ISSN: 2754-8880
Published 00 11 0000

Extensive Small Bowel Ulcers With Overt Haemorrhage Secondary To Nsaid Usage, A Case Report.

M. Hairulhazuan H[1*], S T Sambanthan[1], and N. R. Kosai [1]

[1]Department of General Surgery, Hospital Canselor Tuanku Muhriz, Cheras, Malaysia
[*]Corresponding author: E-mail: wackadoodle23@gmail.com

ORIGINAL

Abstract
Lower gastrointestinal bleeding can be defined as bleeding from the gastrointestinal tract distal to the ligament of Treitz. Small bowel bleeding accounts for about 5% of the total case of gastrointestinal bleeding. Angioectasia is the commonest cause of small bowel bleeding accounting for 30-40% of cases, with a strong association with liver cirrhosis and cardiovascular disease. NSAID-induced small bowel injury has long been known, but the occurrence of overt bleeding has been unclear according to a study. With that in mind, I would like to report a case of massive small bowel bleeding due to extensive small bowel ulceration which was confirmed with intraoperative enteroscopy and bowel resection specimen. This case report highlights the extensive damage of NSAID usage and the management of complicated lower gastrointestinal bleeding.

Keywords : Lower Gastrointestinal bleeding, small bowel ulcers, NSAID

Introduction

Lower gastrointestinal bleeding can be defined as bleeding from the gastrointestinal tract distal to the ligament of Treitz. It can manifest as either occult or overt bleeding. Hematochezia is a pathognomonic clinical presentation. However, melena may occur in the case of small bowel or proximal colon bleeding. Small bowel pathology must be suspected in the absence of bleeding during upper and lower endoscopy.

Management of gastrointestinal bleeding mainly depends on a few factors such as the hemodynamic status of the patient and the site of bleeding. Despite a few algorithms and treatment modalities has been established for the management of gastrointestinal bleeding, local availability of facilities, clinician judgment and experience must be taken into consideration while facing the complicated situation. This case report highlights the extensive damage of NSAID usage and the management of complicated lower gastrointestinal bleeding.

OPEN ACCESS
Edited by
A.Hussain

Submitted *10 Dec. 2022*

Accepted *10 Dec. 2022*

Citation
M. Hairulhazuan H, S T Sambanthan, N. R. Kosai.Extensive Small Bowel Ulcers With Overt Haemorrhage Secondary To Nsaid Usage, A Case Report.:BJOSS::2022:(3);104-107

Case Report

An 84-year-old lady presented to us with a short history of per rectal bleeding. Prior to this presentation, she gave a history of prolonged NSAID use for her arthritis for more than 2 weeks. Upon assessment, she was hemodynamically unstable with hypotension. Per abdomen was unremarkable and per rectal examination revealed a large amount of altered blood. The patient received a massive amount of blood product due to hemodynamic instability. The provisional diagnosis was upper GI bleed.

An urgent OGDS was performed within 24 hours of presentation and it was unremarkable. A colonoscopy was performed and blood clots were seen throughout the colon, with a pooling

of blood seen from the terminal ileum. An urgent computed tomography angiography of the mesenteric vessels failed to the localized bleeding point. She was brought to the operating theatre for an exploratory laparotomy.

Intraoperatively, the outer small bowel appears healthy with no signs of chronic inflammation. An enteroscopy examination through enterotomy shows multiple ulcers throughout the small bowel mostly at the distal ileum. Limited right hemicolectomy, small bowel resection, and double barrel stoma due to extensive bleeding and ulcers at the distal ileum. Postoperatively, the patient developed persistent bleeding from the proximal stoma and CTA mesentery was repeated. 2 bleeders were identified from proximal and distal branches of the superior mesenteric artery, likely from the jejunal branch. The distal branch of the jejunal vessel was angio-embolized using 20% glue while the proximal branch was angio-embolized using 45-150micron Polyvinyl alcohol (PVA). Post-angioembolization shows no further arterial blush during an angiogram. Post-procedure, bleeders from small bowel resolved.

