

AN AGGRESSIVE COURSE OF RENAL CANCER WITH MULTIPLE METASTASES : A CASE REPORT

UNE ÉVOLUTION AGRESSIVE DE CANCER DU REIN MÉTASTATIQUE : A PROPOS D'UN CAS CLINIQUE

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Abstract

A 57-year-old female had experienced progressive epigastric pain for the past 6 months with bodyweight loss over the past year.

A physical examination found epigastric tenderness, hepatomegaly with a hard consistency.

An enhanced computed tomography (CT) scan revealed a left renal tumor with multiple hyper-enhancing metastases; hepatic, gastric, pancreatic, and adrenal seedings.

CT-guided liver biopsy showed hepatic metastasis of a carcinoma whose immunohistochemical profile was compatible with a Renal Cell Carcinoma (RCC). Strong positivity for CK7 and CD10 and focal positivity for CD20

Key-words: Renal cell carcinoma; Pancreatic metastasis; Liver metastases; Adrenal metastases; Gastric metastasis.

Résumé

Une femme de 57 ans avait souffert de douleurs épigastriques progressives au cours des 6 derniers mois avec une perte de poids au cours de l'année écoulée.

Un examen physique a trouvé une sensibilité épigastrique, une hépatomégalie à consistance dure.

Une tomographie assistée par ordinateur avec injection du produit de contraste (TDM) a révélé une tumeur rénale gauche avec de multiples métastases hyper-vasculaires hépatiques, gastriques, pancréatiques et surrénaliennes.

La biopsie hépatique scanno-guidée montrait une métastase hépatique d'un carcinome dont le profil immunohistochimique est compatible avec un carcinome à cellules rénales (CCR). (CK7 fortement positive, CD10 avec positivité focale CK20).

Mots-clés : Carcinome à cellules rénales ; Métastase pancréatique ; Métastases hépatiques ; Métastases surrénaliennes ; Métastase gastrique.

ملخص

عانت امرأة تبلغ من العمر 57 عامًا من آلام بالبطن علوية وسطى متصاعدة خلال الأشهر الستة الماضية مع فقدان الوزن خلال العام الماضي.

كشف الفحص البدني عن فرط إحساس بالجهة العلوية للبطن مع تضخم شديد في الكبد.

كشف التصوير المقطعي المحوسب عن طريق الحقن بمواد الوسائط و التباين عن ورم في الكلية اليسرى مع وجود العديد من النقائل الخبيثة الكلوية والمعدة والمعكلة والغدة الكظرية.

أظهرت خزعة الكبد الموجهة بالمسح الضوئي وجود ورم خبيث كبدي من سرطان يكون ملفه الكيميائي المناعي متوافقًا مع سرطان الخلايا الكلوية (CRC). (CK7 إيجابي قوي، CD10 مع إيجابية بؤرية CK20).

الكلمات المفاتيح : سرطان الخلايا الكلوية ; نقيلة خبيثة في المعكلة ; نقيلة خبيثة في الكبد ; نقيلة خبيثة في الغدة الكظرية ; نقيلة خبيثة في المعدة.

INTRODUCTION

The twelfth most common cancer in the world, renal cancer (RC), accounts for around 3% of all adult malignancies (1). It is an aggressive tumor with a poor prognosis, especially when associated with metastasis. Approximately 25 to 30% of patients with RCC have distant metastases at presentation, with only 1% to 3% of the patients presenting with isolated solitary visceral metastases. Biopsy of the primary renal mass or accessible metastasis allows for histologic investigation and immunohistochemical staining to establish a diagnosis in correlation with clinical and radiologic findings.

Here we report a case of an aggressive course of an RCC with multiple metastases.

CASE REPORT

A 57-year-old female presented to our gastroenterology department with progressive epigastric pain over the past 6 months. She also reported weight loss over the past year. However, no nausea, no vomiting, no bowel habit changes, and no gross hematuria were reported by the patient.

She had a history of type 2 diabetes and coronary artery disease.

