Locally advanced renal cell carcinoma: cause of upper gastrointestinal bleeding

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DESCRIPTION

Renal cell carcinoma (RCC) most commonly develops in the sixth and seventh decade of life and has a male preponderance 2:1.^{1,2} Primary RCC presenting as upper or lower gastrointestinal bleeding as a result of direct extension is uncommon with only few case reports being described in the literature.¹³⁻⁶ Metastatic spread involves haematogenous, lymphatic, transcelomic and direct invasion. Direct invasion of the second part of the duodenum is likely due to its anatomical relationship with the right kidney anteriorly. Management of the

Figure 1 CT abdomen and pelvis arrows showing the right renal mass involving the second part of the duodenum.

Figure 2 CT abdomen and pelvis arrows showing the right renal mass involving the inferior vena cava extending into the left common iliac vein.

Figure 3 CT abdomen and pelvis arrows showing the right renal mass involving the inferior vena cava extending into the hepatic venous confluence.

Figure 4 Oesophagogastroduodenoscopy showing bleeding masses arising from the second part of the duodenum.

locally advanced RCC involving the second part of duodenum can involve performing pancreaticoduodenectomy along with cytoreductive nephrectomy and early use of checkpoint inhibitor immunotherapeutic agents like sunitinib.

A 53-year old man presented to the emergency department with complaints of melena and fatigue for 2 weeks. It was associated with persistent aching of the right-sided abdominal pain, non-radiating and partially relieved with non-steroidal anti-inflammatory drugs. Medical history is significant for 40 pack-year smoking and alcohol abuse.

On admission, his vitals are as follows: blood pressure 100/60 mm Hg, heart rate 126/min, saturating 92% on room air and temperature 36°C.

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Physical examination was significant for conjunctival pallor, mild tenderness over the right upper quadrant and pitting lower extremity oedema. No guarding or rigidity, palpable abdominal mass was present on examination. The rest of the physical examination was unremarkable.

Blood workup showed haemoglobin 2.3 g/dL, blood urea nitrogen 58 mg/dL and white cell count $74 \times 10^9/L$. CT abdomen and pelvis with intravenous contrast showed right kidney mass measuring $14.4 \times 9.6 \times 9.8$ cm, tumour infiltrating the second part of the duodenum and right renal vein extending into the inferior vena cava, coursing into the hepatic venous confluence cranially and left common iliac vein caudally (figures 1–3). He was transfused five units of packed red blood cells (pRBC) and subsequently underwent oesophagogastroduodenoscopy which showed bleeding masses arising from the second part of the duodenum (figure 4). Interventional radiology performed

microfoil and surgifoam embolisation of the branches of the gastroduodenal artery supplying blood flow to the duodenum which had tumorous invasion to achieve haemostasis. Urology and oncology were consulted for palliative cytoreductive surgery followed by chemo/immunotherapy.

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Learning points

- The presence of renal cell carcinoma (RCC) classic triad of flank pain, haematuria and palpable abdominal pain suggests an advanced disease.
- Increased age, smoking, obesity and long-term dialysis are important risk factors for the development of RCC.
- Lungs, lymph nodes, liver, pancreas, bone, brain and contralateral kidney are the most common sites of metastasis.

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