An unusual case of pancreatitis revealing a metachronous renal cell carcinoma metastasis to the gallbladder

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Clear-cell renal cell carcinoma (RCC) is a common urological tumor known for its potential to metastasize. Common sites of metastasis include the lungs, lymph nodes, liver and bones but rare sites of metastasis are described. Gallbladder metastasis from RCC is very rare and occurs mostly in men. It is admitted that most cases are asymptomatic. Cholecystectomy has been performed as the treatment for solitary lesion. We describe a case of RCC metastasis diagnosed after lithiasic pancreatitis in a 68-year-old male. To our knowledge, this is the first case of a metachronous RCC metastasis to the gallbladder presenting concurrently with lithiasic pancreatitis.

Key Words: gallbladder metastasis, renal cancer, gallbladder cancer, renal surgery

Introduction

Clear-cell renal cell carcinoma (RCC) is a typical urological tumor known for its metastasizing potential. The most common sites of metastasis are the lungs, lymph nodes, liver and bones but rare sites of metastasis are described. Particularly, the gallbladder has been the site of metastasis in a few reported cases. We describe what the authors believe to be the first case of RCC metastasis diagnosed incidentally after acute lithiasic pancreatitis. A review of the literature regarding presentation and management is also provided.

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Case presentation

We present the case of a 68-year-old male known for coronary heart disease, type 2 diabetes mellitus, arterial hypertension and dyslipidemia who presented with gross hematuria. The cystoscopy was negative;

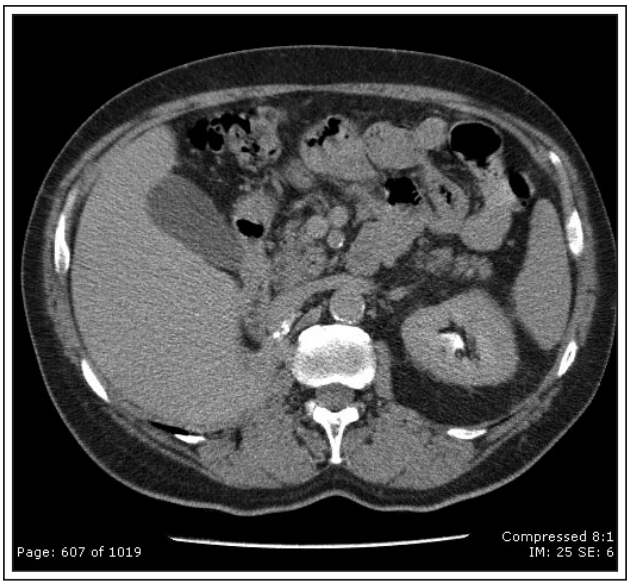

Figure 1. Follow up CT scan showing no suspicious lesion.

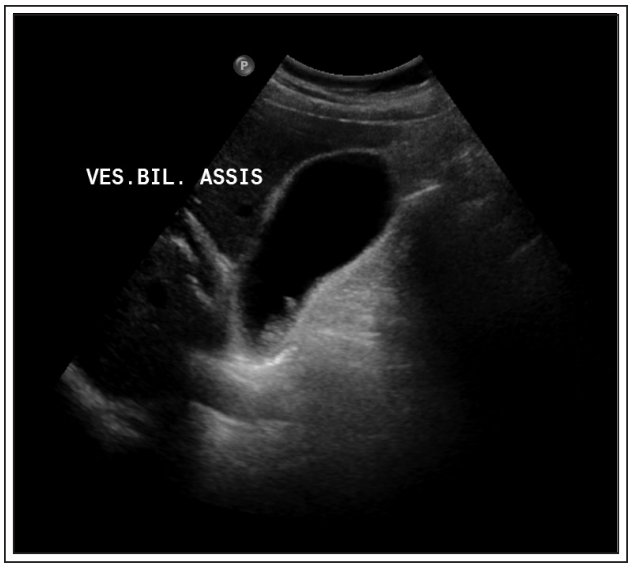

Figure 2. Abdominal echogram showing gallbladder lithiases but no sign of a tumoral lesion.

