

Case report: Renal epidermoid carcinoma in a patient with a chronic staghorn kidney lithiasis associated with an uretero-pelvic junction syndrome

Mohameden EYA *, Reda BELMADANI, Rhyan ALAMI OUADDANE, Mustapha AHSSAINI, Soufiane MELLAS, Jalal eddine EL AMMARI, Mohammed Fadl TAZI and Jamal EL FASSI

Department of Urology, Hassan II University Hospital, Fes (Morocco).

World Journal of Advanced Research and Reviews, 2026, 30(02), 454-459

Publication history: Received on 25 March 2026; revised on 04 May 2026; accepted on 07 May 2026

Article DOI: <https://doi.org/10.30574/wjarr.2026.30.2.1224>

Abstract

Epidermoid carcinoma of the upper urinary tract is a rare cancer, occurring mainly in elderly patients with a history of neglected kidney stones and/ or neglected urinary upper tract infections, the prognosis is extremely poor, which makes prevention and management of kidney stones highly important.

Keywords: Epidermoid carcinoma; Uretero-pelvic junction syndrome; Kidney lithiasis; Kidney cancer; Upper urinary tract

1. Introduction

We report the case of a 80-year-old woman presenting with a xanthogranulomatous pyelonephritis, on a staghorn left kidney stone or more than 10 years. The diagnosis was only suspected per-operatively to be confirmed later by pathological and immunohistochemical findings. The patient died two months after the diagnosis.

2. Case description

We report a case of 80-year-old female patient, presented with Symptoms of isolated left flank pain, evolving within 7 years. Patient never had a physical examination by a physician during this period, and was self medicated by paracetamol at demand.

Clinical examination found a slight flank sensibility, lumbar contact positive on her left side, the rest was normal, no signs of hematuria or other urinary symptoms.

The CT scan performed demonstrated a Large left staghorn (coraliform) pyelocaliceal stone measuring 13 cm in greatest diameter, of calcific density located upstream of a left ureteropelvic junction syndrome, with a renal parenchymal destruction signifying xanthogranulomatous pyelonephritis and Multiple lymph node formations: hilar renal, lumbo-aortic, and left prevertebral.

Renal function was normal, *E.coli* was identified in urine culture, and the patient had intravenous ceftriaxone accordingly to the antibiogram 3 days before the surgical procedure.

