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## Jejunum Metachronous Metastases from Kidney Carcinoma: Case Report

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### Abstract

Jejunum-ileal metachronous metastases from Renal-Cell Carcinoma (RCC) are rather rare and can develop even years after the first diagnosis. Surgical resection increases survival but it's not always feasible both before and after oncological treatment. We present the case of a 42yo man who underwent left nephrectomy for RCC. At the diagnosis, imaging scans showed pulmonary metastases, so he was treated with adjuvant radiochemotherapy after surgery. Nevertheless, new bone lesions were developed, so the patient underwent more chemotherapy. During follow-up tests, severe anemia was found without any symptoms. The patient underwent CT-scan and endoscopic investigation which showed a jejunal metastasis, that was surgically removed. Today the patient is still alive and bone lesions are unchanged. In conclusion, metachronous metastases from RCC can present with non-specific symptoms, such as chronic bleeding, and they can involve a lot of organs; therefore, further evaluations may be considered but the role of chemotherapy is crucial.

**Keywords:** Jejunum metastasis; Renal-cell carcinoma metastases

### Background

Renal malignancies represent 3% of malignant tumors in the adult worldwide [1] and in most of the cases (85%) it comes to renal-cell carcinoma. At the diagnosis, almost 20-30% of the patients show synchronous metastases and in 40-50% of the cases new metastases can be diagnosed during the follow-up [2,3,4]. The recurrence rate after radical nephrectomy (20-30% of the cases) has a peak between 3 and 5 years after surgery [5]. Hematogenous spread of the cancer represents the most common case, but it's also described lymphatic or contiguous spread. The most common sites of cancer metastases are lung (29-54%), liver (8-30%), bones (16-31%), brain (2-10%) and the adrenal gland [6]. However, there are other atypical sites of kidney carcinoma metastases: thyroid, breast, bladder, epididymis, pancreas, gallbladder and small intestine. The involvement of the small intestine is not very common and nowadays in literature there is no agreement about its real incidence, with reported rates between 0,7 and 14,6% [7]. The onset of metachronous secondary tumors is described even after 20 years by primary diagnosis [8], with a mean of 7,9±4,7 years between surgery and the secondary tumor discovery [9]. Moreover males seem to be more affected (3:1) and the risk to develop RCC metastases seems to increase with age [10].

### Case presentation

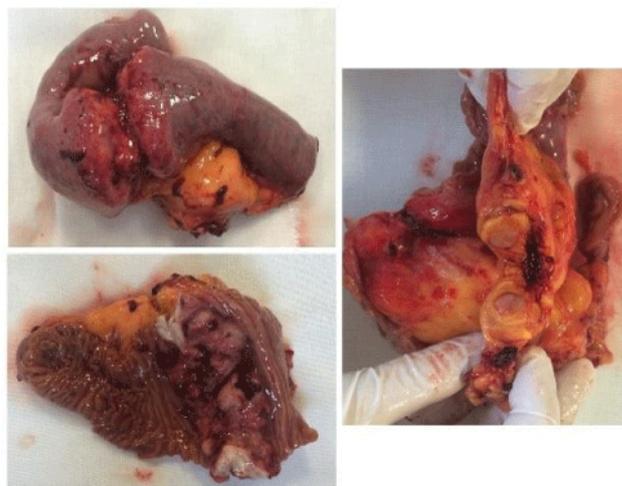
This case report is about a 42-year-old man, who came to our

attention almost 4 years after he underwent a radical left nephrectomy with lymphadenectomy because of RCC pT3a N2 M1 (sarcomatoid histotype). After surgery, he underwent chemotherapy (Sutent) because of the presence of suspected lung lesions, too small to be certainly characterized. During the follow-up, after the evidence of bone metastases in the right humerus, on D10-D11-L3-L5 and in the left sacral ala, the patient underwent radiotherapy (16Gy on the humerus, 30Gy on the vertebral column, and 30Gy on the sacral zone), and chemotherapy with Zoledronic Acid and Axitinib (from February 2012 to May 2015). The clinical and instrumental investigations during 39 months of therapy were stable; there wasn't a further disease progression. In July 2015 the patient performed routine blood tests that showed severe anemia (Hb 6,8g/dL). He didn't report melena, hematemesis, or other symptoms suggesting an active gastro-intestinal bleeding. He first underwent an EGD that revealed chronic gastritis (*Helicobacter pylori* test was negative). We decided the patient to undergo further diagnostic tests: a contrast thorax-abdomen CT revealed a wall thickening of a jejunal loop, 20cm after Treitz ligament, with a little lumen reduction but no signs of complete obstruction (Figure 1). This evidence was confirmed by a Double-Balloon Enteroscopy (DBE) that showed a vegetant, circumferential, ulcerated, spontaneously bleeding lesion 25cm distal to the ligament, determining a substenosis of the lumen. A biopsy showed fragments of RCC (sarcomatoid histotype).

