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Solitary Colon Metastasis from Renal Cell Carcinoma

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Abstract

Background: The most common renal malignancy in adults is renal cell carcinoma (RCC). Metastatic disease is relatively common and at the time of diagnosis may be present in upto 25% of patients. Frequent sites of metastasis are lung, bone, brain, liver and adrenal glands. The risk of recurrence even after curative resection is a 30-40%. The gastrointestinal tract, particularly the colon, represents a very uncommon site of late metastatic disease. *Case Report*: We present a case of a 40-year-old-male with solitary colonic renal cell carcinoma metastasis. Patient underwent laparoscopic nephrectomy in 2016 in view of renal mass and was followed by chemotherapy for clear cell carcinoma. He had history of water diarrhoea, abdominal pain, tenesmus and haematochezia. Investigation revealed circumferential thickening involving the proximal and mid segment of sigmoid colon, stricture around 30 cm from the anal verge and histopathology suggestive of deposits of renal cell carcinoma. FDG PET scan was suggestive of enhancing necrotic lesion in the wall of sigmoid colon with multiple deposits noted in adjacent mesentery. On diagnostic laparoscopy focal lesion was noted in the sigmoid colon with no evidence of omental, peritoneal and any other metastasis. Resection and anastomosis of lesion was done. Histopathology was clear cell carcinoma with clear margins. *Conclusion*: The colon is a potential, though uncommon, site for solitary metastasis from RCC. Oncologic resection with negative margins may result in long-term survival in patients with isolated metastatic disease.

Keywords: Colonic Diseases, Metastasis, Renal Cell Carcinoma, Sigmoid Colon, Solitary Kidney.

Introduction

Renal cell carcinoma (RCC) is the most common renal malignancy and represents approximately 3% of malignant tumors in adults. The most frequent histological type is clear cell carcinoma. In patients with localized disease surgical resection remains the primary curative treatment. Nearly 40% of patients will develop metastasis even after nephrectomy. The most common sites of metastasis are the lung, liver, bone, and brain [1], whereas metastasis to the gastrointestinal tract, specifically the colon, is extremely rare. We report a case of a patient who presented with a late recurrence of RCC in the sigmoid colon and was treated successfully with colonic resection.

Case Report

The patient is a 40-year-old male who underwent laparoscopic nephrectomy for left renal mass in 2016. The histopathology was suggestive of clear cell carcinoma of the left kidney grade T2a. Patient was started on tab sunitinib 50 mg for 1 year. He subsequently presented in out-patient department with complaints of watery diarrhoea, abdominal pain, tenesmus, haematochezia. Patient was vitally stable maintaining normal pulse, blood pressure, temperature and oxygen saturation. Per abdomen was soft, non-tender, but distended and per rectum, anal tone was normal. X-ray and ultrasound didn't show any significant findings. Computed tomography scan showed circumferential

thickening involving proximal and mid segment of sigmoid colon **[Fig.1]**. The patient underwent colonoscopy, which revealed a tight stricture with surrounding edema at 30 cms from anal verge. Scope could not be negotiated beyond the stricture. Multiple biopsies were taken. Histopathology report of which was suggestive of deposits of clear cell renal cell carcinoma. FDG PET scan was suggestive of FDG avid heterogeneously enhancing necrotic lesion in the wall of sigmoid colon measuring 2.7×3.3 cm with multiple deposits noted in adjacent mesentery.

Patient was posted for elective diagnostic laparoscopy. There was focal lesion at sigmoid colon without any liver, omental and peritoneal deposits. Hence decision was taken to go ahead with sigmoid resection and anastomosis **[Fig.2]**. Post-operative recovery was uneventful. Histopathology showed deposit from RCC with margins free from tumor **[Fig.3]**.

Discussion

We reported a case of metastatic RCC to sigmoid colon. The patient had symptoms associated with colonic lesions, like watery diarrhoea, tenesmus, haematochezia. On colonoscopy and FDG PET/CT images, hyper-metabolic activity in sigmoid colon was noted. Histopathology confirmed metastasis from RCC. Few cases of metastatic RCC to rectum or colon have been reported. One of them, presented with haematochezia after receiving a left nephrectomy for RCC and was found to have a sub-mucosal mass with ulcerated area in rectum by colonoscopy and ultrasound [1]. The other patient with metastatic RCC to rectum directly received surgery, without any endoscopy or imaging [2].

