ECRONICON OPEN ACCESS

EC GASTROENTEROLOGY AND DIGESTIVE SYSTEM

Case Report

Rectal Adenocarcinoma with Renal Metastasis Report of a Rare Case and Literature Review

R Allali[1,2]*, K Bordj[1], A Djenaoui[1], M Abada[3], I Hafaia[4], H Ait Kaci[4] and I Ayadi[5]

[1]*Department of Oncologic Surgery, Debussy Clinic, Pierre and Marie Curie Center Algiers, Algeria*

[2]*Department of General Surgery, Public Hospital, Miliana, Ain Defla, Algeria*

[3]*Department of Medical Oncology, Public Hospital, Ain Defla, Algeria*

[4]*Anatomopathology Service, Pierre and Marie Curie center Algiers, Algeria*

[5]*Radiology Service, Pierre and Marie Curie center Algiers, Algeria*

***Corresponding Author**: R Allali, Department of Oncologic Surgery, Debussy Clinic, Pierre and Marie Curie Center Algiers and Department of General Surgery, Public Hospital, Miliana, Ain Defla, Algeria.

Received: December 05, 2018; **Published:** November 13, 2018

Abstract

Colorectal carcinoma is one of the most common malignant tumors in the Western world, Distant metastasis from adenocarcinoma of rectum most frequently spread to the liver and lungs. Metastasis to the kidney is extremely rare and may be generally associated with an unfavorable prognosis. Thus, patients with Kidney metastasis are a diagnostic and therapeutic challenge.

The present study report a case of a 56-year-old female patient who presented an adenocarcinoma of the middle third of the rectum, having undergone neo-adjuvant treatment followed by rectal anterior resection with total mesorectal excision. 6 years after treatment we noticed in the CT-scan control a tumoral recurrence on the rectal stump encompassing the internal iliac vessels as well as the lower ureter giving rise to a right uretero-hydronephrosis. And underwent Right uretero- nephrectomy due to suspicion of neoplastic infiltration into the right ureter. However, histology showed a multifocal renal metastases from rectal carcinoma.

Keywords: *Renal Metastasis; Rectal Adenocarcinoma; Nephrectomy*

Abbreviation

CRC: Colo Rectal Carcinoma

Introduction

Colorectal carcinoma is one of the most common cancers in Western World. Its incidence has increased significantly over the last 30 years and it represents the second most common cancer-related cause of death [1].

Most of cases about colorectal carcinoma occur in people aged 50 years or older [1].

The extent of tumor via lymph-node and haematogenous spread correlates with local depth of invasion. The usually involved organs are liver, lungs and bone.

Renal metastasis from colorectal cancer is extremely rare and represents only 2.8% of secondary renal neoplasms [2].

And maybe generally associated with an unfavourable prognosis..

Case Report

A 56-year-old female patient with a history of Type 2 diabetes mellitus, who presented an adenocarcinoma of the middle third of the rectum (CT2N2M0), having undergone neo-adjuvant treatment and then anterior resection with total mesorectal excision by total laparoscopic approach, protected by temporary ileostomy, Which was closed one month after.

Histopathological examination revealed a well-differentiated adenocarcinoma of the rectum, Tumor is classified PT2N0MX according to the PTNM 2004 classification.

No adjuvant chemotherapy was performed.

After 6 years of remission, she complained of asthenia and difficult defecation, and we noticed in the CT-scan control a tumoral recurrence on the rectal stump encompassing the internal iliac vessels as well as the lower ureter giving rise to a right uretero-hydronephrosis (Figure 1). Completed by renal scintigraphy showing a right mute kidney.

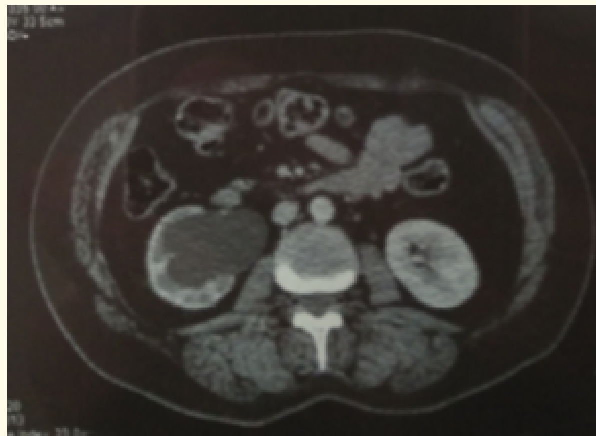

Figure 1: *Abdominal CT-scan revealing uretero hydronephrosis.*

The left kidney and serum creatine were normal, even the carcinoembryonic antigen (CEA).