* Corresponding author: Mohameden EYA



Figure 1 Abdominal X-ray showing the large staghorn calcic stone

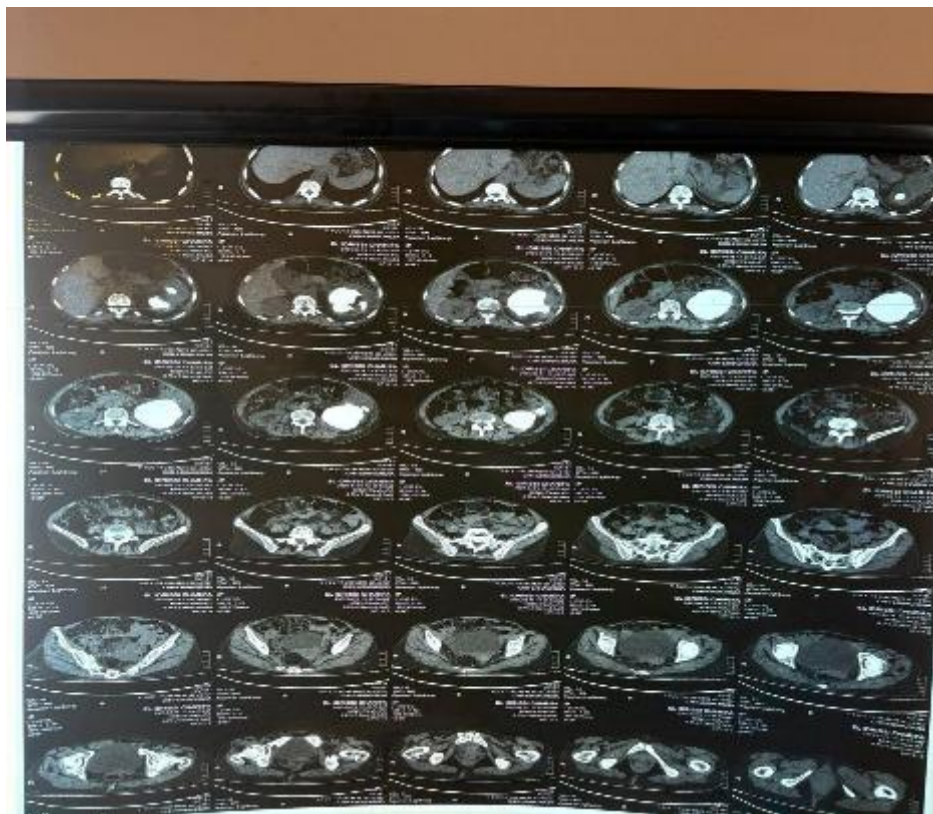


Figure 2 CT scan showing the large staghorn left kidney calcic stone on an upstream of left uretero-pelvic junction syndrome

The patient underwent a left bivalve nephrotomy, with the extraction of the full stone, suspicious abnormal inflammatory renal tissue was found surrounding the stone, and biopsies were performed.

a JJ stent was put before suturing the kidney tissue, to assure an adequate renal drainage and cicatrization of the tissue and the patient was released 3 days after the surgery after finishing the antibiotic post operative course.



Figure 3 Large staghorn stone extracted from the kidney

Follow up was normal, the wound was clean, suture nots were removed 13 days post operative Immunohistochemical (CK5/6, GATA3) and pathology analysis returned in favor of and poorly differentiated mature infiltrating epidermoid carcinoma, and the patient was programmed for large left total nephrectomy as soon as possible.

A week before the scheduled surgery, the patient was presented to the emergencies with left flank pain, several fatigue and fever.

Clinical examination found fever at 39.8 °C, an important lumbar contact, with a turgescnt 3cm sub cutaneous mass regarding the left posterior lumbar area.

Blood tests, urine and hemoculture were performed : we found an important biological inflammatory syndrome : hyperleucytosis and elevated CRP (Hg=9.8, GB=38 000 /mm3 , CRP=300), normal renal function.

A CT scan was performed demonstrating Presence of a retroperitoneal collection extending into the soft tissues of the left lateral abdominal wall, fistulized to the skin

Increase in size of left renal hilar lymph nodes with appearance of retroperitoneal carcinomatosis, Persistent pyelocaliceal dilation with thickened and irregular walls destroying the left renal parenchyma.

