CASE REPORT

An intussuscepting unusual tumour of small bowel: a metastasis from renal cell carcinoma ten years after the primary

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Introduction

Renal cell carcinoma (RCC) is the third commonest urological malignancy. It is known to metastasize to any organ in the body. While its common sites to metastasize include lung, liver, bone and brain, small bowel involvement is very rare. We hereby report a case of a metastatic deposit in small bowel causing intussusception and chronic blood loss ten years after resection of the primary. There are less than ten such cases reported in the literature according to the authors' knowledge.

Case presentation

A 77 year old woman was investigated for symptomatic hypochromic microcytic anaemia. She had a laparoscopic radical nephrectomy in 2005 for localized (T2aN0M0) renal cell carcinoma of her right kidney of which the grade was 4 (Fuhrman). She had been free of recurrent disease in the interim.

On presentation, she had noticed some weight loss but had no symptom to point towards a focus of chronic blood loss. Her examination was unremarkable. Both gastroscopy and colonscopy were normal but stools for occult blood were positive. CT scan of abdomen revealed an intussusception in the left iliac fossa although a tumour was not clearly identified (Figure. 1).

She was discussed at the colorectal multidisciplinary meeting and was scheduled for an elective laparotomy. At surgery she had a tumour of the mid small bowel with intussusception and associated multiple lymph nodes in the mesentery. A segmental resection with removal of mesenteric lymph nodes was done with end to end anastomosis. Her recovery was uneventful.

Macroscopic examination revealed a 40 x 40 mm polypoidal tumour in the lumen of small bowel acting as a lead point for

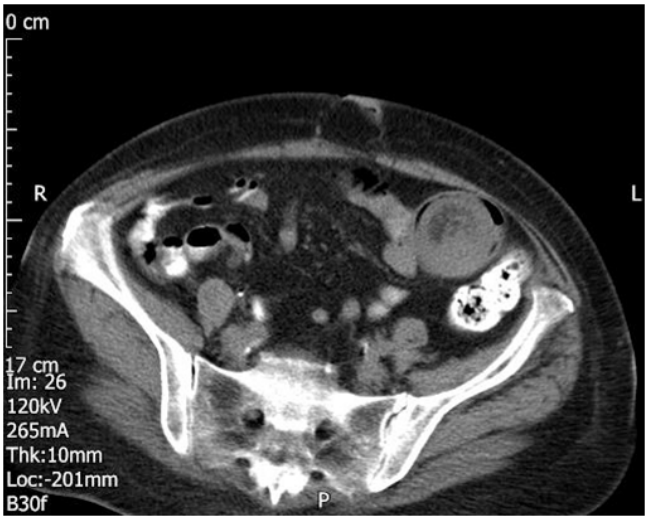

Figure 1. CT scan showing the intussuception in the left iliac fossa

intussusception.

Microscopic examination revealed tumour cells with extensive hemosiderin deposition, varying from acinar pattern to more solid areas morphologically not typical of an intestinal primary.

Immunohistochemistry confirmed that it was a metastatic deposit from RCC which was invading the submucosa but not beyond. Resection margins and all mesenteric lymph nodes were clear. To this date she has had a disease free period of one year including a normal CT scan at one year.

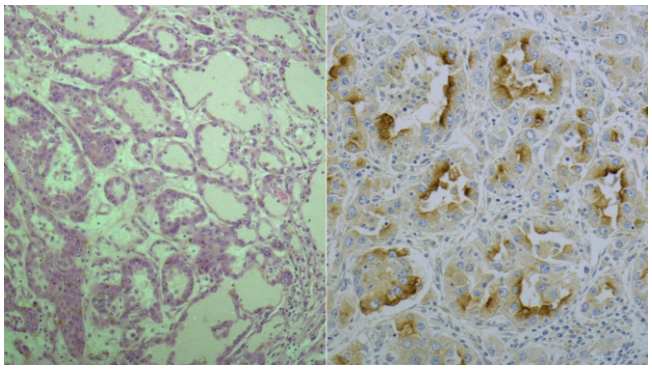

Figure 2. H and E Staining at 40 x (Left) and Immunohistochemical stain(Carbonic anhydrase IX) specific for RCC at 40x (Right)

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Discussion

Small bowel metastases from RCC are rare and are usually solitary [1-3]. The deposits may on occasion may be multiple [4]. The interval between primary treatment and diagnosis of small bowel metastases has been reported up to 20 years [3-5].

Most such cases have been presented with small bowel obstruction due to intussusception [1-3]. Frank or occult gastrointestinal bleeding has been seen in some cases [4].

CT scan has been the diagnostic tool in this case. This can potentially be negative especially if the lesions are small and there is no intussusception at the point of imaging. Capsular endoscopy has been useful in some of the cases described in literature in identifying subtle metastatic polyps of RCC [5]. Intra-operative endoscopic polypectomy has been used to excise small polyps in one case [4].

As in this case most patients in literature have been managed with a surgical resection of the affected segment of bowel, in some cases undertaken laparoscopically. Although there is enough evidence on efficacy of immune therapy and targeted therapy in metastatic renal cell cancer, evidence is scarce on its use following metastatectomy of such lesions as in this case.

Conclusion

RCC spread is via the hematogenous route and may therefore involve many sites including the small bowel. It should be suspected when a patient presents with occult blood loss with a history of RCC irrespective of the timing of primary. Metastatectomy of such deposits helps to palliate symptoms.

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Learning Points:

- Metastasis of renal cell carcinoma to small bowel is a very rare disease entity.
- Surgeons, physicians and radiologists need to be aware of this rare disease to accurately diagnose these patients.
- There is no management guidelines found and treatment is based on expertise and the scarce experience.