hence an abdominal computerized tomography (CT) scan was performed and showed a 10 cm x11.5 cm x 6.7 cm right renal tumor compatible with renal carcinoma. The metastatic work up was negative. He underwent an uneventful right laparoscopic radical nephrectomy in early June 2010. Final pathology showed RCC of Fuhrman grade 3/4 with 30% necrosis without any perirenal fat invasion. There was a renal vein tumor thrombus but the vascular and ureteral margins were negative. The tumor was staged as a pT3aN0M0 based on pathological and radiological findings. The patient was followed with routine chest and abdominal CT scans every 6 months as recommended, Figure 1. Some nonspecific infracentimetric right lung nodules were deemed benign based on the absence of progression between the follow up scans.

Sixteen months after the nephrectomy, the patient presented to the emergency unit with abdominal pain, an elevated blood lipase (to approximately 10 times the normal value) and a normal blood bilirubin value. A diagnosis of pancreatitis was established. An abdominal ultrasound was performed and revealed the presence of cholelithiases, a dilated common bile duct to 9 mm, normal intrahepatic biliary tract and no sign of cholecystitis, Figure 2. An endoscopic ultrasound (EUS) was also performed and confirmed the presence of cholelithiases without common bile duct dilatation or choledocholiathiasis. The Wirsung duct was normal. In the presence of a non-alcoholic pancreatitis secondary to cholelithiases, an endocholecystectomy was indicated and performed uneventfully. The gallbladder pathology report stated a chronic cholecystitis with cholelithiases and the presence of a 0.2 cm intraluminal suspicious tumor. A RCC metastasis was suspected and immunologic markers confirmed a positive staining for RCC and CD10 and negative for CD68, Figure 3. A routine metastatic work up including liver function tests, chest and abdominal CT scan at 18 months after right radical nephrectomy and 2 months following endocholecystectomy was negative. The patient is presently asymptomatic.

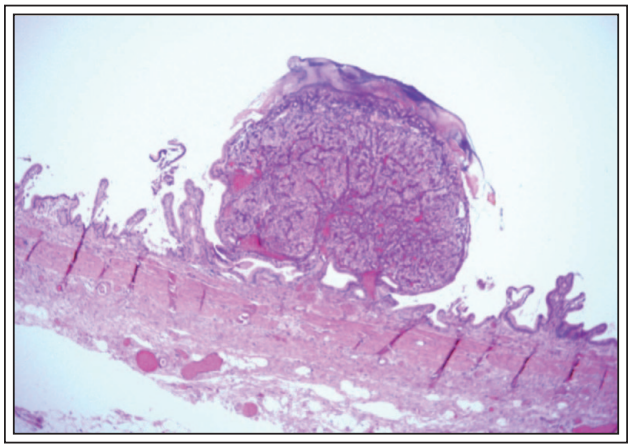

Figure 3. Histology and immunology slides of the cholecystectomy showing metastasis of renal clear cell carcinoma.

