Synchronous Jejunal Metastasis Presenting as Intussusception in a Case of Advanced RCC: a Rare Presentation

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Abstract Renal cell carcinoma (RCC) may metastasize to almost any organ, but metastasis to the small bowel is very rare. Factors responsible for a resistant behavior of small bowel wall are still not clear. Small bowel metastasis from RCC may cause obstruction, bleeding, and perforation. RCC metastasis to the small bowel presenting as intussusception is extremely rare. Only 20 cases of small bowel intussusceptions caused by metastatic RCC have been reported worldwide. Here, we are reporting this rare case of RCC with simultaneous solitary metastasis in jejunum which presented as intussusceptions and which was treated with simultaneous radical nephrectomy, jejunal resection, and anastomosis.

Keywords Renal cell carcinoma · Synchronous metastasis · Small intestine · Intussusception

Introduction

Renal cell carcinoma (RCC) consists of a variety of kidney cancer comprising several histologically, biologically, and clinically distinct entities. One third of all newly diagnosed RCC patients present with synchronous metastatic disease [1]. In most of these cases, they are too advanced for surgical intervention. Additional 20–40 % localized disease at diagnosis will eventually develop metastasis [1]. RCC may metastasize to almost any organ, but metastasis to the small bowel is rare, although the etiology is not very clear. Small bowel metastasis from RCC may present as intestinal obstruction, bleeding, or perforation. RCC metastasis to the small bowel is unlikely to be a direct cause of intussusceptions. Only 20 cases

of intussusceptions caused by small intestinal metastasis of RCC have been reported worldwide. Here, we present a very rare case of RCC with simultaneous solitary metastasis in the jejunum which presented as intussusception.

Case Profile

A 57-year-old male patient presented to us with dull aching left flank pain for 2 months and progressively increasing vomiting for 20 days. He had no urinary complaints. General and abdominal examination was unremarkable. His routine blood investigations, renal function tests, and liver function tests were normal. X-ray chest was also normal. Abdominal ultrasonography revealed 11.2×7.1 cm complex SOL arising from an inferior pole of the left kidney. The abdominal CT scan revealed an enhancing mass (10.5×8.5×7.9 cm) in the left kidney. It also showed an enhanced mass with the “target” sign, suggesting enteric intussusceptions (Fig. 1). Color Doppler of the left renal vein showed hypoechoic soft intraluminal echo, suggesting an extension of tumor thrombus. IVC was free. Via the extended left subcostal incision, left radical nephrectomy was performed. On exploration, jejunal intussusception was found at 60 cm distal to the ligament of Treitz. It was released using a standard squeezing technique. On palpation, a mass within the jejunum could be felt. Segmental resection and end-to-end anastomosis were performed. Resected segment of the jejunum showed a polypoid lesion, 4×2.5×2 cm. Histopathology of the kidney tumor showed renal cell carcinoma (clear cell type)—Fuhrman’s nuclear grades II–III. The polypoid lesion, at the tip of the intussusceptum, showed metastatic renal cell carcinoma (clear cell type) (Fig. 2). Postoperative period was uneventful. Patient was discharged on day 10 with the advice to attend oncology department for adjuvant therapy. Patient was followed with CECT scan and liver function, blood urea, and serum creatinine tests, and all these parameters were normal.

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Fig. 1 Abdominal CT scan showing an enhanced mass in the left kidney and an enhanced mass with a target sign, suggesting an enteric intussusception

He was advised to take 50 mg sunitinib tablet daily from oncology department. Presently, patient is having no recurrence and normal bowel habits with regular follow-up from urology and oncology department.

Fig. 2 Histopathology of an intestine showing normal intestine and metastatic RCC

Discussion

RCC consists of kidney cancer with histologically, biologically, and clinically distinct entities. Because of its multiple presenting signs and symptoms, it has been called the “internist’s” tumor. Among all patients, 25–40 % are asymptomatic with the diagnosis made from radiological study obtained for other reasons. Approximately, one third of newly diagnosed RCC patients present with synchronous metastatic disease [1]. In most of these cases, they are too advanced for surgical intervention. Additional 20–40 % localized disease at diagnosis will eventually develop metastasis [1]. RCC may metastasize to almost any organ, notably the lung, lymph nodes, liver, bone, adrenal gland, and opposite kidney. Metastasis to the small bowel is rare. Small bowel metastasis has been regarded as one of the bad prognostic factors in a number of studies [2, 3].

Bowel metastasis is an extremely rare phenomenon representing only 10 % of malignant small bowel tumors. Common cancers metastasizing to the small bowel are from the lung, head and neck, breast, esophagus, and malignant melanomas [4].

Records of the Mayo Clinic from 1905 to 1954 showed only three cases of small intestinal metastasis from RCC [5]. Another report by Smith et al. at Mayo Clinic showed only one case from 1965 to 1975. Most of patients with synchronous metastatic RCC in the small intestine also have metastases in other organs and are mostly too advanced for resection. Most resectable small gut metastatic lesions in the world literature are metachronous lesion. Interval of initial nephrectomy to symptomatic intestinal metastases varies from 3 months to 20 years [5, 6]. Intestinal metastases occur equally in the jejunum and ileum.

Metastasis to the small bowel usually presents with obstruction and rarely with hemorrhage, anemia, or perforation [7]. RCC metastasis to small bowel rarely causes intussusceptions. Twenty cases of surgically treatable intussusception caused by small intestinal metastasis of RCC have been reported [8]. All these reported cases are having metachronous lesions.

To the best of our knowledge, this is the first reported case of metastases from RCC that presented as synchronous intraluminal polypoid tumors leading to jejunal intussusception which was simultaneously resected along with radical nephrectomy.

Conclusion

Unexplained repeated vomiting in a patient with renal cell carcinoma may be due to multiple causes, and one of the very rare causes can be small bowel metastasis. Proper history is invaluable in this regard. High degree of suspicion is an important factor.

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