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Squamous Cell Carcinoma of Kidney: A Case Report and a Review of the Literature

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Abstract

We report the observation of a 48-year-old man patient admitted for right low back pain. The physical examination found lumbar sensitivity, without lumbar contact. The ultrasound of kidney and bladder finds a ureterohydronephrosis without visible obstacle. The abdominopelvic CT scan finds a right ureterohydronephrosis upstream of a bulky right iliac necrotic lymphadenopathy) and a non-functioning right kidney. We performed a right nephrectomy for non-functioning right kidney. The histological result confirms an epidermoid carcinoma of the kidney. The patient was referred to oncology for chemotherapy. The evolution was dramatic followed by death at less than 2 months.

Keywords: *squamous cell carcinoma, kidney, nephrectomy.*

Introduction

Squamous cell carcinoma of the kidney is a rare malignant tumor [1-6]. It is characterized by an invasive character and an unfavorable prognosis [3, 6]. It is often associated with kidney stones and kidney infection. The prognosis for squamous cell carcinoma of the kidney is poor [7]. Its appearance in terms of imagery is not specific. He makes the differential diagnosis with renal cell carcinoma, transitional cell carcinoma, renal metastatic tumor, renal lymphoma, etc. We present a case of squamous cell carcinoma of the kidney.

Observation

Mr. J.G, 48 years old man, admitted to urology department in October 2019 for right back pain. The patient reports a history of urinary schistosomiasis in childhood. He is monitored in cardiology for ischemic heart disease. On examination, the patient was in fairly good general condition. Abdominopelvic ultrasound showed right ureterohydronephrosis. Total PSA and renal function were normal. The ECBU was negative. The abdominopelvic CT evoked an increased right kidney of size 132 mm long axis. Also noted an infiltration of peripheral fat in contact with a large lymphadenopathy with a necrotic center (58x39mm) with significant right ureterohydronephrosis upstream of a large right iliac necrotic lymphadenopathy). A non-functioning right kidney (figure 1, 2). The patient underwent a right total nephrectomy in November 2019. This nephrectomy was difficult with adhesion of the para-renal fat and on the psoas muscle. Pathological examination of the surgical specimen confirmed squamous cell carcinoma of the kidney (Figure 4, 5). The patient was referred to medical oncology. The extension assessment by thoraco-abdominopelvic computed tomography of 12/03/2019 under adjuvant

chemotherapy one month after the nephrectomy showed a retroperitoneal mass infiltrating the right iliac psoas muscle and sheathing the large retro-peritoneal vessels with vertebral lysis of L4. No hepatic or pulmonary metastasis. The patient died a month later on adjuvant chemotherapy.

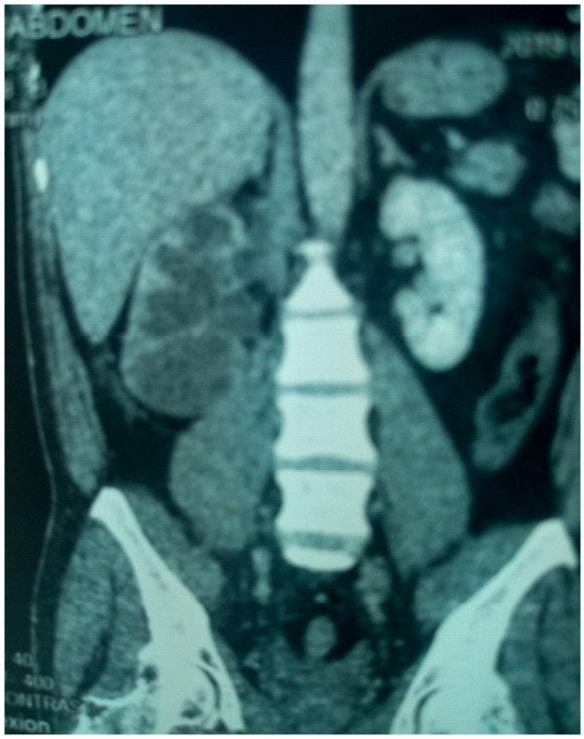

Figure1. *Abdominopelvic CT: right ureterohydronephrosis with laminated right renal parenchyma.*