However, chest and abdominal computed tomography (CT) scans did not reveal any distant metastases.

Surgery was performed by median laparotomy, we noticed a pelvic armor at the level of previous surgery, and no resection was possible.

However, Right nephro-ureterectomy was performed due to suspicion of neoplastic infiltration into the right ureter.

Histopathological study showed a multifocal metastases of an adenocarcinoma well differentiated from the rectum at the level of the right kidney (Figure 2) however there was no invasion into the right ureter.

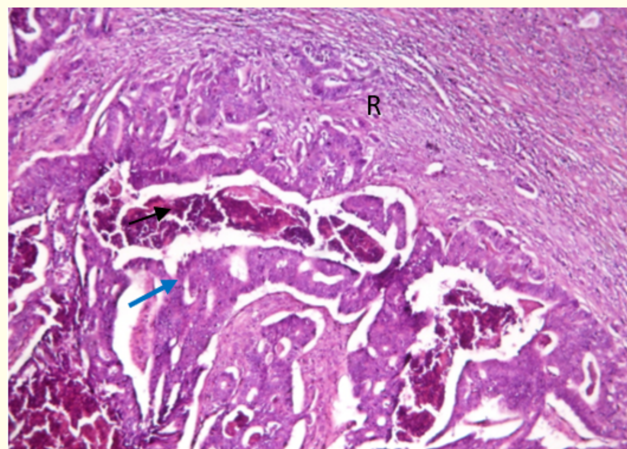

Figure 2: *Metastasis of known rectal adenocarcinoma (thick arrow) with focal necrosis (thin arrow), R: normal renal parenchyma.*

In immune-histochemical study (IHC); the tumour tissue was positive for CK20 and negative for CK7 (Figure 3), with PAS-positive intracytoplasmic inclusions.

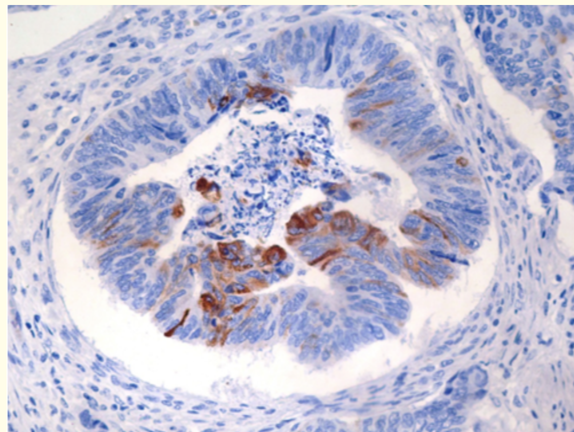

Figure 3: *Heterogeneous positivity of CK 20 tumor cells in immuno-histochemical study.*

According to no underwent curative surgery, palliative treatment was performed.

Few months after surgery the patient developed diffuse intra peritoneal and pulmonary metastases and dies 10 months after the surgical treatment.

Discussion and Conclusion

Isolated metastatic involvement of the kidney is rare and sporadic, and usually occurs with concomitant carcinoma [4,11].

Colorectal cancer was found to involve the kidneys in only 2.7% of postmortem analyses, being part of an advanced systemic disease [3,4,7].

Generally, the frequency of renal metastasis in cancer patients is 7 - 13% in large autopsy series [2].

The present study utilized a computerized literature search using PubMed, Medline and other libraries [3,4,6,7,11]. And identified less than 20 cases of renal metastasis from Colo-rectal cancer [7-19].

The vast majority of cases are asymptomatic and were detected on imaging, or as a result of increased CEA levels [5,6]. One potential reason for the difficulty in clinical diagnosis is the small size of the lesions. Silent renal metastasis may be a source of other metastases and poor prognosis associated with renal metastasis may partly be due to the accelerated metastatic hematogenous spread [7].

Therefore, patients with renal metastasis from CRC tumors are a diagnostic and therapeutic challenge [9].