Discussion

Kidney cancer is the eighth most common cancer in Canada according to Canadian Cancer Statistics of 2011. Approximately one third of all newly diagnosed RCC patients present with synchronous metastatic disease and an additional 20% to 40% of patients with clinically localized disease at diagnosis will eventually develop metastases.[1] RCC has a potential to metastasize to almost any distant site. In descending order of frequency, the most common sites of metastasis are the lungs, lymph nodes, liver, bones, adrenal glands, kidneys, brain, heart, spleen, intestine, and skin.[2] Nevertheless, gallbladder metastasis from RCC is very rare, as was shown by Chung et al in their extensive review of the literature of the past 45 years. They documented only 33 cases, mostly in men.[3] Decoene et al stated that the majority of cases were asymptomatic without associated cholelithiases and were diagnosed on routine imaging follow up.[4] Some cases have also been diagnosed at autopsy reports. Gallbladder metastases usually occurred in previous locally advanced RCC to either perirenal fat or presence of tumor thrombus with or without lymph node involvement. According to the review by Fang et al, gallbladder pathology reports were consistent with invasion limited to the mucosa in approximately two thirds of the cases and only 5% of the cases reported showed invasion of the perimuscular soft tissues.[5] These findings are consistent with hematogenous dissemination rather than a contiguous invasion. Cholecystectomy has been performed in most reported cases and solitary metastasis to the gallbladder correlates with better overall prognosis following cholecystectomy when compared to multi-metastatic disease.[3–5] The laparoscopic approach for cholecystectomy seems to be effective and has been the preferred approach in most cases.[6] On the other hand, some authors have suggested that in young patients with low surgical risk and good prognosis of the malignancy, a wide excision (central hepatectomy) with lymphadenectomy would be more appropriate.[7]

To our knowledge, this is the first case of a metachronous RCC metastasis to the gallbladder in a patient who underwent an endocholecystectomy for an acute lithiasic pancreatitis 16 months after laparoscopic nephrectomy. No data is available regarding adjuvant therapy for gallbladder RCC metastasis. Nevertheless, the hospital tumor board and the patient decided for an active surveillance and in case of recurrent metastasis, an adjuvant therapy with a tyrosine kinase inhibitor will be started.[8]

Up to now, there is no clear indication to perform an endocholecystectomy in asymptomatic patient with gallbladder stones or infra-centimetric lesion. However, if a gallbladder lesion is seen in a patient with a history of renal cancer, a cholecystectomy should be performed.

Conclusion

Gallbladder metastasis of renal cell carcinoma is still a rare and bizarre event in the medical literature. While more and more knowledge is being defined about this disease, it is still exclusively on case reports and reviews of the literature and many questions still remain. For instance, is there a place for adjuvant therapy and what is the extent of the surgery needed for resection and cure? Our case reflected a premiere event in the literature, mainly an incidental finding of a gallbladder metastasis after cholecystectomy for a pancreatitis secondary to cholelithiases. Hopefully, physicians will continue to report personal observations regarding this seldom seen entity in order to improve the management. □

References

1. Nojima H, Cho A, Yamamoto H et al. Renal cell carcinoma with unusual metastasis to the gallbladder. *J Hepatobiliary Pancreat Surg* 2008;15(2):209-212.
2. Rustagi T, Priya R, Versland M. Metastatic renal cell carcinoma. *Case Rep Gastroenterol* 2011;(5):249-257.
3. Chung PH, Srinivasan R, Linehan WM, Pinto P, Bratslavsky G. Renal cell carcinoma with metastases to the gallbladder: Four cases from the National Cancer Institute (NCI) and review of the literature. *Urol Oncol* 2012;30(4):476-481. Epub 2011 Feb 1.
4. Decoene J, Ameye F, Lerut E et al. Renal cell carcinoma with synchronous metastasis to the calcaneus and metachronous metastases to the ovary and gallbladder. *Case Report Med* 2011;2011: 671645.
5. Fang X, Gupta N, Shen SS et al. Intraluminal polypoid metastasis of renal cell carcinoma in gallbladder mimicking gallbladder polyp. *Arch Pathol Lab Med* 2010;134(7):1003-1009.
6. Patel S, Zebian B, Gurjar S et al. An unusual gall-bladder polyp--site of metastatic renal cell carcinoma: a case report. *Cases J* 2009; 2:172.
7. Moujahid M, Zrara I, Touiti D, Daali M. [Renal cell carcinoma with gallbladder metastasis]. *Gastroentérologie clinique et biologique* 2008;32(8-9):788-789.
8. Powles T, Chowdhury S, Jones R et al. Sunitinib and other targeted therapies for renal cell carcinoma. *Br J Cancer* 2011;104(5):741-745.