



Audit on Patients Admitted with Fresh PR Bleeding Due to Non-Anal Causes

V. B. Pathirana ^{a*}

^a *Department of General Surgery, National Hospital, Sri Lanka.*

Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

Article Information

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/109046>

Short Research Article

Received: 06/09/2023

Accepted: 10/11/2023

Published: 15/11/2023

ABSTRACT

Aim: To audit the diagnoses, management and outcome of patients presenting with fresh PR bleeding due to non-anal causes.

Place and Duration: Emergency Surgical ward – National hospital Sri Lanka – 2019 November to 2020 October.

Methodology: All patients admitted with acute fresh PR bleeding were identified from patient records during this time period and based on final diagnosis, patients with anal causes, post-surgical/ polypectomy patients, known cancer patients and traumatic causes were excluded. Comorbidity, drop of haemoglobin, duration of hospital stay, imaging and colonoscopy findings, management and outcome data were collected from the records with patient consent.

Results: 18 patients were included in the study, and there were two [11.1%] patients with small bowel causes and 3 with no identified cause for the bleeding. Colitis was the commonest colonic cause of bleeding among the patients. CT and colonoscopy are complementary to each other in diagnosing the cause for bleeding with good diagnostic yield. Overall patients had good outcomes with conservative management and majority of patients [66.7%] were managed without blood transfusion. A drop of haemoglobin was the only factor shown significantly associated with a hospital stay [P< 0.003]. Age, comorbidities did not show such association.

Conclusion: Most of the time fresh bleeding due to colonic causes can be managed conservatively and non-colonic causes often need surgical intervention. A drop of haemoglobin is the main factor that determined the hospital stay.

*Corresponding author: E-mail: varunapath@gmail.com;

Keywords: Fresh per rectal bleeding; haematochezia; colitis; diverticular bleeding; jejunal diverticula.

1. INTRODUCTION

Per rectal bleeding is a common presentation among the general surgical emergencies with an annual incidence around 20 -40 cases per 100000 admissions with 20% of admissions due to gastrointestinal bleeding are due to lower GI bleed^{1,2}. Anorectal cause accounts for the majority of rectal bleeds where diagnosis is usually simple². Non anal causes can be difficult to diagnose and treat.

This is studied on a cohort of patient with excluding patients with anorectal bleeding and bleeding due to known cancer to study the diagnostic yield, management and outcome. Data was collected from the period of one year from emergency general surgical patients admitted to a surgical ward of the National Hospital of Sri Lanka Colombo.

2. METHODS

Data were obtained retrospectively from patient records and none of the patient sensitive data was collected. Therefore, no bias on the patient investigation or management is related to the study. Basic demographic data, hospital stay, haemoglobin drop in grams, imaging [CT/ CT angiogram], endoscopy [flexible sigmoidoscopy/ colonoscopy] data, management and outcome were collected. Irrespective of long-term outcome, if the patient was discharged home after the index admission due to bleeding, considered a good outcome.

Bleeding due to anal cause, already diagnosed colorectal cancer, post-op/polypectomy bleeding, bleeding due to trauma were excluded from the study.

3. RESULTS

Data of 18 patients were analysed where the majority were males accounting for 61.1%. Three patients [16.7%] had left and/or lower abdominal pain where the rest of the patients had painless bleeding. Four patients [22.2%] had more excessive bleeding with passage of clots. Half of the patients had one or more comorbidities and 2 of the patients [11.1%] were on Warfarin.

Haemoglobin drop was checked in grams based on pre admission records to post admission levels after 24 h.

Diagnosis based on CT +/- CT angiogram and endoscopy is shown on following Table 3.

Two patients present with fresh PR bleeding noted to have non colonic causes [11.1%] and in three patients, no cause for the bleeding was identified. In this cohort, only three patients needed emergency procedure which included angioembolisation in one patient and small bowel resection in two patients. All other patients which had colonic causes were managed conservatively with or without blood transfusion, including the three patients where the cause was not found. All patients were discharged home from the index admission except for the patient who was provided with palliative care with the diagnosis of advanced colonic cancer. The majority of the patients accounting for 66.7% was managed without blood transfusion.

There was a significant positive association of haemoglobin drop and hospital stay [$p < 0.003$]. Age and comorbidities failed to show a significant association with the duration of hospital stay with a p value of $p < 0.39$ and $p < 0.99$ respectively.

Table 1. Symptom analysis

Symptom analysis	n	%
Painless fresh PR bleeding	11	61.1
Heavy bleeding with clots	4	22.2
Bleeding with pain	3	16.7

Table 2. Result of haemoglobin drop

Hb Drop	n	%
15 g or less	6	33.3
16 g to 30 g	5	27.8
31 g to 45 g	4	22.2
45 g or more	3	16.7

Table 3. Diagnosis based on CT +/- CT angiogram and endoscopy

Diagnosis	CT/ CT angiogram diagnosis	Endoscopy diagnosis	Management
Colitis	3	3	Conservative -2 Blood tr -1
Colitis	Diverticulitis - 1	Colitis - 1	Conservative -1
Colitis	Normal -2	Colitis -1 Proctitis - 1	Conservative - 2
Angiodysplasia	1	1	Blood transfusion -1
Caecal tumour	Caecal mass + Mets - 1	Caecal tumour - 1	Palliative care -1
Diverticular bleed	IMA bleed – 1	Diverticular bleed – 1	IR embolization - 1
	Normal - 1	Diverticular bleed - 1	Conservative - 1
Polyp	Normal - 2	Colonic polyp - 2	Polypectomy -2
Rectal carcinoma	Rectal ca - 1	Rectal Ca - 1	Non Em Surgery -1
Small Bowel cause	Jejunal Diverticula -1	Not done	Surgical Resection + Blood Tr - 1
	Small bowel tumour -1	Not done	Surgical resection + Blood tr -1
No cause found	Normal - 3	Normal - 3	Conservative -2 Blood Tra - 1