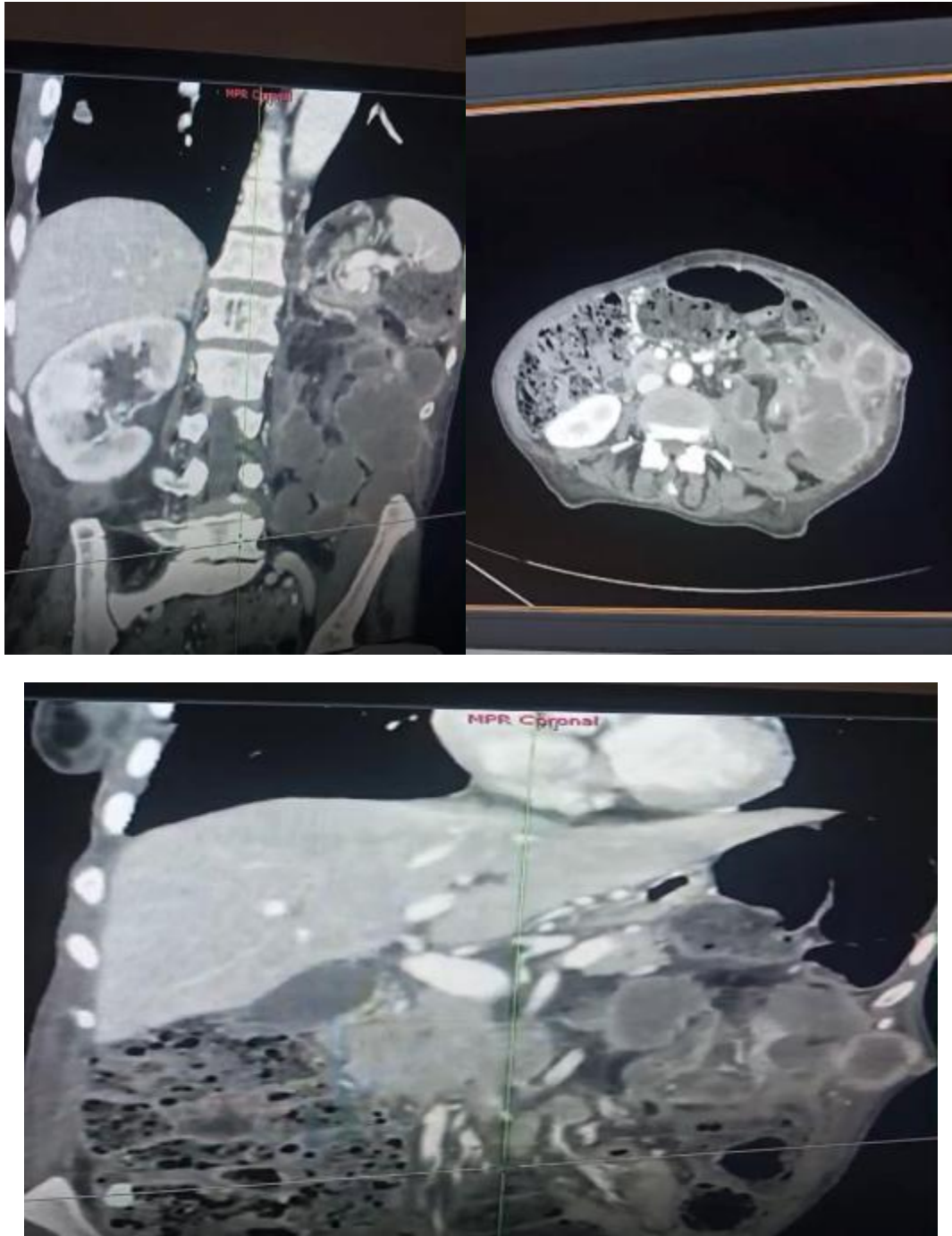


Figure 4 CT scan performed a month after surgery showing the retroperitoneum collections and carcinosis nodes

Patient was hospitalized and intravenous large specter antibiotics was administered : ceftriaxone+ metronidazole+ amikacine.

During the follow up, patient didn't present any fever, *E. coli* was found urine,blood culture and the also in the pus drained out of the collections, treated according to the antibiogram.

A control CT -scann was performed 6 days later, due to the persistence of the biological inflammatory syndrome, and demonstrated Marked regression of the retroperitoneal collection previously extending to the soft tissues of the left lateral abdominal wall and fistulized to the skin, a partial regression in size of pseudo-cystic renal collections with thick and irregular walls destroying the renal parenchyma, Slight increase in size of nodular lesions in the soft tissues of the left lateral abdominal wall, consistent with permeation nodules.

During the multidisciplinary concertation reunion, we concluded that the surgery is not to be performed due to the important local extension of the tumor, and mostly due to the very weak status of the patient OMS score 4.

Patient was transferred to the oncology departement for palliative care, no systemic therapy was administered, a Thoraco-aobdominal CT Scan performed at a month later showed a rapid evolution of the disease, an increase in size and number of multiple retroperitoneal tissue nodules located along renal fascia and posterior parietal peritoneum, heterogeneously enhancing after contrast, consistent with carcinomatosis nodules, Enlargement of left renal hilar lymph nodes, rounded, with necrotic hypodense centers and the Appearance of two secondary pulmonar nodular lesions.

The patient family decided to release the patient from hospital care and let her spend her last days at her home, we have learned of her passing away shortly afterwards.

