Innovative Journal of Medical and Health Science

IJMHS 10 (06), 970–972 (2020) ISSN (O) 2277:4939 | (P) 2589:9341

Locally recurrent renal cell carcinoma involving large gut presenting with life threatening Gastrointestinal bleed: A rare presentation and review of literature

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Accepted 15/06/2020; Received 05/06/2020; Publish Online 20/06/2020

Reviewed By: Dr Daniel V.
Department: Medical

ABSTRACT

Renal cell carcinoma (RCC) is a highly malignant neoplasm. Renal cell carcinoma constitutes 3% of all adult malignancies and often presents insidiously.
The most common sites of metastasis in RCC are the lung, liver and bone; other less common metastatic locations are lymph nodes, adrenal, opposite kidney and brain.[i] Local recurrences of RCC are rare and reported in 3-4% of these cases[ii]. Metastasis to the pancreas and gastrointestinal tract are rare.
Herein, we report our experience with a case of massive lower gastrointestinal bleeding 1.5 years after Right radical nephrectomy and removal of IVC thrombus. In our case, colonoscopy and Computed tomography abdomen revealed heterogeneous soft tissue mass in the right renal fossa invading the hepatic flexure of colon. He underwent right Hemicolectomy and Ileo-transverse anastomosis. Locally recurrent right RCC with colonic involvement presenting with life threatening Gastrointestinal bleed is rare and is being presented.

Key words: Gastrointestinal bleed–metastasis–renal cell cancer–large bowel

1 CASE REPORT

A 65-year-old, DM type-2 man with a history of renal cell carcinoma had undergone right Radical Nephrectomy and removal of IVC thrombus(level2) in July, 2018. Histopathologic examination (HPE) revealed clear cell type RCC (size 8x 11.5 cm) with Fuhrman nuclear grade 2. Perinephric fat and ureteric margin were negative with no positive lymph node (stage pT3aN0cM0). PET scan done 3 months later, detected numerous hypodense soft tissue density largest of size ~15mm in lower lobe of left lung and multiple enhancing nodular lesions in the nephrectomy bed largest of size 21*18mm with SUV max ~ 6.82. However, overall FDG distribution was in physiologic limits (SUV max-4.1-10.9)[i]. Medical oncologist put him on sorafenib 400 mg bd without food.

He had a massive episode of lower GI bleed after 18 months of the index surgery in February, 2020. He presented to the emergency room with 4 days of recurrent Gastrointestinal bleed and light headedness. His blood pressure was 90/70 mmHg. His Hb level dropped from 12.3 g/dL to 5.2 gm/dL. Blood urea nitrogen (BUN) was 38 mg/dl (normal 8–24 mg/dL) and creatinine 1.1 mg/dL (normal 0.8–1.3 mg/dL). After initial stabilisation and 12 units of blood transfusion, he was taken for colonoscopy. On colonoscopy, he had a large-sized friable and sessile mass at the hep-

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atic flexure not allowing the scope to negotiate beyond the growth. It was not possible to distinguish primary colonic mass from local recurrence invading colon. Biopsy was inconclusive.

CT abdomen showed recurrent mass 47 *35 mm at the renal fossa invading into the right psoas muscle and also another enhancing mass of 58*58*64 mm at hepatic flexure of colon with significant perilesional fat stranding and loss of fat planes (figures 1 and 2). Few retrocaval and paraaortic lymph nodes were also present. Contralateral kidney and adrenal were normal.

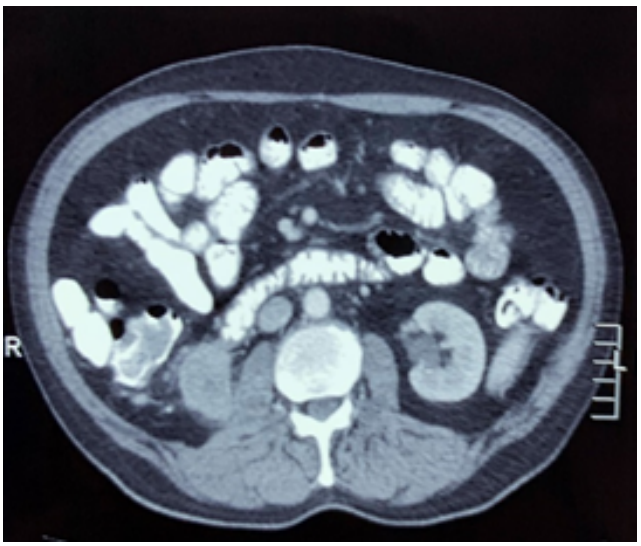

Figure 1. CT Abdomen showing local recurrence (arrow) in Right renal fossa involving large gut

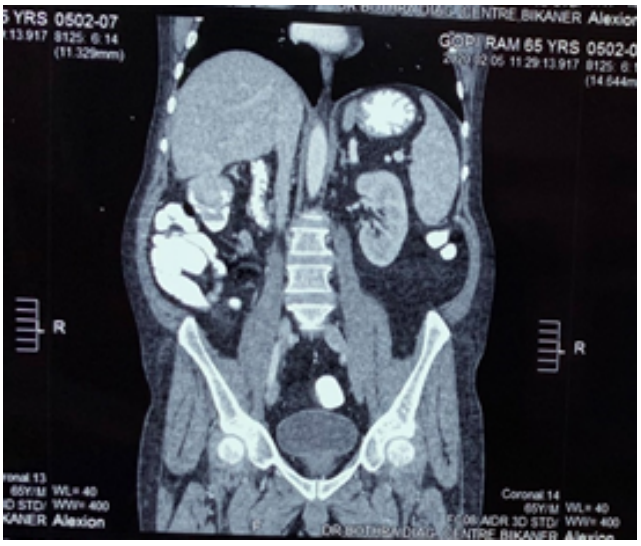

Figure 2. CT Abdomen showing local recurrence (arrow) in Right renal fossa involving large gut