4. DISCUSSION

Haematochezia is a common presentation of variety of colorectal pathologies including diverticular bleeding, colitis, angiodysplasia, colorectal neoplasms [1,2,3]. Causes such as Haemorrhoids and other anorectal causes, iatrogenic causes like post-surgical and post polypectomy bleeding, post traumatic bleeding were excluded from this study. Non colonic sites which can be gastro duodenal or small bowel causes are the aetiology in many as 15% of cases [3,4] and in this cohort, 2 patients had a small bowel site of bleeding.

Most of the patients, particularly when the non-colonic causes are excluded, can be managed conservatively as in 80% or more cases bleeding stops spontaneously [5]. This was evident in this cohort as well and even blood transfusions were given in a small proportion of cases [3,4].

CT angiogram play an important role in initial evaluation of acute lower gastrointestinal bleeding which has shown to have sensitivity and specificity around 90% [5,6]. In this cohort CT scan/ CT angiogram helped in making the diagnosis in most cases and was able to diagnose important non colonic site of bleeding from small bowel diverticula and a small bowel tumour.

Although, colonoscopy is an important diagnostic and therapeutic tool, practically the use is not productive in many cases due to factors like inability to achieve a satisfactory vision, patient stability and comorbidity related factors [5]. In this case series colonoscopy helped in arriving the diagnosis of colitis in three cases where two had a normal CT scan and one was wrongly diagnosed as diverticulitis in the CT scan.

Age, comorbidities, and severity of bleeding are important factors that influence the length of hospital stay and overall outcome [3,4,7-10]. In this study, only the severity of bleeding assessed with haemoglobin drop was noted as a significant predictor of a long hospital stay and morbidity.

5. CONCLUSIONS

Majority of colonic causes can be managed conservatively with blood transfusion in carefully selected patients. CT and colonoscopy are complementary in diagnosing the cause for bleeding, however in few patients cause can be

illusive. The amount of drop in haemoglobin is a significant factor for duration of hospital stay.

CONSENT

Informed consent was taken from patients prior to discharge from hospital to use non personal data in the study.

ETHICAL APPROVAL

As per international standards or university standards written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

1. Kevin A Ghassemi, Dennis M Jensen. Lower GI Bleeding: Epidemiology and Management; *Curr Gastroenterol Rep.* 2013 Jul;15(7):10.1007/s11894-013-0333-5. DOI: 10.1007/s11894-013-0333-5
2. Titilayo Adegboyega, David Rivadeneira, Lower GI Bleeding: An Update on Incidences and Causes; *Clin Colon Rectal Surg.* 2020 Jan;33(1):28–34. Published online 2019 Nov 11. DOI: 10.1055/s-0039-1695035
3. Benita KT Tan, Charles BS Tsang, Denis CNK. Nyam, Yik Hong Ho. Management of Acute Bleeding Per Rectum. *Asian Journal of Surgery.* JANUARY 2004;27(1).
4. Diagnosis and management of acute lower gastrointestinal bleeding: European Society of Gastrointestinal Endoscopy (ESGE) Guideline; *Endoscopy.* 2021;53: 850-868. DOI: <https://doi.org/10.1055/a-1496-8969>
5. Oakland K, et al. Diagnosis and management of acute lower gastrointestinal bleeding: Guidelines from the British Society of Gastroenterology. *Gut.* 2019;0:1–14. DOI: 10.1136/gutjnl-2018-317807.
6. John Frost, Faye Sheldon, Arun Kurup, Benjamin R Disney, Sherif Latif. An approach to acute lower gastrointestinal bleeding. *Frontline Gastroenterol.* 2017 Jul;8(3):174–182.
7. Jeremy R Wortman, Wendy Landman, Urvi P Fulwadhva, Salvatore G Viscomi and

- Aaron D Sodickson. CT angiography for acute gastrointestinal bleeding. Br J Radiol. July 2017;90(1075):20170076
8. Dekey Y Lhewa, Lisa L Strate. Pros and cons of colonoscopy in management of acute lower gastrointestinal bleeding. World J Gastroenterol. 2012 Mar 21; 18(11):1185–1190.
 9. Kalpit Devani, Dhruvil Radadiya, Paris Charilaou, Tyler Aasen, Chakradhar M Reddy, Mark Young. Trends in hospitalization, mortality, and timing of colonoscopy in patients with acute lower gastrointestinal bleeding. Endosc Int Open. 2021 Jun;9(6):E777–E789.
 10. Lisa L Strate, Ian M Gralnek. Management of Patients with Acute Lower Gastrointestinal Bleeding. Am J Gastroenterol. 2016 Apr;111(4):459–474. DOI: 10.1038/ajg.2016.41

© 2023 Pathirana; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

The peer review history for this paper can be accessed here:
<https://www.sdiarticle5.com/review-history/109046>