3. Discussion

Epidermoid carcinoma of kidney is a rare entity of renal cancers occuring in less than 0.5% of kidney cancers [1], and 9 to 17% of the renal pelvis and calix cancers [2].The average age of this cancer onset is between 56 and 69 years, Our patient was elderly (80 years old). Most common symptoms are the lumbar pain, hematuria or in other cases reccurent upper urinay tract infections symptoms.

Multiple risk factors are implicated, other than from lithiasis and recurrent upper urinary tract infections, notably tabagism, and urinary bilharziasis [3,4].The CT scan is the imaging of reference in the kidney tumors diagnosis, yet in our case it hasn't shown any signs of cancerous disease, so there was no suspicion of the diagnosis untill peri-opertively,

The anatomopathological and immunohistochemical study confirmed the diagnosis. Histology showed malpighian epithelial differentiation of the biopsy samples.

The urothelium chronic irritation of the renal cavities is often to be a cause of the malpighian metaplasia and as a consequence malignant progression to cell carcinoma [5,6]. chronic irritation is mostly due to long presence of kidney lithiasis development, exposure to radiation therapy and bilharziasis [3,4].

The prognosis is poor, with a median survival of 5 months [7],and a survival 5 year not exceeding 10% [8] ,Chemotherapy and radiotherapy have no proven effectiveness [9].

Surgery remain the only recommended treatment when the diagnosis is suspected,Extended nephrectomy, combined with ureterectomy and a bladder cuff.

In our particular case, performing the surgery on a neoplastic affected kidney, seems to have accelerated the evolution of the cancerous disease especially locally, due to the absence of signs or evidence of tumor on primar imaging.

4. Conclusion

Given the dramatic prognosis of these tumors, prevention remains of all the importance, by treating kidney stones correctly and early management of the entire lithiasis pathology to prevent recurrence, and that includes proper treatment of upper urinary tract infections as well.

Compliance with ethical standards

Disclosure of conflict of interest

The authors declare that they have no conflict of interest.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study. Additional informed consent was obtained from all individual participants for whom identifying information is included in this article.

References

- [1] BLACHER E.J., JOHNSON D.E., ABDUL-KARIM F.W., AYALA A.G.: Squamous cell carcinoma of renal pelvis. *Urology*, 1985, 25, 124-126.
- [2] UYSAL Z., TASAR C., BAKKALOGLU M., REMZI D.: Primary carcinoma of the renal pelvis and ureter. A collective review. *Int. Urol. Nephrol.*, 1988, 20, 23-28
- [3] Slimane M, Hadidane M, Bouzaiene H, Driss M, Jaidane O, HENCHIRI H, et al. Squamous cell carcinoma of the renal pelvis discovered by parietal and cutaneous invasion: an unusual presentation. *Pan Afr Med J.* 2018;31:246. doi: 10.11604/pamj.2018.31.246.10266.
- [4] Singh V, Sinha RJ, Sankhwar S, Bandana M, Nisar A. Squamous cell carcinoma of the kidney-rarity Redefi ned: case series with review of literature. *Journal of Cancer Science & Therapy.* 2010;2(4):82–85.
- [5] Holmäng S, Lele SM, Johansson SL. Squamous cell carcinoma of the renal pelvis and ureter: incidence, symptoms, treatment and outcome. *J Urol.* 2007;178(1):51–56. doi: 10.1016/j.juro.2007.03.033
- [6] Kose F, Bal N, Ozyilkan O. Squamous cell carcinoma of the renal pelvis. *Med Oncol.* 2009;26(1):103–104. doi: 10.1007/s12032-008-9089-4.
- [7] KINN A.C.: Squamous cell carcinoma of the renal pelvis. *Scand. J. Urol. Nephrol.*, 1980, 14, 77-80.
- [8] SEAMAN E., YAGODA A., O'TOOLE K.M.: Squamous cell carcinoma of the renal pelvis associated with cystinuria. *Anticancer Res.*, 1994, 14, 1361-1363