



ORIGINAL RESEARCH PAPER

Surgery

"A PROSPECTIVE STUDY OF PER RECTAL BLEED BY COLONOSCOPY"

KEY WORDS: Colonoscopy, per rectal bleeding, lower GI bleed.

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ABSTRACT

Introduction: Bright red bleeding per rectum indicates bleeding from the lower GI tract occurring from colon, rectum, or anus. Dull aching abdominal pain, changes in bowel habits, anemia, and weight loss may be associated symptoms.

Methods: 100 patients with complaints of per rectal bleeding were selected from general OPD and wards. All were subjected to flexible Fiber-optic Colonoscopy.

Results: 100 patients were divided into 3 groups based only on their age alone. 34 were females and 66 males, Mean \pm SD: 49.18 \pm 16.55. There was a high yield of positive findings in 75 patients. 25 patients (8 females, 23.5%) and (17 male 25.8%) n=25 were having normal colonoscopic findings. 20 patients, 7 females (20.6%) and 13 males (19.7%) had hemorrhoids as the most common findings.

Conclusion: Hemorrhoids is the most common cause of per rectal bleeding followed by IBD and cancers. These findings differ from studies done in western countries.

Introduction:

Bleeding per rectum is one the most common presentations in a surgery outpatient department (OPD)¹. It indicates bleeding from the lower gastro intestinal tract (GIT) occurring from colon, rectum, or anus^{2,3,4}.

Frequent dull aching abdominal pain, gradual changes in bowel habits, anemia, and weight loss may also be few of the associated symptoms⁵.

Acute lower gastro intestinal bleeding (LGIB) classically presents with sudden onset of hematochezia (maroon or bright red blood) or it can be microscopic. In rare cases, bleeding from cecum or right colon can present as melena (black tarry stools)^{6,7}. Blood loss occurring for three days and ultimately leading to hemodynamic instabilities, anemia or requiring blood transfusions is termed as acute lower gastrointestinal bleed. Chronic LGIB is over a period of several days and can be intermittent⁸.

Regardless of the amount of blood lost, most of the cases resolve naturally in 80% of people^{4,6,8}. Persistence or recurrent blood loss in an acute episode occurs in 10%-40% of people and up to 50% of patients with continuous blood loss need some surgical intervention⁹. Many of the related studies have been done in the western countries, most of which show diverticulosis followed by polyps, neoplasias, inflammatory bowel diseases, non-specific proctitis, ischemic colitis, angiodysplasia and infective colitis accordingly as cause's of per rectal bleeding. However studies in ASIA (India and Singapore), Africa (Cameron) have demonstrated different pathologies³. Hence the need for this study to know the prevalence of different causes of bleeding per rectum in the local population.

Objective is to identify and if required treat the source of bleeding⁶. Flexible Endoscopy is definitely the mainstay for analysis of acute LGIB and has become a routine investigation^{4,10,11}. It is the diagnostic tool of choice in hemodynamically stable patients with a suspected LGIB as it permits the examination of the entire colon at the same time providing a chance to acquire biopsy samples and facilitating therapeutic intervention¹².

Materials and Methods:

INCLUSION CRITERIA:

Patients from surgery OPD, surgical ward's and patients referred from other department with complaints of

1. Bleeding per rectum.

EXCLUSION CRITERIA:

1. Very frail patients unfit for colonoscopy.
2. Patients not willing for colonoscopy.

MATERIALS

Olympus Exera 150 Colonoscope, 170 video Gastroscope, sterile gloves, lignocane jelly, mop, polyethylene glycol enema (PEG)

METHOD OF DATA COLLECTION

All participants underwent flexible Fiber-optic Colonoscopy, after approval from institutional ethical committee, a written consent, anesthesia fitness for the procedure and necessary colonic preparation.

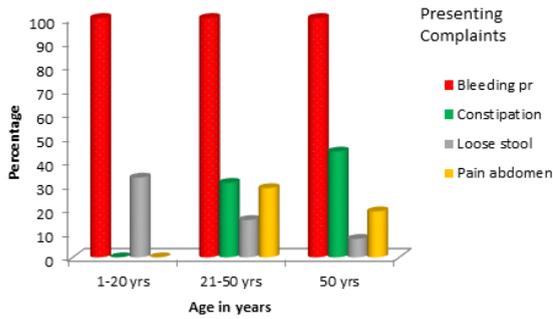
Colon preparation was given according to standard regiments as clear liquid diet one day prior to the procedure followed by Polyethylene glycol enema (PEG) given in split doses (Three liters to be taken in the evening prior to the day of the investigation and One liter to be taken on the morning of the day of the investigation)¹³.