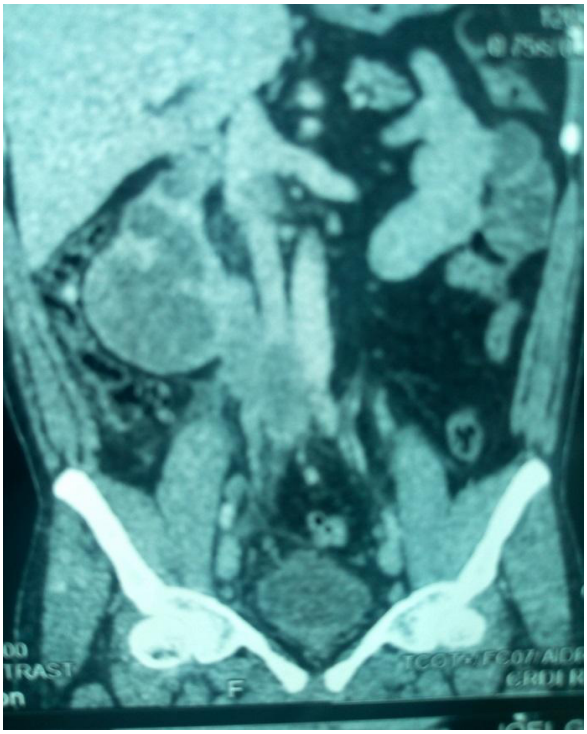

Figure2. *Abdominopelvic CT: presence of a retroperitoneal mass compressing the inferior vena cava the abdominal aorta*

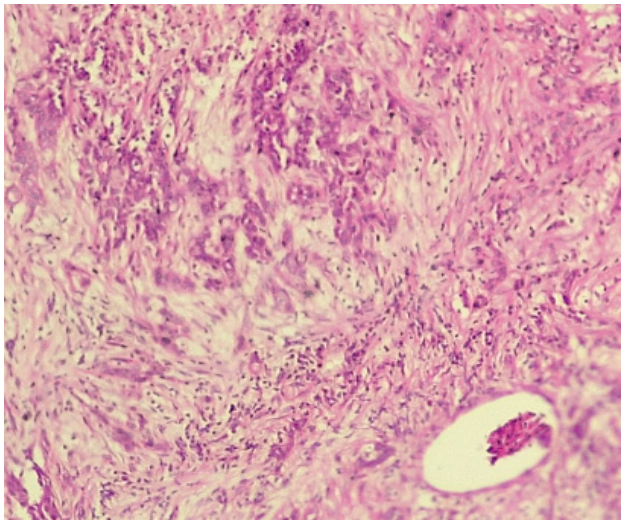

Figure3. *(HE x 40) Squamous cell carcinoma of the kidney producing a tumor proliferation made up of lobules and trabeculae of atypical squamous cells.*

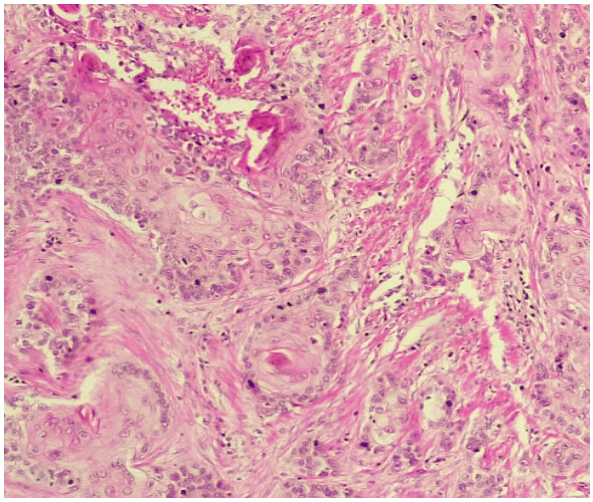

Figure4. *(HE x 100) Squamous cell carcinoma of the kidney producing a tumor proliferation made up of atypical squamous cell lobules with horny globes.*

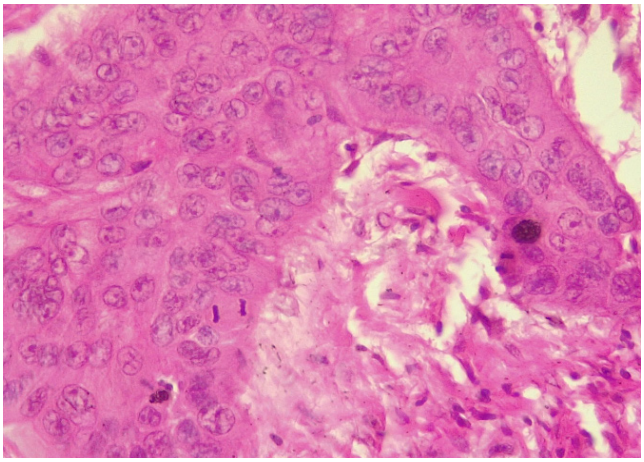

Figure5. *(HE x 400) Squamous cell carcinoma of the kidney producing a tumor proliferation made up of lobules of squamous cells presenting anisokaryosis and normal mitosis.*

Discussion

Kidney squamous cell carcinoma is invasive and has an unfavorable prognosis [1]. The association of kidney stones and kidney infection has been reported by several authors [5, 8]. Our patient had a history of urinary schistosomiasis but we did not find a urinary calculus in the workup. Chronic irritation of the stone may be responsible for the development of the tumor. Kidney squamous cell carcinoma associated with renal cyst has been reported by Jiang P et al. [6]. Zengin K [8] et al. Reported squamous cell carcinoma of the kidney with a kidney stone in a dumb kidney. In our case, the right kidney was non-functional. Several authors report that squamous cell carcinoma of the kidney is an aggressive cancer with a poor prognosis [1, 3, 4]. According to the study by El Hachem G [5], squamous cell carcinoma of the kidney is rare with a rapid and dramatic clinical course. In our patient, the outcome was clinically and radiologically unfavorable.

