A Protruded Lesion with Hemorrhage of Unexpected Histological Findings

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1. Clinical Image
An 83-year-old man complained of repeated hematochezia for 3 months. No other medical history was reported except for the percutaneous needle aspiration of left renal cyst 10 years ago. Colonoscopy revealed a 25-mm protruded lesion with central ulcer formation at the descending colon (Figure 1A). Massive bleeding occurred during forceps biopsy (Figure 1B), which was temporary managed by the clips. The initial pathologic result only indicated inflammation without evidence of malignancy. Abdominal enhanced computed tomography (CT) revealed a neoplastic lesion in the descending colon, involving adjacent left kidney (Figure 1C). The laparoscopic surgery was indicated for the management of massive bleeding. However, the histopathological findings showed renal cell carcinoma (RCC) directly invaded from colonic serosa to propria muscularis with immunohistochemical staining expressing PAX-8, which indicated clear cell renal cell carcinoma (ccRCC). (Figure 2A, H&E, orig. mag. ×40; Figure 2B, H&E, orig. mag. ×200; Figure 2C, IHC, orig. mag. ×200;). Renal cell carcinoma (RCC), located in the retroperitoneal cavity, usually metastasizes to lymph nodes, lungs, bones, livers and brains [1], however, due to the anatomic separation, the metastasis from RCC to colon or primary colon tumor to kidney were only reported in few widespread cases, while direct invasion rarely occurred [2,3]. A case report observed that clips migrated to the descending colon after left kidney nephrectomy, possibly caused by the postoperative repairing process [4]. In the present case, the postoperative histological observation of the tumor revealed close adhesions between involved left kidney and colonic wall, which implied the rare site of colonic metastasis might occur as the result of the previous intervention of left renal cyst. Therefore, when a colonic lesion invaded nearby kidneys, the possibility of colonic metastasis of RCC needs to be considered, especially in the patients with history of renal disease or interventions.
Figure 1: A: Colonoscopy revealed a protruded lesion about 25 mm in diameter at the descending colon, occupying the lumen for 1/3 week with central ulcer formation; B: Spurting bleeding in the site of the biopsy; C: A mass-like tumor was observed in the descending colon and adjacent left kidney.

Figure 2: A: Histopathological findings showed clear cell renal cell carcinoma directly invaded from colonic serosa to propria muscularis (asterisk), the remaining mucosal and submucosal layers remained normal (H&E staining, ×40); B: The ccRCC generally presents as round or polygonal, large distinctively transparent cells with thin-walled vascular network. (H&E staining, ×200); C: The expression of PAX-8 in tumor tissue was detected by immunohistochemical technique, which indicates the tumor originated from the renal epithelial cells.
Reference