Gross specimen examination and histopathological findings

The gross specimen shows multiple skipped punch-out ulcers throughout the small bowel. There is no sign of stricture seen from outside and as well as inside the bowel. Histopathology findings show acute multiple small bowel ulceration with dense acute inflammation. There is also the presence of abnormal muscularised submucosal vessels. No evidence of vasculitis, fungal infection, acid-fast organism, granuloma, dysplasia, or malignancy was seen.

Figure 1. Unopened Limited Right Hemicolectomy With Small Bowel Resection Specimen (No Sign Of Stricture From Outside

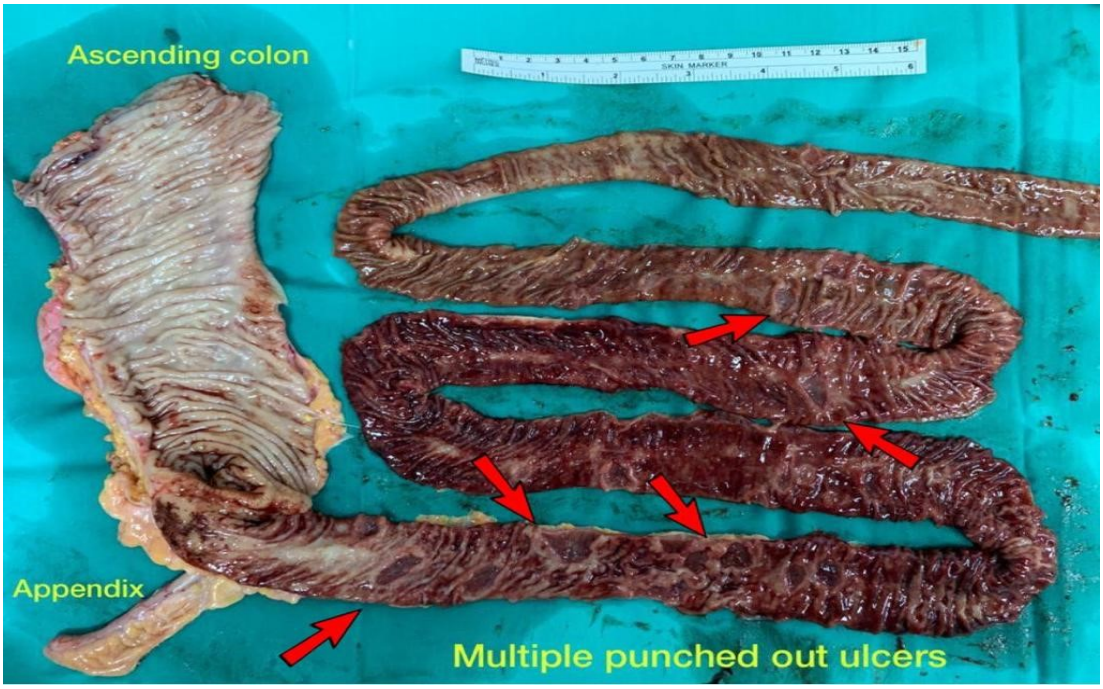

Figure 2. Opened Limited Right Hemicolectomy And Small Bowel Resection Specimen With Labelled Showing Multiple Ulcers

Discussion

Small bowel bleeding accounts for about 5% of the total case of GI bleeding (1). Angioectasia is the commonest cause of small bowel bleeding accounting for 30-40% of cases, with a strong association with liver cirrhosis and cardiovascular disease (2; 3). Usage of NSAID has been associated with small bowel mucosal injury in about 20% of patient who has been taking NSAID in one of the hospital-based study (4). Even though a small multicentre study shows the occurrence of overt bleeding is statistically not significant (5), the occurrence and possible complication of the event still cannot be ignored. Initial risk assessment and resuscitation are the earliest steps that need to be taken prior to any imaging, endoscopic, or surgical intervention (6; 1). Small bowel bleeding must be suspected if the index upper and lower scope shows no significant finding. The role of repeat OGDS and colonoscopy has been proposed in the latest AGC updated guideline of small bowel bleeding in 2016. This is due to the percentage of missed GI lesions being about 25-60% of cases, with angiodysplasia being the commonest missed lesion (7).