The work of Singh V [2], on 5 cases of squamous cell carcinoma of the kidney: 3 patients presented a renal stone, one patient was inoperable, the 4 patients underwent a nephro-ureterectomy in their study. Survival after total nephrectomy ranged from 1 to 6 months, and all patients died within 6 months. The poor prognosis is confirmed by several authors and overall survival does not exceed 6 months. In our case, the patient only survived 2 months after diagnosis. Squamous cell carcinoma of the kidney is rare and aggressive. The rarity of squamous cell carcinoma of the kidney has been emphasized by several authors [2, 7, 9, 10], who report that only a few cases have been reported in the literature. We report our first documented case. Several cases of squamous cell carcinoma of the kidney in a non-functioning kidney have been reported in the literature [5, 8, 11]. The aggressiveness of squamous cell carcinoma of the kidney was noted in the study by Cetindag MF et al., [11], often even associated with kidney stones in a non-functioning kidney. Our case corroborates the data in the literature on the aggressiveness of squamous cell carcinoma of the kidney and the concept in non-functioning kidney.

Clinically and radiologically, there is no specificity for squamous cell carcinoma of the kidney compared to other solid kidney tumors. Therapeutically, the use of chemotherapy is the rule after nephrectomy, has been observed in most of the reported cases. The nephrectomy was difficult in our case, due to the invasion of the pararenal fat tumor and the right psoas muscle.

The thoraco-abdominopelvic CT control extension workup showed an increase in radiological signs after chemotherapy, indicating the poor prognosis of primary squamous cell carcinoma of the kidney. The patient died 2 months after the surgery, ie 1 month under chemotherapy.

Conclusion

Squamous cell carcinoma of the kidney is a rare cancer with a poor prognosis. It is often associated with kidney stones and often occurs in a non-functioning kidney at the time of diagnosis. Its treatment is based on nephrectomy and the prognosis is poor with an average survival of less than 6 months in most of the cases reported.

Reference

[1] Chen CH, Wu TR, Tiu CM, Wang JH, Chou YH. Epidermoid carcinoma of the kidney. Zhonghua Yi Xue Za Zhi 1989; 44(5): 318-21.

[2] Singh V, Sinha RJ, Sankhwar SN, Mehrotra B, Ahmed N, Mehrotra S. Squamous cell carcinoma of the kidney-rarity redefined: case series with review of literature. J cancer sci Ther 2010; 2(4): 82-85.

[3] Sahoo TK, Das SK, Mishra C, Dhal I, Nayak R, Ali I et al. Squamous cell carcinoma of kidney and its prognosis: A case report and review of the literature. Case Report in Urology 2015; 3(1): 1-3.

[4] El Hachem G, Choueiry C, Al Hajj Obeid W, Chamseddine N. Renal squamous cell carcinoma: rare and aggressive variant of renal cancers. Cancer biology and therapeutic oncology 2017; 1(2): 1-6.

[5] Kumar S, Tomar V, Yadav SS, Udawat H, Priyadarshi S, Vyas N et al. Primary squamous cell carcinoma of kidney associated with large calculus in non-functioning kidney: a case report. Urology case reports 2016; 8: 4-6.

[6] Jiang P, Wang C, Chen S, Li J, Xiang J, Xie L. Primary renal squamous cell carcinoma mimicking the renal cyst: a case report and review of the recent literature. BMC Urology 2015; 15: 69.

[7] Lanjewar SM, Bodade RM, Bansod AN, Kulkarni A. Primary squamous cell carcinoma of kidney: a case report. Int Surg J 2015; 2(1): 82-84.

[8] Zengin K, Tanik S, Sener NC, Albayrak S, Ekici M, Bozkurt IH et al. Incidence of renal carcinoma in non-functioning kidney due to renal pelvic stone desease. Molecular and clinical oncology 2015; 3: 941-943.

[9] Badruddoza SM, Pervin S. Primary renal squamous cell carcinoma. AKMMC J 2012; 3(2): 34-36.

[10] Kaur P, Chauhan A, Singh G, Kataria S, Kalra R. Primary squamous cell carcinoma of kidney-A case report and review of literature. The internet journal of nephrology 2009; 6(1): 1-6.

[11] Cetindag MF, Ozsavran AY. Primary renal squamous cell carcinoma: a case report. Türk Onkoloji Dergisi 2015; 30(2):74-77.

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