Endoscopy was done by Olympus Exera 150 Colonoscope and Olympus Exera 170 video Gastroscope¹⁴. Procedure was carried out under the effect of Short General Anesthesia (Propofol 2mg/kg with a maximum dose of 140 mg), sedation with injection Midazolam if needed^{15,16}. Oxygen supplementation with continuous Electrocardiogram (ECG) monitoring, Heart Rate and respiratory rate monitoring¹⁷. Maintenance fluid as Ringers lactate¹⁸. Analgesia was achieved with Injection Buscopan¹⁹. Biopsies were taken from suspected lesions and sent for histo-pathological reporting (HPR) study. Colonoscopic findings were noted. Result was based on colonoscopy reports alone.

Results:

Table 1: Presenting Complaints according to age of patients studied.

Presenting Complaints	Age in years			Total (n=100)
	1-20 yrs (n=3)	21-50 yrs (n=45)	50 yrs (n=52)	
Bleeding PR	3(100%)	45(100%)	52(100%)	100
Constipation	0(0%)	14(31.1%)	23(44.2%)	37
Loose stool	1(33.3%)	7(15.6%)	4(7.7%)	12
Pain abdomen	0(0%)	13(28.9%)	10(19.2%)	23

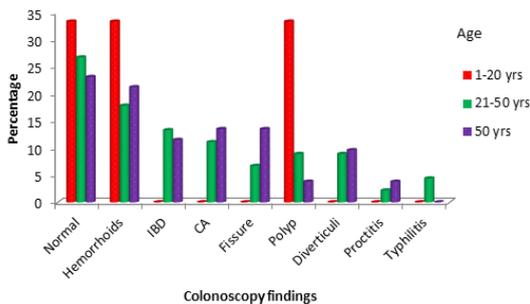


Graph no 1: Presenting Complaints according to age of patients studied

In this study, 37 patients had constipation, 12 had loose stool and 23 had pain in abdomen as associated complaints, 28 patients had rectal bleeding as their only complaint.

Table 2: Colonoscopy findings in different age group of patients studied.

Colonoscopy findings	Age in years			Total (n=100)
	1-20 yrs (n=3)	21-50 yrs (n=45)	50 yrs (n=52)	
Normal	1(33.3%)	12(26.7%)	12(23.1%)	25
Hemorrhoids	1(33.3%)	8(17.8%)	11(21.2%)	20
IBD	0(0%)	6(13.3%)	6(11.5%)	12
Cancer	0(0%)	5(11.1%)	7(13.5%)	12
Fissure	0(0%)	3(6.7%)	7(13.5%)	10
Polyp	1(33.3%)	4(8.9%)	2(3.8%)	7
Diverticuli	0(0%)	4(8.9%)	5(9.6%)	9
Proctitis	0(0%)	1(2.2%)	2(3.8%)	3
Typhilitis	0(0%)	2(4.4%)	0(0%)	2



Graph 2: Colonoscopy findings in different age group of patients studied.

Graph 2 shows different causes of per rectal bleeding found in different age groups in the studied subjects. Most common finding was hemorrhoids whereas 25 patients had normal colonoscopic findings.

Discussion:

Bleeding per rectum is prevalent in majority of people and often goes un-reported. Causes of per rectal bleeding in Asia and Africa are not similar to other countries and are specific to each region. Colonoscopy is more superior diagnostic modality in investigating and treating rectal bleeding²⁰.

The motive of this research was to identify the different causes of bleeding per rectum in different age groups.

According to Age and Diet

Participants were distributed into three categories based only on their age alone; 3.0% young age (1-21years), 45.0% (21-50 years adult), and 52.0% old age (>51 years). Out of one hundred patients who presented with complaints of per rectal bleeding 34

were females and 66 males. Mean ± SD: 49.18±16.55

Out of 100 patients, 20(20.0%) were diagnosed to have hemorrhoids of which 7 were females (20.6%), (3 veg and 4 mixed) and 13 were males (19.7%) (4 veg and 9 mixed). Based on these findings it can be said that hemorrhoids was more commonly seen in those who had mixed diet than patients who had a vegetarian diet i.e. 13 out of 20.

Based on Associated Complaints.

Rectal bleeding with associated complaints such as change in bowel habit's (loose stool, constipation) and pain in abdomen are strong predictor of severe colonic pathologies²¹.

In present study it was found that other related complaints with PR bleeding were change in bowel habits (lose stool, constipation) 49(49%) and pain in abdomen 23(23%)

Christoph Heintez *et.al*⁵ in a related study observed that out of 422 patients with signs of rectal bleeding the most accompanying symptoms were pain abdomen (23.0%), change in bowel patterns (27.3%) which were similar to present study.

