LUPINE PUBLISHERS

ISSN: 2643-6760

Surgery & Case Studies: Open Access Journal

DOI: 10.32474/SCSOAJ.2019.03.000174

Case Report

Jejunal Metastasis from Clear Cell Renal Cell Carcinoma

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Received: November 29, 2019 **Published:** December 05, 2019

Abstract

Introduction: To present a case of a jejunal metastasis from a clear cell renal cell carcinoma (RCC) in an old-aged woman, with a history of radical left nephrectomy 20 years before the actual diagnosis.

Case report: 78 years old female presented to the emergency department, with a 7-day history of melena, diffuse abdominal complains and hyporexia. The only relevant history was a left radical nephrectomy because a RCC, which was treated only with surgery. After the medical evaluation and a normal upper gastrointestinal endoscopy an abdominal angiotomography was requested, demonstrating a bowel intussusception at the jejunum caused by an hypervascular mass, suspecting a metastasis from the RCC. The patient undergone a small bowel resection of the affected jejunum, with primary anastomosis, the histologic diagnosis of jejunal metastasis of clear cell RCC was made. After that the patient went on chemotherapy, finishing all the cycles without major complications. Actually the patient is on oncologic surveillance and refers clinically asymptomatic.

Conclusión: RCC accounts for 3% of the total of adult malignancies, the most common subtype is the clear cell carcinoma. The prevalence of metastasis in patients with RCC is approximately 33%, but less than 2% of this correspond to small intestine metastasis. Strict follow up is recommended because the recurrence of metastatic RCC is 11% after 10 years of the initial diagnosis. The radiological characteristics of the primary clear cell RCC depends on the modality of imaging used, but it will commonly demonstrate as a hypervascular exophytic mass. The metastatic lesions from the RCC tend to be similar of the primary tumor (hypervascular mass), when they appear on bone they show as lytic lesions. For the relapse of the clear cell RCC the treatment will from sole medical treatment to metastasectomy plus medical treatment.

Keywords: Kidney; carcinoma; metastasis; small intestine; clear cells

Introduction

The renal cell carcinoma (RCC) is among the 10 most common types of cancer in men and women, with an incidence of 64,000 cases per year in the United States. The clear cell subtype of RCC is the most common (70-88%) [1]. Approximately one third of the patients with RCC present with metastasis at the time of diagnosis [2], although the small intestine metastasis is a rare event, with reported prevalence that ranges from 0.7 to 14.6% and 1.7% [3,4], with only a few cases reported in the literature [3]. Here we report a case of jejunal metastasis from clear cell RCC in a 78 year old female with a personal history of left RCC treated with simple nephrectomy 20 years ago, presenting with the clinic of an upper gastrointestinal bleeding.

Case Report

A 78 years old female presented to the emergency department, with a 7-day history of melena plus diffuse abdominal complains and hyporexia. The only relevant history was a left radical nephrectomy because a RCC, which was treated only with surgery. After the medical evaluation the hematic biometry showed an hypochromic microcytic anemia, after a normal upper

gastrointestinal endoscopy an abdominal angiotomography was requested, demonstrating a bowel intussusception at the jejunum caused by an hypervascular mass (Figure 1), measuring 4.8 x 4.2 x 5.8 cm and the virtual rendering (VR) images demonstrates a rich vascular supply by the superior mesenteric arteries (Figure 2); no other relevant alterations where found. A metastasis from the RCC was suspected by imaging.

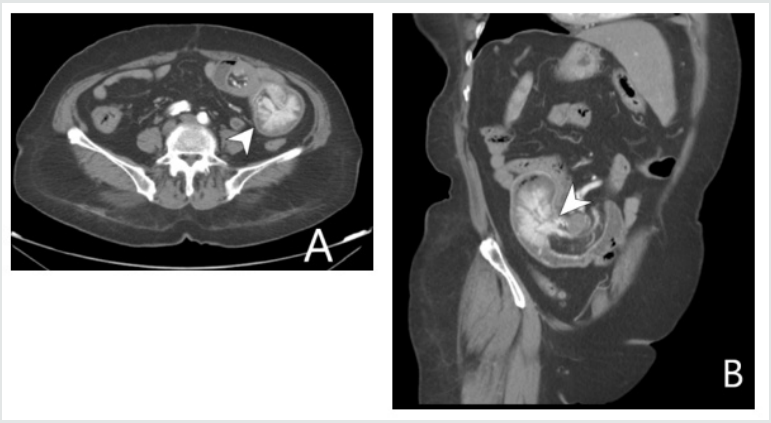

Figure 1: Abdominal Angiotomography demonstrating a jejunal intussusception originated by a lobulated hypervascular mass (arrowhead).