A physical examination found BMI =23, epigastric tenderness, and hepatomegaly with hard consistency (liver span at 15 cm). There was no superficial lymphadenopathy.

The results of a laboratory examination showed the following levels of measurements: hemoglobin:11.7 g/dl, platelets:390 /ml alkaline phosphate:662 IU/L, Gamma-Glutamyl Transferase (GGT):258, C-Reactive Protein Test:275 and tumor marker test revealed an elevated CA19-9 level,560 U/ml (15 times higher than the normal range). Other laboratory data were within normal limits.

Upper gastrointestinal endoscopy with biopsy and histopathological examination showed an erosive gastrobulbitis caused by helicobacter pylori without any sign of malignancy.

An enhanced computed tomography (CT) scan revealed a left renal lesion (measuring approximately 5.5 cm) (Fig. 1). Hepatomegaly with multiple hyper-enhancing metastases (Fig. 2).

Gastric invasion by pancreatic metastasis, multiple abdominal lymphadenopathies, and adrenal metastasis (Fig. 3)

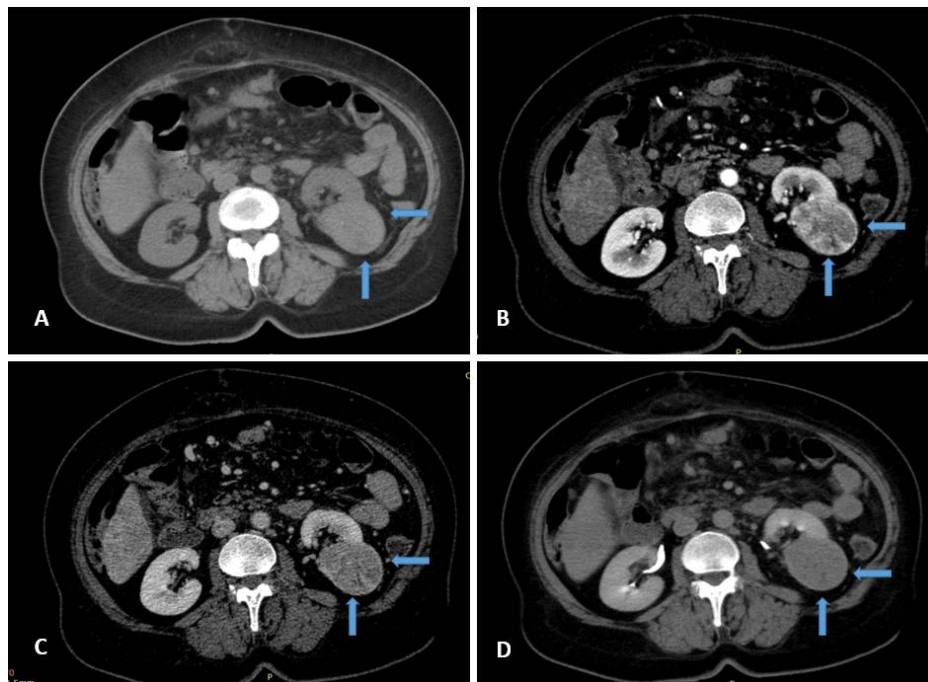


Fig. 1. Left renal carcinoma

A; axial image of an unenhanced CT scan shows a well-circumscribed rounded mass (blue arrows) with a 5.5-cm diameter, no calcifications with 45H attenuation value.

B, D, and C; axial images on contrast-enhanced CT scans show that the enhancement pattern of the lesion (blue arrows) is heterogeneous, predominantly peripheral with central necrosis, and the attenuation value was measured as 110 H in the corticomedullary phase (degree of enhancement: 65 H) (B), 86 H in the tubulointerstitial phase(C), 71 H in excretory phase (degree of enhancement: 26 H) (D). They were no evidence of perinephric change such as strands of soft-tissue attenuation nor thickening of Gerota’s fascia. No evidence of vascular invasion.

