



RESEARCH ARTICLE

LARGE RENAL CALCULUS HIDING A RARE RENAL TUMOR TYPE SQUAMOUS CELL CARCINOMA ABOUT A RARE CASE AND REVIEW OF LITERATURE

Othman Chama^{1,2}, Rhyam Alami Ouaddane^{1,2}, Mustapha Ahsaini^{1,2}, Soufiane Mellas^{1,2}, Jalal Eddine EL Ammari^{1,2}, Mohammed Fadl Tazi^{1,2}, Mohammed Jamal El Fassi^{1,2} and Moulay Hassan Farih^{1,2}

1. Department of Urology, Hassan II University Hospital, Fez, Morocco.
2. Faculty of Medicine, Pharmacy and Dentistry of Fez, Sidi Mohammed Ben Abdellah University, Morocco.

Manuscript Info

Manuscript History

Received: 31 January 2023

Final Accepted: 28 February 2023

Published: March 2023

Key words:-

Squamous Cell Carcinoma, Large Stone, Rare Case, Pelvis, Surgery

Abstract

Through this clinical study we present a rare case of renal squamous cell carcinoma discovered incidentally during a nephrectomy on dumb kidney plus large renal lithiasis in a patient with a history of recurrent upper urinary tract infections on kidney stones. The reason for consultation was chronic pain in the right flank. The CT scan showed a huge kidney stone of 10 cm long axis with pyelic infiltration in relation to her history of right renal pyelonephritis. The discovery of squamous cell carcinoma was on the anatomopathological specimen.

Copy Right, IJAR, 2023., All rights reserved.

Introduction:-

Squamous cell carcinoma of the renal pelvis is a serious and rare condition. It represents 0.5 to 0.8% of malignant renal tumors. [1,2]

Squamous cell carcinoma of the renal pelvis most often occurs as a result of chronic irritation by renal lithiasis and repeated untreated or poorly treated urinary tract infections.

The main risk factor is the presence of stones associated with chronic infection with a relative risk of 2.5. [1,3,4]

At the same stage, urothelial carcinoma has the same prognosis as squamous cell carcinoma.

Case report:-

73-year-old patient, followed in cardiology for hypertension and heart failure, diabetic on insulin.

She was admitted to our clinic for chronic low back pain.

On examination, the patient complained of pain in the right flank for several years, in a context of afebrile and conservation of the general state.

The clinical examination found a patient in good general condition, slightly pale with sensitivity in the right flank.

Biologically, the patient presented with a microcytic hypochromic anemia of 8g dl, the rest of the workup was unremarkable.

Corresponding Author:-Othman Chama

Address:-Department of Urology, Hassan II University Hospital, Fez, Morocco.

The patient underwent an ultrasound and the kidney, ureters and bladder (KUB) x-ray (figure 1) and then a CT scan (figure 2) which revealed a large stone measuring 11 cm in length as well as two other stones measuring 4 cm in length with a mute kidney which did not excrete contrast.

A MAG 3 renal scan was performed to confirm the non-functionality of the right kidney.

The patient was hospitalized in the department where she received a transfusion with 2 packed red blood cells.

She underwent a total extended right nephrectomy by lumbotomy (Figure 3).

The postoperative follow-up was unremarkable, she was hospitalized for 4 days and then discharged.

The anatomopathological examination found a histological aspect compatible with a mature and infiltrating well differentiated squamous cell carcinoma with the presence of vascular emboli.

Our patient underwent an extension workup which did not reveal any distant secondary lesions.

The patient did not receive adjuvant treatment.

She had an extension workup at 3 and 6 months which came back negative.

Discussion:-

As in the case of our patient, repeated urinary tract infections on renal lithiasis are an important risk factor for squamous cell carcinoma of the pelvis. Smoking can also be incriminated for bladder localizations but this is not the case for our patient. Bilharzia has been reported as a risk factor for urinary squamous cell carcinoma [5]. The average age of onset is between 56 and 69 years [6, 7] with a male predominance [5, 7]. Symptomatology consists mainly of hematuria in 60% of cases and back pain [8]. The infectious signs that are often present can also lead to a diagnosis of carcinoma, especially as the UCE (urine cytobacteriological examination) is often positive. Urine cytology may help to orient the diagnosis.

The particularity of our case is that we never reported the presence of hematuria.

