INTRODUCTION

Metastatic renal cell carcinoma (MRCC) to the small bowel is a rare cause of massive lower gastrointestinal bleeding (LGIB). It can present with different gastrointestinal complications, such as obstruction, intussusception, occult bleeding, and perforation. It can be a potentially fatal cause of massive lower gastrointestinal bleeding (LGIB). A high index of clinical suspicion with complementary investigative tools are critical for timely diagnosis and intervention in patients with MRCC related massive LGIB.

We present a rare case of massive LGIB, where the source of bleeding was MRCC in the jejunum. Resection of the mass along with the affected segment of intestine, with an end-to-end anastomosis was performed.

Our objective in reporting this case is to increase awareness among clinicians for this rare source of massive LGIB. The case is discussed in the context of other cases in the literature.

CASE REPORT

A 51-year-old male patient presented to the emergency department (ED) with a history of hematochezia, coffee ground vomiting for 24 hours before presentation. He had no history of loss of weight or appetite. He had undergone left kidney nephrectomy for renal cell carcinoma (RCC) 6 years ago. Physical examination with complementary investigative tools revealed a reducible incisional hernia over the nephrectomy scar. Laboratory values were as follows: White blood cell count 6.3 x 10^9/L, hemoglobin 7 g/dl (normal value [NV]: 14-18 g/dl), urea 6.8 mmol/L (NV: 3.6-7.1 mmol/L), creatinine 123 mmol/L (NV: <133 mmol/L), and normal coagulation profile. He then underwent upper gastrointestinal endoscopy, which showed coffee ground material, and Foley’s catheter also was inserted with drainage of minimum amount of concentrated urine. A blood sample was drawn and sent for complete blood count, urea, creatinine, electrolytes, and coagulation profile. Laboratory values were as follows: White blood cell count 6.3 x 10^9/L, hemoglobin 7 g/dl (normal value [NV]: 14-18 g/dl), urea 6.8 mmol/L (NV: 3.6-7.1 mmol/L), creatinine 123 mmol/L (NV: <133 mmol/L), and normal coagulation profile. He then underwent upper gastrointestinal endoscopy, which was normal, followed by colonoscopy, which revealed large amount of clotted and fresh blood in the whole colon with blood coming from the ileocecal valve. Abdominal CT scan showed jejunal mass and multiple hepatic lesions suggestive of metastasis. After the infusion of 2 liters of Ringer lactate and 4 units of packed red blood cells, he stabilized hemodynamically and was transported to the operating theater where he underwent exploratory laparotomy. Exploration of the abdomen revealed jejunal mass 20 cm distal to the duodenojejunal junction with multiple enlarged mesenteric lymph nodes, and multiple liver lesions.

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ABSTRACT

Metastatic renal cell carcinoma (MRCC) is a rare cause of massive lower gastrointestinal bleeding (LGIB). We report a 51-year-old man who underwent left nephrectomy for renal cell carcinoma (RCC) 6 years ago, presenting with massive LGIB. Preoperative abdominal computed tomography (CT) revealed small bowel mass. Exploration of the abdomen revealed jejunal mass. Resection of the mass along with the jejunal segment with end-to-end anastomosis was performed. Histopathology of the jejunal mass confirmed MRCC. MRCC should be expected as a source of massive LGIB in a patient with history of RCC. Surgical intervention should not be delayed in a hemodynamically unstable patient and persistent bleeding.

Metachronous metastatic renal cell carcinoma to the jejunum presenting with massive lower gastrointestinal bleeding

Lesions. Resection of the mass along with the jejunal segment with end-to-end anastomosis was performed.

Biopsy was taken from the liver lesions. Postoperatively, he was transferred to the intensive care unit, where he remained in stable hemodynamic condition and 2 days later he was transferred to the general surgical ward with uneventful recovery. He was discharged from the hospital on 7th postoperative day for follow-up in the outpatient clinic of general surgery and oncology. Histopathology of the jejunal mass as well as the liver lesions confirmed the MRCC to the jejunum and liver.

DISCUSSION

Renal cell carcinoma (RCC) is a common urological malignancy which may develop metachronous metastasis in up to 50% of patients who have submitted to presumably curative radical nephrectomy, mainly into the liver, lung, bone, adrenals and brain. Metastasis to the gastrointestinal tract (excluding the liver) is very rare, and occurrences of MRCC deposits in the small bowel are exceedingly rare phenomena, with only 7% of all metastatic lesions to the small bowel being accounted for RCC. Our patient developed metachronous metastasis in the brain, liver and small bowel. Patients with MRCC to the gastrointestinal tract can present with upper gastrointestinal bleeding, melena, fatigue, anemia and early satiety. Metastasis to the small bowel can cause obstruction, perforation, intussusception and bleeding. This patient presented with massive LGIB from MRCC in the jejunum. Small bowel tumors represent less than 4% of all cases of LGIB, with the MRCC to the small bowel being very rare source. Bleeding from MRCC in the small bowel can be obscure, overt non-massive, or overt massive. The optimal diagnostic tools and treatment approach for patients with massive LGIB remain controversial. Adequate resuscitation and hemodynamic stabilization, nasogastric tube and Foley’s catheter insertion, followed by history taking and physical examination is the initial standard approach to such patients. The controversy is related to the next step in the management of such critical patients. Colonoscopy, mesenteric angiography, and radionuclide scintigraphy are the three primary investigative modalities. In the situation of massive LGIB, the visualization and intervention by colonoscopy might be difficult. Mesenteric angiography is well accepted tool in the investigation of patients with massive LGIB. Helical CT angiography can detect an unusual source of LGIB, which is usually available in ED. Although angiography was not performed in this patient due to the lack of facilities, helical CT scan was carried out and showed small bowel mass as a potential source of bleeding. Double balloon endoscopy and capsule endoscopy are helpful tools in detecting MRCC in the small bowel, particularly in hemodynamically stable patients. Intraoperative endoscopy has been used successfully in localization and therapeutic intervention in MRCC. The importance of early surgical consultation in the care of patients with LGIB cannot be overemphasized. Surgical intervention is needed in LGIB when despite intensive resuscitation, hemodynamic instability persists, recurrent bleeding, or blood transfusion requirement of more than 6 units. Resection of the tumor mass along with the affected bowel is the recommended surgical procedure. This patient underwent exploratory laparotomy with presumed diagnosis of bleeding small bowel tumour. Abdominal exploration revealed jejunal mass 20 cm distal to the duodenojejunal junction with multiple enlarged mesenteric lymph nodes, and multiple liver lesions. The affected bowel was resected with the tumor and end-to-end bowel anastomosis was established. The final histopathology of the jejunal mass and liver lesions revealed metastasis from RCC.

In conclusion, MRCC should be expected as a source of massive LGIB in a patient with history of RCC. Abdominal helical CT scan must be included in the evaluation of hemodynamically stable patients. Surgical intervention should not be delayed in a hemodynamically unstable patient and evidence of persistent gastrointestinal bleeding.

REFERENCES


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