bones, heart and brain, and especially to regional lymph nodes. However, skin metastases are most common in the head, face, neck, abdomen, suprapubic regions, and extremities [7]. In our case, the skin metastasis appeared as a hyperemic mass lesion approximately 3 cm in diameter at the trocar entry site on the left inguinal region.

It has been reported that TCCs originating from the bladder cause skin metastasis more frequently than the TCCs of the renal pelvis [8,9]. However, the incidence of skin metastasis from TCCs originating from renal pelvis is not exactly known due to the lack of literature information.

Current clinical and laboratory procedures can hardly

reveal metastases of TCCs. The diagnosis of skin metastasis of TCC is made based on pathological examination of the mass lesions after surgical excision. In addition, there are reports of cases diagnosed based on pathological examination of needle biopsy specimens [10]. In our case, the lesion considered to be an abscess based on radiological interpretation, so abscess was excised which prevented us to plan a wider excision with resultant development of positive surgical margins.

Although there are not enough data on the treatment of skin metastases of urinary TCCs, platinum-based treatments are generally used in most cases [11]. However, the prognosis of skin metastases of urinary TCCs are quite poor. Overall, one-year survival rate for metastatic urothelial carcinomas is 35%, even with the use of current chemotherapeutic agents [12].

Our patient has been on cisplatin and gemcitabine treatment for about twelve months, and he is currently being closely followed up by our urology and oncology clinics.

## Conclusion

In conclusion, PSM of urinary system TCCs is a rare condition with a very poor prognosis. Newly developed skin lesions should be considered as possible metastases, and should be closely followed up in patients treated for urinary TCC.

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