On a radiological level, the presence of stones should not lead to a misdiagnosis. The association on CT scan or ultrasound of renal calculi, pyelocal lacunae and/or renal mass syndrome should raise alarm, especially in the case of old calculi [3].

The CT scan remains important for the diagnosis and the assessment of local and distant extension. It also allows a radioguided biopsy.

In our case, the CT scan revealed infiltration of the peri-renal fat in relation to the infectious history.

Histologically, an intraepithelial squamous component is in favor of the primary nature of the tumor [6, 7]. The tumor is characterized by a mainly local extension [1]. Unlike other urothelial carcinomas, there is no ureteral dissemination [5]. Lymph node metastases are less frequent and tend to be bone, lung or liver [7].

In our case there was no metastasis.

The therapeutic management of this type of cancer should take into consideration the age, general condition and choice of the patient as well as the stage and grade of the tumor [9]. The main curative surgery consists of nephro-ureterectomy with bladder flange.

In our patient, she underwent an extended total nephrectomy since the diagnosis of squamous cell carcinoma was not evoked.

Chemotherapy, immunotherapy and radiotherapy are mainly indicated in advanced inoperable stages with limited effects on survival [10].

However, the prognosis of these tumors remains poor with a mean survival of 07 months and a 5-year survival of no more than 10% [1,9].

With this type of cancer, prevention remains very important by treating kidney stones correctly and preventing recurrent upper urinary tract infections.



Figure 1:-The kidney, ureters and bladder (KUB) x-ray.



Figure 2:- CT scan showing the large stone with infiltration of the peri-renal fat.



Figure 3:- Post operative part

Conclusion:-

The difficulty in making this diagnosis remains very difficult despite the development of medical imaging. This leaves us to ask the following question: should we do a urinary cytology in front of any lithiasis image of old appearance?

List of abbreviations :-

UCE: urine cytobacteriological examination
KUB: the kidney, ureters and bladder (x-ray)

References:-

1. Li MK, Cheung WL. Squamous cell carcinoma of the renal pelvis. *Journal of Urology*. 1987;138(2):269–7. [PubMed] [Google Scholar]
2. Holmång S, Lele SM, Johansson SL. Squamous cell carcinoma of the renal pelvis and ureter: Incidence, symptoms treatment and outcome. *J Urol*. 2007;178(1):51–6. [PubMed] [Google Scholar]
3. Mhiri MN, Rebait T, Turki L, Smida ML. Association between squamous cell carcinoma of the renal pelvis and calculi. *Br J Urol*. 1989;64(2):201–2. [PubMed] [Google Scholar]
4. Ouzzane A, Rouprêt M, Leon P, Yates DR, Colin P. Epidemiology and risk factors of upper urinary tract tumors: Literature review for the yearly scientific report of the French National Association of Urology. *Prog Urol*. 2014 Nov;24(15):966–7. [PubMed] [Google Scholar]
5. Messing EM, Catalona W. Urothelial tumors of the urinary tract. In: Walsh PC, Retik AB, Vaughan ED Jr, Wein AJ, editors. *Campbell's Urology*. 7. Philadelphia: WB Saunders Company; 1998. pp. 2327–2410. [Google Scholar]
6. Blacher EJ, Johnson DE, Abdul-Karim FW, Ayala AG. Squamous cell carcinoma of renal pelvis. *Urology*. 1985;25(2):124–6. [PubMed] [Google Scholar]
7. Kinn AC. Squamous cell carcinoma of the renal pelvis. *Scand J UrolNephrol*. 1980;14(1):77–80. [PubMed] [Google Scholar]
8. Seaman E, Yagoda A, O'Toole KM. Squamous cell carcinoma of the renal pelvis associated with cystinuria. *Anticancer Res*. 1994;14(3B):1361–3. [PubMed] [Google Scholar]

9. Jiantao Xiao, Jun Lei, Leye HE, Guangmin Yin. Renal calculus complicated squamous cell carcinoma of renal pelvis: Report of two cases. Can UrolAssoc J. 2015 May-Jun;9(5-6):E310–E312. [Article PMC gratuit] [PubMed] [Google Scholar]
10. Singh V, Sinha RJ, Sankhwar SN, Mehrotra B, Ahmed N, et al. Squamous cell carcinoma of the kidney-Rarity redefined: Case series with review of literature. Journal of Cancer Science Therapy. 2010 ;2:87–90. [Google Scholar].