Successful treatment of life-threatening small bowel bleeding in patient with granulomatosis with polyangiitis : sequential clamping with intraoperative endoscopic guidance

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To the editor,

A 34-year-old man was referred to our department with a history of rectal bleeding. He was known with glomerulonephritis due to granulomatosis with polyangiitis (GPA) and he was under intravenous pulse steroid treatment. On physical examination he was pale and afebrile, with a blood pressure of 90/60 mmHg and a pulse rate of 115/min. Blood analysis showed a white-cell count of 9540/mm^3, the hemoglobin level was 7.4 g/dl, and creatinine was 5.6 mg/dL. Upper gastrointestinal endoscopy was unremarkable without signs of active bleeding. Ileocolonoscopy revealed a normal appearing rectum, with fresh blood in the right colonic lumen and terminal ileum, but no evidence of any inflammatory lesion or mass. Also, there was no evidence of bleeding during catheter angiography. The patient needed 14 units of blood replacement in 48 hours, therefore emergency surgery was performed after aggressive resuscitation and correction of underlying medical conditions. During laparotomy blood was observed in the lumen of the entire small bowel and colon. To determine the bleeding area in the small bowel, intraluminal content was milked by hand from the Treitz ligament towards the ileum. Thereafter, the small bowel was sequentially clamped with 40-50 cm intervals from Treitz ligament to the ileocecal valve and bleeding localization was detected in the proximal jejunum (Fig. 1, arrow). Subsequently, enterotomy was performed in the detected bleeding segment of small bowel and multiple linear extensive deep ulcer craters were observed during intraoperative upper gastrointesinal endoscopy (Fig. 2). A 20 cm small bowel segment was resected with an end-to-end anastomosis.

GPA, also known as Wegener's granulomatosis, is a rare and potentially lethal systemic disorder that is characterized by necrotizing vasculitis involving vessels of small and medium size in many organs. The most affected organs are the respiratory and urinary tracts, (1, 2). Gastrointestinal involvement related to GPA has been described in 10 %-24 % of patients (3). We present a rare case of GPA presenting with life-threatening small bowel bleeding and successfully treated with surgical management. Video capsule endoscopy provides excellent visualization of the small bowel mucosa, but

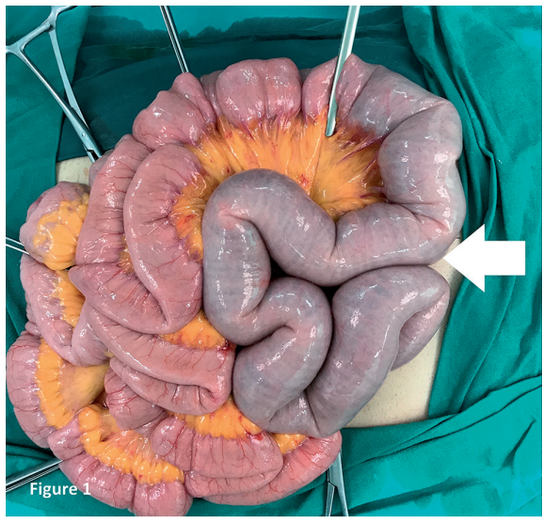

Fig. 1. — Figure showed after laparotomy small bowel was sequentially clamped with 40-50 cm interval from Treitz ligament to ileocecal valve and bleeding localization was detected in proximal jejunum (arrow).

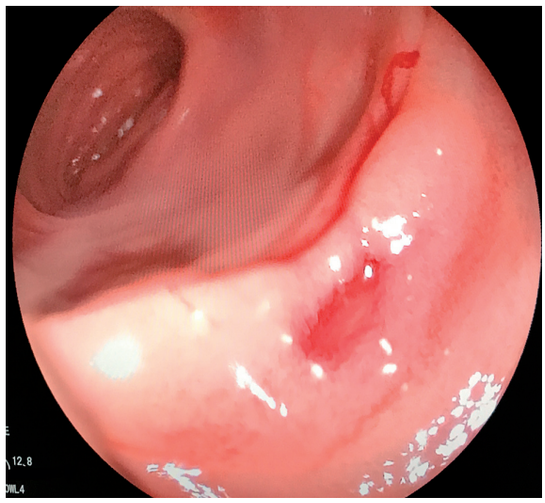

Fig. 2. — Endoscopy showed multiple linear extensive deep ulcer craters in the proximal jejunum.

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its use is often limited in unstable patients with acute severe bleeding. Likewise, balloon-assisted enteroscopy has diagnostic and therapeutic purposes for the small bowel mucosa visualization, but its use is limited in unstable patients. Taken together, sequential clamping is a vital surgical method for the detection of the bleeding intestinal segment and leads to curative treatment of high-volume intestinal hemorrhages of unknown origin.

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We hereby declare that all authors have made a substantial contribution to the information submitted for publication; all have read and approved the final manuscript and the manuscript or portionsthereof are not under consideration by another journal. Also, we have no conflict of interest to report.

References:

1. KARAAHMET F, KILINCALP S, COSKUN Y. *et al.* Severe colitis related to granulomatosis with polyangiitis (Wegener's granulomatosis). *Endoscopy*, 2014,, **46** Suppl 1 UCTN : E175.
2. DEGER SM, SAHİN T, VURAL C. *et al.* Wegener's granulomatosis with massive gastrointestinal hemorrhage due to jejunal and colonic involvement: report of a case. *Surg. Today*, 2008, **38** : 166-9.
3. MASİAK A, ZDROJEWSKİ L, ZDROJEWSKİ Z. *et al.* Gastrointestinal tract involvement in granulomatosis with polyangiitis. *Prz. Gastroenterol*., 2016, **11** : 270-275.