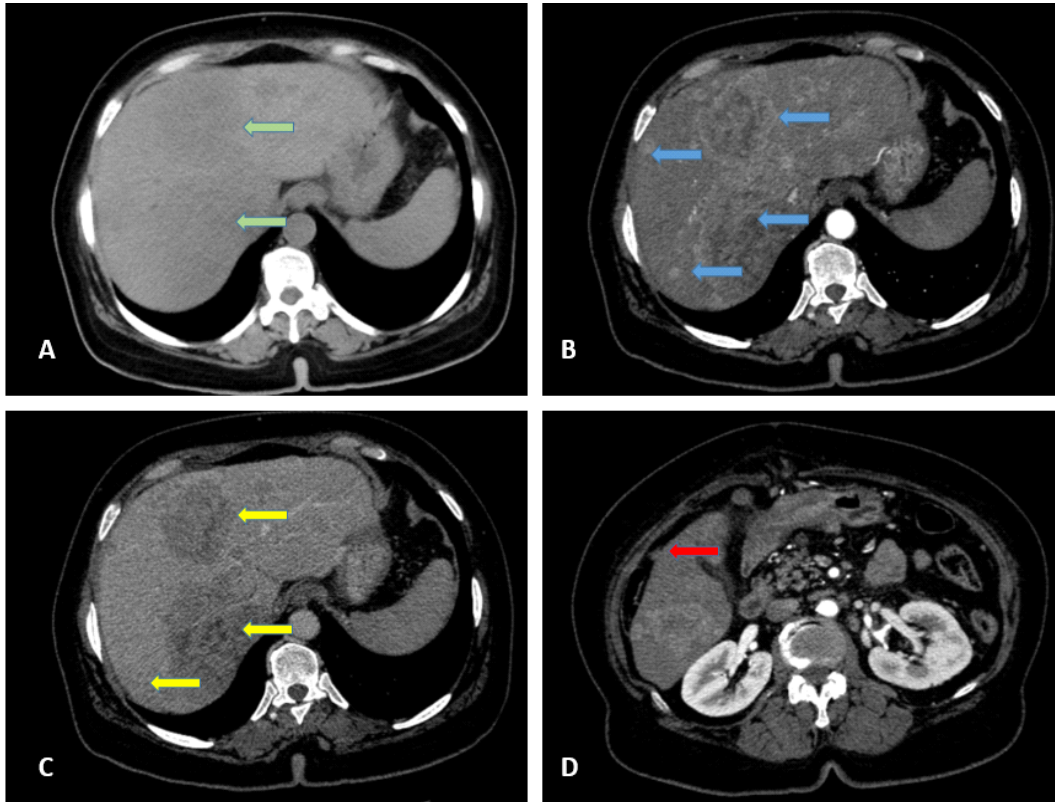


Fig. 2. Hepatomegaly with multiple hyper-enhancing metastases

A; axial image of an unenhanced CT scan, on contrast-enhanced CT scans of the arterial phase (B and C) and portal phase(C).

Rapid peripheral enhancement (more important than surrounding liver) following contrast in the arterial phase (blue arrows). Rapid and total washout in the portal venous phase (yellow arrows). Capsular invasion of liver metastasis (red arrow).