In our case multifocality of the metastatic deposits in the kidney. The origin may be a possibility of haematogenous spread because there were no ureteral infiltration in histological examination.

Previous study described this direct kind of dissemination [3], another observation was about direct peritoneum growth who is extremely rare [7].

Nephrectomy is not commonly used in the management of renal metastases from colorectal cancer [3,9,10].

The indication of nephrectomy in patients with suspected renal metastasis from CRC should take into consideration the prognosis of the metastatic tumor, the patient's performance status, the presence of comorbid disorders, and the possibilities, for further therapeutic interventions [10].

Therefore, Systemic chemotherapy is the treatment of choice [6,10], but nephrectomy may compromise the choice of chemotherapy agents that require renal clearance [4,11].

In conclusion, isolated renal metastasis of rectal adenocarcinoma without any other visceral metastasis have rarely been reported in the worldwide literature (< 20 cases). The present study reported one such rare clinic case.

Bibliography

1. National Cancer Institute: SEER Cancer Statistics Review, 1975-2005 (2015).
2. Bracken RB., *et al*. "Secondary renal neoplasms: an autopsy study". *Southern Medical Journal* 72.7 (1979): 806-807.
3. Dräger DL., *et al*. "Late recurrence of colorectal adenocarcinoma as a renal tumour by direct spread via the ureter". *Therapeutic Advances in Urology* 9.5 (2017): 121-122.
4. Aksu G., *et al*. "Colon cancer with isolated metastasis to the kidney at the time of initial diagnosis". *International Journal of Gastrointestinal Cancer* 34.2-3 (2003): 73-77.
5. Zhou C., *et al*. "Metastases to the kidney: a comprehensive analysis of 151 patients from a tertiary referral centre". *BJU International* 117.5 (2016): 775-782.
6. Dulskas A., *et al*. "Sigmoid adenocarcinoma with metastases to the kidney: report of a rare case and review of the literature". *Oncology Letters* 10.2 (2015): 1191-1193.
7. Kibar Y., *et al*. "Renal papillae metastasis of sigmoid colon adenocarcinoma". *International Journal of Urology* 12.1 (2005): 93-95.
8. Nelson J., *et al*. "Extraluminal colonic carcinoma invading into kidney: A case report and review of the literature". *ISRN Urology* (2011): 707154.
9. Dagnoni C, *et al*. "Sigmoid adenocarcinoma with renal metastasis". *Clinical Practice* 1.4 (2011): e88.
10. Melichar B., *et al*. "Metastatic colorectal carcinoma and kidney tumors: A report of four cases". *Tumori* 96.3 (2010): 483-486.
11. Julianov A., *et al*. "Late renal metastasis from sigmoid adenocarcinoma". *Lancet Oncology* 5.12 (2004): 726.
12. Klaasse Zn., *et al*. "Bilateral metachronous colon cancer metastasis to kidneys: a rare case with a treatment dilemma". *UroToday International Journal* 6.1 (2012): 1-5.
13. Wolff JM., *et al*. "Spontaneous kidney rupture due to a metastatic renal tumour. Case report". *Scandinavian Journal of Urology and Nephrology* 28.4 (1994): 415-417.
14. Waleczek H., *et al*. "Complex pattern of colon cancer recurrence including a kidney metastasis: A case report". *World Journal of Gastroenterology* 11.35 (2005): 5571-5572.
15. Komeya M., *et al*. "A case of upper urinary tract metastases from sigmoid colon cancer". *Hinyokika Kiyo* 55.6 (2009): 339-343.
16. Milbank AJ., *et al*. "Metastatic cancer to the renal pelvis: A novel approach to management". *Urology* 64.4 (2004): 807-809.
17. Brambilla E., *et al*. "Isolated renal metastasis after colon cancer". *Canadian Journal of Urology* 14 (2007): 3649-3650.
18. Shiraishi T., *et al*. "Implantation of colon cancer cells onto renal pelvic mucosa. A case report". *APMIS* 97.2 (1989): 181-184.
19. Ho L., *et al*. "Renal metastasis from primary colon cancer on FDG PET-CT". *Clinical Nuclear Medicine* 34.9 (2009): 596-597.

Volume 5 Issue 12 December 2018
© All rights reserved by R Allali*., et al.*