Similarly Brian G Ellis *et.al*¹⁶ in his study discussed that pain in abdomen associated with per rectal bleeding has been recommended in several studies as an warning sign of severe GI pathology, which was present in 23 (23%) of patients in present study.

Colonoscopic findings

Out of 100, 25 patients (8 females,23.5%) and (17 male 25.8%) n=25 had no pathological lesions diagnosed.

Similar studies done by Robert F Wong *et.al*¹⁷ in 223 patients found that 48(21.5%) patients had normal colonoscopic findings in even if the admitting complaint was bleeding per rectum.

Positive Findings

In present study, there was a high yield of positive findings in 75 (75.0%) patients, which is identical to observations done by S Papagrigroriadis *et.al*¹⁰ showing a high yield of 56.6% positive findings.

Colonoscopic Findings.

We also found in our study that 20 patients (20%), 7 females (20.6%) and 13 males (19.7%) had hemorrhoids as the most common findings. These were similar to studies done in countries other than the western and different from many of those findings found in studies done in western countries where diverticuli and cancers were the most common findings.

Dennis M *et.al*²² in his study mentioned that diverticulosis was the most common reason for LGIB in the elderly, in the U.S., but after cleaning the bowel and then doing colonoscopy; colonic angioma was the most common cause followed by diverticuli.

Naomi G Diggs *et.al*¹⁴ in their study of 229,727 performed colonoscopies found diverticuli (54%), polyps (40%), colitis (4%) and malignancy (0.8%).

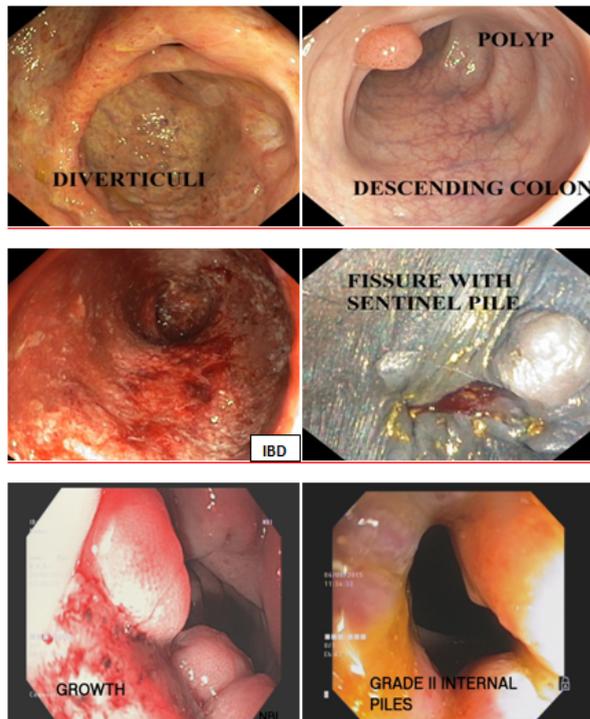
Al-Najami *et.a*²³ in their study of 1098 enrolled colonoscopies found significant neoplastic findings in 289.

However, similar studies done in countries other than western, by Firmin Ankouane Andoulo *et.al* (2013, Yaounde, Cameroon)²⁰, Shahriar Nikpour *et.al* (2008, Tehran, Iran)¹⁵, and P. S. Cheung *et.al* (1988, Hong Kong)²⁴ all have found that hemorrhoids is the most common finding. Present study has similar findings.

Sedation Required.

In the present study, total 43patients (43.0%), 20males (58.9%) and 23females (34.8%) required sedation during the procedure which was similar to the study done by S Papagrigroriadis¹⁰ of 316 patients out of which 98 patients (31%) needed sedation.

COLONIC PATHOLOGIES



occult blood test, flexible sigmoidoscopy, and colonoscopy. *Gastroenterology*. 2003 Mar 31;124(3):608-14.

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CONCLUSION:

- Patient's complaints are important positive signs in instances of rectal bleeding.
- Colonoscopy after proper bowel preparation is the first choice and best option in many patients with per rectal bleeding.
- Colonoscopy proves to be a superior investigation of choice in patients with complaints of rectal bleeding in whom no diagnosis can be confirmed.
- Hemorrhoids are the most common cause of per rectal bleeding in present study.
- Most common cause in pediatric age group of painless bleeding is juvenile polyps.
- Patients who have undiagnosed bleeding per rectum or pain in abdomen and have a normal colonoscopy finding's, it is still satisfying to have visualized the entire colon to rule out other pathologies.

Conflict of interest- Nil

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