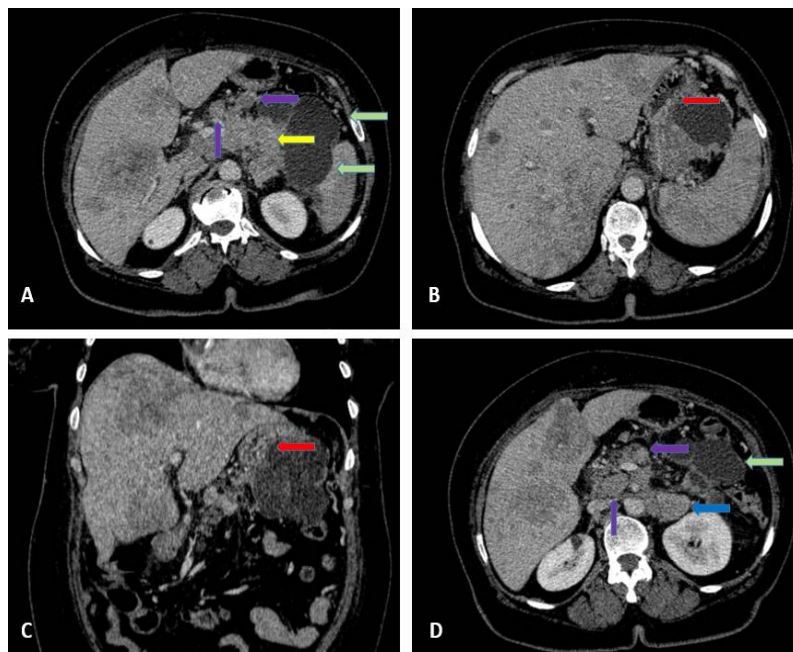


Fig. 3 Left adrenal metastasis, pancreatic metastasis with gastric invasion, multiple adenopathies

A, B, D axial, and C coronal images of enhanced abdominal CT scan. the well-encapsulated lesion, in the pancreatic tail, has solid and cystic components. Heterogeneous and diffuse enhancement of solid areas (yellow arrow), whereas cystic spaces present peripheral enhancement (green arrow). Gastric invasion of the pancreatic tumor (pink arrow). Multiples abdominal lymphadenopathy (purple arrows). Adrenal metastasis (blue arrow).

CT-guided liver biopsy showed hepatic metastasis of a carcinoma whose immunohistochemical profile was compatible with a renal cell carcinoma (strongly positive CK7, CD10 with focal positivity CK20).

Unfortunately, several days after her admission and before initiating any treatment, our patient presented with acute respiratory distress leading to her rapid death.

DISCUSSION

RCC comprises approximately 2%–3% of adult malignancies(1).

The National Inpatient Sample has published the most widely cited studies of RCC metastasis (2). In which, the most common sites of metastases were lung 45%, bone 30%, and lymph node 22%. Liver metastases were present in 20% of cases and adrenal metastases were noted in 9%. Brain metastases occur in approximately 9% of patients. Other rare locations were mentioned in literature such as the tongue (3), skin(4).

Our patient had stage 4 RCC with multiple metastases; liver metastasis which was proven by a liver biopsy, ipsilateral adrenal gland which is reported in several cases in the literature (5,6) pancreas, and even the stomach.

The liver and adrenal lesion have the same radiological characteristics as the left kidney RCC which reinforces the theory of metastasis.

In our case and this context of progressive RCC, the discovery of a pancreatic mass should suggest a pancreatic metastasis of RCC which is not often described in the literature (1%) (7) and is usually part of terminal diffuse carcinomatosis with widespread visceral and nodal involvement. Nonetheless, a synchronous pancreatic tumor should also raise suspicion especially when we have elevated Ca19-9 level and different radiological characteristics than the primary site. Nevertheless, Serum CA 19-9 is known to be sometimes elevated in patients with urothelial carcinoma and rarely elevated in those with renal cell carcinoma (8). Add to that, metastasis whether synchronous or metachronous, generally follows the structure of the primary tumor except for kidney cancer(9). Anyway, a pancreatic biopsy was the only option to be sure of the nature of the lesion.

For the gastric lesion, it is only based on radiologic findings with normal GI endoscopy. Indeed, gastric metastasis of RCC is extremely rare and grossly, a polypoid lesion more commonly than an ulcerated

lesion(10). In our case, it is probably due to contiguity invasion from the pancreas due to anatomical characteristics between these two organs. We think that the GI endoscopy wasn't conclusive, probably because it was performed two weeks before the CT scan which is very suggestive of a rapidly aggressive neoplasm.

CONCLUSION

Renal cancer is an aggressive tumor with a poor prognosis due to the frequency of distant multiple metastases at presentation. Histological and immunohistochemical examinations of metastasis are primordial.

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