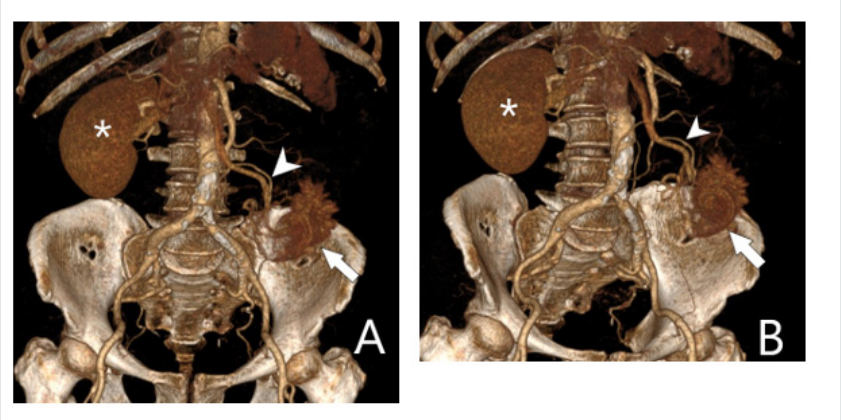

Figure 2: VR demonstrates the vascular supply (arrowhead) to the jejunal metastases (arrow); only the right kidney is seen (*).

The patient was prepared to surgery, she undergone a small bowel resection of the affected jejunum (30 cm), with primary anastomosis, the histologic diagnosis of jejunal metastasis of clear cell RCC was made by intraoperative frozen section and confirmed again by the final pathology. The patient had an excellent postoperative evolution. After that the patient went on chemotherapy, finishing all the cycles without major complications. Actually the patient is on oncologic surveillance and refers clinically asymptomatic.

Discussion

RCC accounts for 3% of the total of adult malignancies, arising from the proximal tubular epithelium of the kidney, with a male preponderance (M:F 2:1) [5]; the most common subtype of RCC is the clear cell carcinoma [1], the other common subtypes are papillary and chromophobe, accounting this three for more of 95% of the total [6]. The prevalence of metastasis in patients with RCC is at least of one third of the total [2], but less than 2% of this correspond to small intestine metastasis [4], which are rare, occurring only in 0.4-4% patients with known malignancies [7]. The recurrence of metastatic RCC is 11% after 10 years of the initial diagnosis, this is why a strict follow up is recommended after the radical nephrectomy [8].

The incidence of small bowel metastases may be explained by some factors that include, high change rate of the intestinal mucosal cells and rapid transit of intestinal content, which causes a shorter exposure to carcinogens [9]. The most common gastrointestinal tract metastases originate from breast cancer (8.2–33%), melanoma (10–26%), lung cancer (14%), and squamous cell carcinoma of the esophagus; although the metastasis to the small intestine constitute

only 2 % of the total of the gastrointestinal metastasis [10]. Spread in RCC is lymphatic, haematogenous, transcoelomic, or by direct invasion [8].

The radiological characteristics of the primary clear cell RCC depends on the modality of imaging used, on ultrasound it appears as an exophytic mass with abundant vascular flow in the color Doppler [11]; on computed tomography (CT) it appears as an heterogeneous mass, which is hypervascular (hyperdense) in the arterial phase, with central necrosis and a tumor thrombus extending into the renal and cava veins, CT is also useful because it can be used to staging [6]. Magnetic resonance also plays a role in the diagnosis of the RCC because the lack of use of ionizing radiation and when the patient has a diminished renal function [11]. The metastatic lesions from the RCC tend to be similar of the primary tumor (hypervascular mass), when they appear on bone they show as lytic lesions with soft tissue component [11]. For the relapse of the clear cell RCC the treatment will depend on the risk model to direct treatment and it will vary from medical treatment (chemotherapy, immunotherapy) to metastasectomy plus medical treatment [12].

Conclusion

The metastasis from RCC to the gastrointestinal tract constitutes a rare entity, but they need to be always considered in the presence of intestinal symptoms in a patient with prior history of RCC, even when it has passed more than 10 years after the initial treatment, because of the presence of the late metastases of the RCC which is a well described entity. The treatment for the relapse of the RCC consists of metastasectomy and chemotherapy.

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