On the basis of the severe chronic anemia and the histological findings, after a multidisciplinary debate among the oncologists, we decided to perform a surgical resection of the jejunal metastases. After blood transfusion because



**Figure 1:** CT scan of the abdomen: there is a small thickening in the wall (arrow), localized by the radiologists in the second or third jejunal loop.



**Figure 2:** The second and third jejunal loop were resected (up left) and then dissected to identify the circumferential lesion (down left) and the solid pattern in the loop wall (right).

of Hb levels at the admission of 7,8 g/dL, the patient was preoperatively evaluated according to our centre protocols (blood tests with nutrition index [Albumines 3,6 g/dL], electrocardiogram, chest X-ray, anesthesiology examination) and he underwent an exploratory laparotomy. A resection of the second and third jejunal loop (almost 21cm length), with lymphadenectomy of the jejunal mesentery, and a side-to-side isoperistaltic entero-entero anastomosis were performed. The jejunal wall presented a stenosing, circumferential, 6cm long lesion on the mucosa, 8cm from the proximal edge (Figure 2). The histological examination revealed an ulcerated, mostly necrotic, transmural RCC (Fuhrman Grade 4) with exudative perivisceritis; regional lymph nodes (0/7) and resection margins were clear (TNM 7<sup>th</sup> Ed: pM1). The intra- and post-operative course was regular and uneventful, following ERAS protocol. The patient was discharged six days after surgery. The stitches were ambulatory removed. The patient continued his regular oncologic follow-up with disease stability and he's still alive 4 years after our surgical treatment;

## Discussion

Metastatic involvement of the small bowel is rather rare, even if the data about the real incidence remain uncertain: some studies register an incidence rate of 2-4% [11;12] while other studies based on autopsy data describe incidence rates of 14% [7;13]. Solitary small bowel metastases from RCC are not very common: nowadays in literature there are 60 studies on this topic, but just 9 of them regard isolated secondary tumors from RCC. The jejunum and ileum are involved

more often than duodenum [11]; duodenal metastases are most frequently located in the periampullary region [10]. As we already reported, secondary small bowel tumors can develop even after 20 years from the surgery. In our case the metastases has been diagnosed 4 years after nephrectomy and multiple bone metastases had already developed. Jejunal secondary tumors can be asymptomatic, but in some cases the patient can show acute bleeding [12;14], with anemia and/or hemodynamic instability, or aspecific symptoms, such as nausea, vomiting, weight loss. Cases of small bowel intussusception [16-18] or obstruction [10-19] have been reported in literature; when the tumor affects the ampulla of Vater, the patient may present jaundice. In our case the severe anemia was the only sign that the tumor spread to the small bowel, without other warning symptoms. The evidence of metastatic tumor after surgery in patients who undergone radical nephrectomy for RCC is considered a negative prognostic factor (median survival of 10 months) [2]. Diagnostic investigations, in this kind of tumor, should be determined by clinical presentation. Patients with signs of bleeding can be examined with EGD or colonoscopy, even if the diagnosis may not be found, due to the inability to study the GI tract entirely. Enteroscopy is useful to identify small bowel lesions: it can be performed by endoscopy (DBE) or surgically. Video capsule endoscopy doesn't always allow a diagnosis, because it doesn't permit to collect a tissue sample of the lesion. Barium study and CT scan are the imaging studies commonly adopted to diagnose secondary small bowel tumors, but these techniques, in some cases, doesn't seem to be enough [20]. Even biochemical markers of small bowel metastases have been studied. Stanniocalcin 2 blood levels have been used to stratify patients at risk, although data are still incomplete [21]. In this case the endoscopic investigations didn't show anything, while the CT scans enabled us to suspect the jejunum-ileal involvement. In spite of the available instrumental investigations, and considering the bleeding the main sign of presentation, sometimes urgent surgery has to be performed, because it can stop the haemorrhage when an endoscopy can't be curative. Leslie et al. [22] report a significant prognosis improvement in patients who undergo surgical resection of the solitary metastasis, with a 5-years survival that increases from 35% to 50% and a 5 years disease-free survival from 5% up to 23%; these rates have been confirmed by other studies [23;24]. Surgical resection of solitary metastasis is recommended by NCCN guidelines, while the treatment of multiple secondary tumors

has to be discussed case by case. Considering these data and the survival rate of these patients, the choice of palliative or less aggressive approaches, except for terminally ill patients, should be considered the last option, while surgery could be the best option wherever safely possible.