Subsequently after optimisation, he was explored through roof top incision, excision of local recurrence (figure 3) and Right Hemicolectomy with Ileo-transverse anastomosis was done. His Post-operative course was uneventful and was discharged on day 8. HPE showed clear cell adenocarcinoma with involvement of hepatic flexure of colon and 3 out of 5 lymph nodes had carcinomatous deposits. He was started on sunitinib 50mg OD for 14 days and 7 days off. Now he is having haemoptysis, oral ulcers and generalized anasarca being managed conservatively.

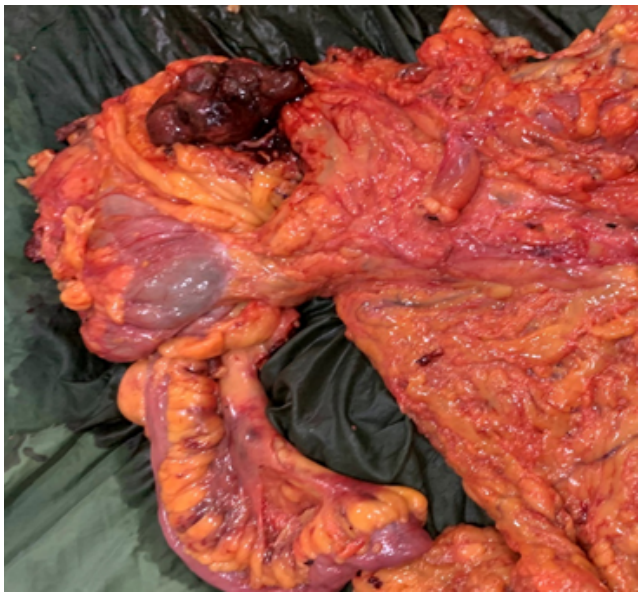

Figure 3. Specimen of right hemicolectomy showing mass involving hepatic flexure of colon

2 DISCUSSION

Renal cell carcinoma (RCC) is the most common malignant neoplasm of the kidney. Poor prognostic factors include Poor performance status, Systemic symptoms, Anaemia, Hypercalcemia, Elevated lactate dehydrogenase, ESR, Larger tumour size, Venous involvement, Extension into contiguous organs, including adrenal gland, Lymph node metastases, Sarcomatoid features, Presence of histologic tumour necrosis, Vascular invasion, Invasion of perinephric fat and Positive surgical margin. This malignancy is known to metastasize even several years after radical nephrectomy with an incidence rate of 3-4%[3]. Common sites of metastasis include the lung, bone, brain, liver, adrenal and the contralateral kidney. Metastases to the pancreas and gastrointestinal tract are rare[i] and there is no specific lymphatic or hematogenous pathway that can effectively explain colonic metastasis and recurrences[ii]. After right radical nephrectomy, hepatic flexure of colon and right lobe of liver occupy more medial position making them prone to involvement by local recurrence.

In our case, poor prognostic factors included large size of tumour (T2b), renal vein invasion and IVC thrombus at initial presentation. Despite medical therapy, the recurrence grew over time and involved hepatic flexure of colon and resulted in massive GI bleed.

In the literature, surgical treatment is suggested for both oligo-metastatic disease and local recurrences as it provides a high disease-free and long-term survival rate. [5,6.] In patients with metastasis, who underwent surgery with negative surgical margins had a higher disease-free survival rate than patients with non-curative or non-surgical treatment[iii]. Favourable features also included 12 months or more disease-free interval after nephrectomy, solitary lesions, age younger than 60 years and curative resections. Long-term 3-year survival rates of 46% and 44% respectively were reported following second and third surgery[6].

Other investigators suggested that patients with colonic metastases and recurrences were mostly males (83%), and the median age of the patients was 65 years (min-max: 35–84) and time to recurrence was 7 years (min-max: 2–17).Majority of the patients presented with symptoms of Haematochezia (53.33%) and abdominal pain (46.66%). The metastatic locations were the splenic flexure (33.33%), recto-sigmoid (20%), transverse colon (13.33%), right colon (6.66%) and hepatic flexure (13.33%). After diagnosis of the disease, the surgical options included left hemicolectomy ± splenectomy (33.3%), right hemicolectomy (33.3%), transverse colectomy (16.6%), anterior resection (16.6%) or radiation (6.66%) in these cases[5,6.033.]

Local recurrence from RCC involving colon presenting with life threatening Gastrointestinal bleed is rare and to our knowledge is not reported earlier.

Funding

No funding was allocated for the development of this care report.

Consent

The patient has provided consent to the authors for the publication of this case report.

Declaration of competing interest

The authors have no conflicts of interest to declare.

Key Clinical Message

Renal cell carcinoma is a highly malignant and vascular neoplasm. There is no other modality except surgery to treat RCC with curative intent. Metastasis and local recurrences to the gastrointestinal tract are rare. Local recurrence from RCC involving colon presenting with life threatening Gastrointestinal bleed is rare and to our knowledge is not reported earlier. [1–6]

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