The mechanism of metastasis of RCC is still unclear, but the blood supply and thin tissue of rectum may be not appropriate for the development of RCC, compared with common metastatic sites such as lungs. The high malignancy and strong invasive ability of tumor may have led to

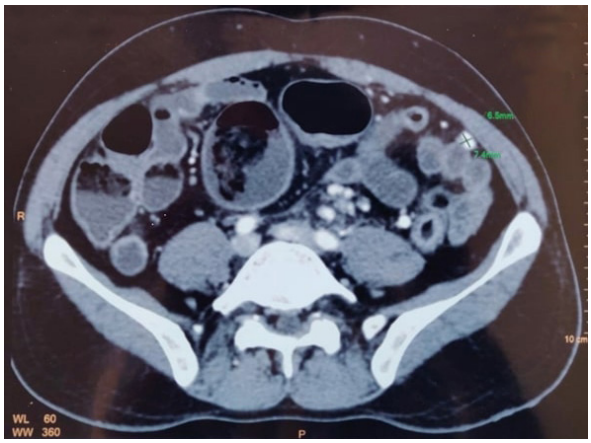

Fig.1: *Computed tomography image showing the sigmoid lesion.*

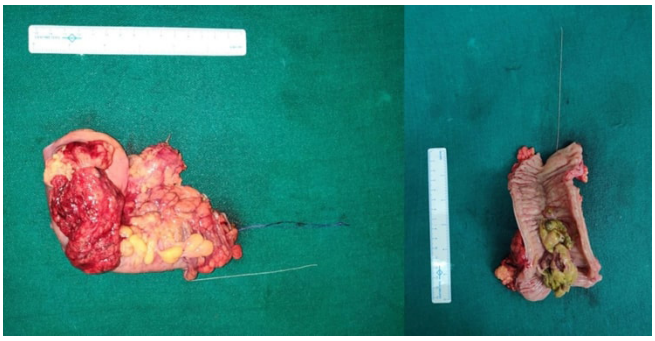

Fig.2: *Gross appearance of the resected specimen.*

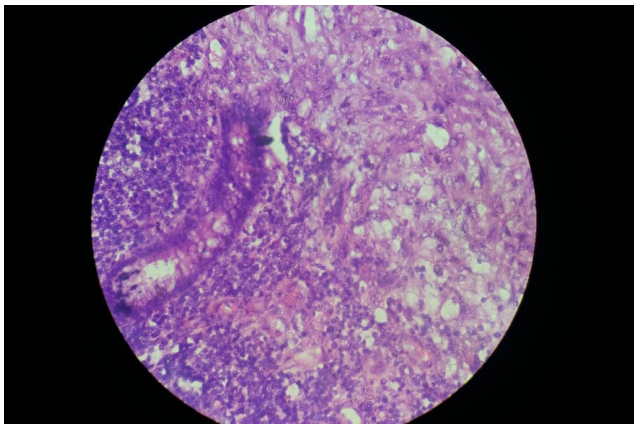

Fig.3: *Histopathology showing metastasis from renal cell carcinoma.*

rectal metastasis, as the presence of such a rare metastatic site of RCC usually indicates relatively poor prognosis. Other unusual metastatic sites of RCC include colon, intestine, stomach, pancreas,

gallbladder, prostate, thyroid gland, and skeletal muscle [3-7]. These rare metastatic sites were usually accompanied by multiple metastasis in the whole body, over the period from the initial diagnosis of RCC to metastasis from several years to more than 10 years.

In this report, FDG-PET/CT images of metastatic RCC in rectum showed hyper-metabolic activity in sigmoid colon. Higher SUV usually indicates higher malignancy of tumors, invasiveness nature of tumor cells, and worse prognosis of patients. The metastasis of other sites such as bilateral lungs and right ilium can be evaluated predicting the patient condition and its prognosis. hence important for surveillance. Therefore, FDG-PET/CT is a valuable examination for appropriate case in order to increase the concern about metastatic disease and to influence further evaluation and management [8] because it could efficiently detect small lesions and identify malignant cases.

Conclusion

Regular examinations and strict follow-up after nephrectomy are necessary for patients with diagnosis of RCC. Rectum and other unusual metastatic sites of RCC should not be ignored in surveillance on RCC.

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