Enteroscopy examination has been customarily performed through an oral approach. However, in certain cases such as incomplete distal small bowel examination or Chron's disease where colonic and small bowel examination is needed, retrograde enteroscopy and capsular endoscopy can be used to visualize the bowel segment (1). In the retrograde approach, which was considered more challenging than the antegrade procedure, the rate of the successful procedure was documented to be only 21% compared to 2% in the antegrade procedure. The success rate declined if the patient is having previous abdominal or pelvic surgery (8).

CT angiography has become one of the modalities to determine the site of gastrointestinal bleeding. It has a sensitivity of 89% and a specificity of 85% in detecting the extravasation of blood (9). Extravasation of blood can be detected as low as 0.3-0.5ml/min (10). However, CT angiography is only able to pick up ongoing active bleeding and this has become a limitation if bleeding is intermittent, or the bleeding rate is slow.

Conclusion

Hemorrhage caused by extensive small bowel ulceration can be potentially lethal for the patient if it's not treated accordingly. NSAID has been associated with the development of small bowel ulcers by various literature. However, its association with the development of overt bleeding is still unclear. Thus judicious usage of NSAID must be emphasized to avoid possible serious complication.

Conflict Of Interest

All authors declare no conflict of interest of any kind.

References

[1] Gerson B L, Fidler J J, Cave R D, Leighton A J. ACG Clinical Guideline: Diagnosis and Management of Small Bowel Bleeding. Am J Gastroenterol [Internet]. 2015 Sep 10 [cited 2022 Nov 23];110(9):1265–87. Available from: https://pubmed.ncbi.nlm.nih.gov/26303132/.

[2] Igawa A, Oka S, Tanaka S, Kunihara S, Nakano M, Aoyama T, et al. Major predictors and management of small-bowel angioectasia. BMC Gastroenterol [Internet]. 2015;15(1). Available from: https://pubmed.ncbi.nlm.nih.gov/26302944/.

[3] Schmit A, Gay F, Adler M, Cremer M, Van Gossum A. Diagnostic efficacy of push-enteroscopy and long-term follow-up of patients with small bowel angiodysplasias. Digestive diseases and sciences. 1996;41(12):2348-52.

[4] Ishihara M, Ohmiya N, Nakamura M, Funasaka K, Miyahara R, Ohno E, et al. Risk factors of symptomatic NSAID-induced small intestinal injury and diaphragm disease. Alimentary pharmacology & therapeutics. 2014;40(5):538-47.

[5] Niikura R, Yamada A, Maki K, Nakamura M, Watbate H, Fujishiro M, et al. Associations between drugs and small-bowel mucosal bleeding: Multicenter capsule-endoscopy study. Dig Endosc [Internet]. 2018 Jan 1 [cited 2022 Nov 27];30(1):79-89. Available from: https://pubmed.ncbi.nlm.nih.gov/28719079/.

[6] Oakland K, Chadwick G, East JE, Guy R, Humphries A, Jairath V, et al. Diagnosis and management of acute lower gastrointestinal bleeding: guidelines from the British Society of Gastroenterology. Gut. 2019;68(5):776-89.

[7] Rodrigues A, Carrilho A, Almeida N, Baldaia C, Alves Â, Gomes M, et al. Interventional algorithm in gastrointestinal bleeding—an expert consensus multimodal approach based on a multidisciplinary team. Clinical and Applied Thrombosis/Hemostasis. 2020;26:1076029620931943.

[8] Lauren B G. Small Bowel Bleeding: Updated Algorithm and Outcomes. Gastrointest Endosc Clin N Am [Internet]. 2017;27(1):171-80. Available from: https://www.sciencedirect.com/science/article/abs/pii/S1052515716300770?via%3Dihub.

[9] Bourreille A, Ignjatovic A, Aabakken L, Loftus Jr E, Eliakim R, Pennazio M, et al. Role of small-bowel endoscopy in the management of patients with inflammatory bowel disease: an international OMED–ECCO consensus. Endoscopy. 2009;41(07):618-37.

[10] Mehdizadeh S, Han NJ, Cheng DW, Chen GC, Lo SK. Success rate of retrograde double-balloon enteroscopy. Gastrointestinal endoscopy. 2007;65(4):633-9.