## Conclusions

Jejunal or ileal metastases from primary tumors are not very frequent. These type of tumors are insidious, since the first sign is acute bleeding, so the patient may require urgent surgery. Considering that metachronous metastases from RCC can develop even after long time (20 years), it can be useful to plan an oncologic follow-up that lasts more compared to other tumors (primary or secondary). On the basis of the few and uncertain available data, it is recommended a radiological investigation (despite the limited and uncertain role of the CT in these cases) and/or endoscopy (DBE or video capsule) at the first signs of malignant recurrence, including non-specific or GI-related symptoms such as sudden anemia onset. Currently, surgical treatment of RCC metastases is the most valid options because, even if secondary tumors appearance is a negative prognostic factor, it allows local radicality, mostly for small and medium size lesions and it can significantly improve the survival rate, especially combined with oncological treatment.

## References

1. Siegel R, Ma J, Zou Z, Jemal A. Cancer Statistics 2014. *Ca Cancer J Clin.* 2014; 64: 9-29.
2. Wang H, Wang J, Li G. Ampullary tumor caused by metastatic renal cell carcinoma and literature review. *Urol J.* 2014; 11: 1504-1507.
3. Miyao N, Naito S, Ozono S. Japanese Society of Renal Cancer. Late recurrence of renal cell carcinoma: retrospective and collaborative study of the Japanese Society of Renal Cancer. *Urology.* 2011; 77: 379-384.
4. Chung PH, Srinivasan R, Linehan WM, Pinto PA, 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: 476-481.
5. Chin AI, Lam JS, Figlin RA, Belldgrun AS. Surveillance Strategies for Renal Cell Carcinoma Patients Following Nephrectomy. *Rev Urol.* 2006; 8: 1-7.
6. Brian S, Allan JP. Surveillance for metastatic disease after nephrectomy for renal cell carcinoma. *Uptodate, Topic 2969* Version. 17.0
7. Vazquez C, Berrueta J, De Simone F. Small-intestinal-bleeding due to metastatic renal cell cancer. *Endoscopy.* 2011; 43: E13.

8. Sridhar SS, Haider MA, Guindi M, Moore MJ. A case of small bowel obstruction due to intraluminal metastases from metastatic renal cell cancer. *Oncologist*. 2008; 13: 95-97.
9. Rustagi T, Rangasamy P, Versland M. Duodenal bleeding from metastatic renal cell carcinoma. *Case Rep. Gastroenterol*. 2011; 5: 249-257.
10. Pavlakis GM, Sakoragas GH, Anagnostopoulos GK. Intestinal metastases from renal cell carcinoma: a rare cause of intestinal obstruction and bleeding. *Mt Sinai J Med*. 2004; 71:127-130.
11. Graham AP. Malignancy of the kidney, survey of 195 cases. *J Urol*. 1947; 58: 10-21.
12. Farthouat P, Faucompret S, Louis C. Gastrointestinal hemorrhage due to jejunal metastases from kidney cancer. *Ann Chir*. 2000; 125: 797-798.
13. Saitoh H. Distant metastasis of renal adenocarcinoma. *Cancer*. 1981; 48: 1487-1491.
14. Sadler GJ, Anderson MR, Moss MS, Wilson PG. Metastases from renal cell carcinoma presenting as gastrointestinal bleeding: two case reports and a reviews of the literature. *BMC Gastroenterol*; 2007; 7: 4.
15. Aissa A, Kherifech M, Alouini R, Hajji H, Stita W. Multiple intussusceptions revealing metastases from renal carcinoma to the small intestine. *J ViscSurg*. 2012; 149: e223-4.
16. Venugopal A, Mahesh S, Lekha V. Intussusception due to ileal metastases from renal cell carcinoma. *Tropical Gastroenterol*. 2006; 28: 35-36.
17. Haynes IG, Wolverson RL, O'Brien JM. Small bowel intussusception due to metastatic renal carcinoma. *Br J Urol*. 2008; 58: 460.
18. Johnson WA, Straus FH. Intussusception of the small intestine produced by metastatic renal carcinoma. *Surgery*. 1952; 32: 991-996.
19. Ibrahim I, Brendon Lange N, Murty M. Solitary jejunal metastasis from renal cell carcinoma presenting as small bowel obstruction 19 years after nephrectomy. *BMJ Case Rep*. 2011.
20. Takeda T, Shibuya T, Osada T. Metastatic renal cell carcinoma diagnosed by capsule endoscopy and double balloon endoscopy. *Med Sci Monit*. 2011; 17: CS15-7.
21. Meyer HA, Tolle A, Jung M. Identification of stanniocalcin 2 as prognostic marker in renal cell carcinoma. *Eur Urol*. 2009; 55: 669-678.
22. Leslie KA, Tsao JI, Rossi RL, Braasch JW. Metastatic renal cell carcinoma to ampulla of Vater: an unusual lesion amenable to surgical resection. *Surgery*. 1996; 119: 349-351.
23. Freed SZ. Nephrectomy for renal cell carcinoma with metastases. *Urology*. 1977; 9: 613-616.
24. Tolia BM, Withmore WF. Solitary metastasis from renal cell carcinoma. *J Urol*. 1975; 114: 836-838.