

# Lower Gastrointestinal Bleeding from Aneurysmo-Colonic Fistula after Endovascular Aneurysm Repair

## Introduction

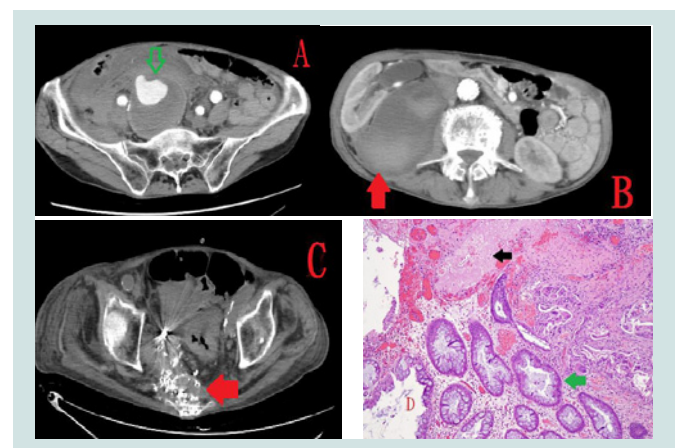
We report a rare case of internal iliac artery aneurysmo-colonic fistula that developed after endovascular aneurysm repair (EVAR) and transarterial embolization (TAE) in the distal internal iliac artery. An 81-year-old man with a history of internal iliac artery aneurysm (IIAA) received TAE and EVAR. He developed hydronephrosis 7 months after the operation, so he received a percutaneous nephrostomy (PCN). Thereafter, he developed hematuria persisting for more than 2 years. Moreover, hematochezia occurred 2 years after the hematuria episode. Owing to the internal iliac artery aneurysmo-colonic fistula, hematochezia developed subsequently.

## Case Report

An 81-year-old man presented to the emergency department with a 2-week history of repeated bloody stools. In March 2015, he had right internal iliac artery aneurysm rupture (Panel A, arrow). He received EVAR and TAE in the distal internal iliac artery. In the next month, he had a retroperitoneal abscess, which was confirmed by the presence of *Escherichia coli* in blood culture and computed tomography (Panel B, red arrow). In addition, computed tomography revealed right hydronephrosis. After he accepted percutaneous abscess drainage, he recovered well. However, he found that he had hematuria in October 2015. He underwent percutaneous nephrostomy to improve his symptom. Thereafter, he also underwent revision of the percutaneous nephrostomy tube monthly due to failure of the double-J stent setting. In September 2016, he developed sepsis due to *E. coli* infection. Moreover, he had repeated bloody stools since April 2017. He underwent a colonoscopic examination five times because we could not make a definitive diagnosis. Colonoscopy revealed a sigmoid colon ulcer and active bleeding. We could not finish the hemostatic procedure, so we suspected the formation of fistula between the aneurysm and the sigmoid colon. Consequently, computed tomography was arranged and revealed aneurysm involvement to the adjacent colon with possible fistula formation (Panel C, arrow). Therefore, he underwent operation with the Hartmann procedure. The pathological report demonstrated that the picture was compatible with aneurysmo-colonic fistula (Panel D, black arrow: aorta wall, green arrow: colon).

## Discussion

As for IIAA, we can choose open repair or endovascular repair. However, compared with open repair, EVAR is associated with fewer complications [1]. We mainly chose to perform EVAR for our patient according to his clinical condition. We also implanted a stent graft in the right internal iliac artery [2]. After the operation, we needed to combine antibiotic treatment with abscess drainage [3]. A



retroperitoneal abscess developed after the operation for EVAR. In fact, various forms of fistula could lead to hematuria [4-7]. Moreover, our patient found bloody stools 2 years later. The recurrent *E. coli* infection from the gastrointestinal tract devastatingly contributed to the internal iliac artery aneurysmo-colonic fistula. In most cases, we often find an aneurysmo-colonic fistula and aortoduodenal fistulas in some cases [8-14]. Antibiotic treatment should be combined with abscess drainage after the operation for EVAR. Otherwise, the abscess may create a fistula between ureter, bladder, and colon. A patient may show symptoms of hematuria or bloody stools.

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