

Colonoscopic Findings of Patients with Lower Gastrointestinal Bleeding in Erbil City

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Abstract

Background and objectives: Rectal bleeding is a frequent symptom in young people and often over-investigated. Rectal bleeding is defined as bleeding from lower gastrointestinal tract, which means bleeding from a place distal to ligament of Treitz. This study was conducted to determine the frequency of different causes of rectal bleeding in young patients. **Methods:** Four hundred and seventy patients with rectal bleeding were selected in out-patient department were referred to gastroenterology units of Hawler and Rizgary Hospital in Erbil. Patients with suspected upper GI source of bleeding excluded from the study. All patients were subjected to colonoscopy after preparation of the gut and the findings were recorded. When it was necessary, biopsy samples were also taken. Diagnosis was based on colonoscopic findings. **Results:** The total number of patients was 470. Their mean age + SD were 31.96 + 7.65 years, the median was 32 years, ranging from 12 to 46 years, more than one third of patients had hemorrhoids, either alone (35.7%), or with other finding, (45%) of patients had hemorrhoid with or without other diseases, (8.3%) had inflammatory bowel disease and colorectal tumor (4.7%), also 21.3% of patients found to be normal. **Conclusions:** Haemorrhoids were the main cause of bleeding per rectum, followed by evidence of inflammatory bowel disease. The incidence of colorectal tumor was low (4.7%). Though most findings were benign, colonoscopy should be strongly considered for this patient group with non urgent rectal bleeding.

Keywords: Colonoscopy; Rectal bleeding; Hemorrhoid.

Introduction

Lower gastrointestinal bleeding is a very common symptom in adult patients. In most people, it is intermittent and often self-limiting. The majority of young patients with rectal bleeding will have benign anal conditions such as haemorrhoids or an anal fissure, but rectal bleeding may also be a symptom of inflammatory bowel disease or colorectal cancer^{1,2}. The age of the patient acts as a guide to the range of potential causes of rectal bleeding. For example, younger patients under 30 years are more likely to have haemorrhoids, anal fissure or inflammatory bowel disease whereas a patient over the age of 50 years with rectal bleeding has a higher risk of colorectal cancer³. The prevalence of rectal bleeding is poorly studied but available evidence suggests that one-year prevalence in adults is about 10% in the United Kingdom. Only a minority of people with rectal bleeding will seek medical advice⁴. Most studies on rectal bleeding do not stratify patients by age⁵. Hence, there is no consensus on the proper evaluation of younger adults with rectal bleeding. The studies

generally favor colonoscopy over sigmoidoscopy. But for adults aged younger than 45 years, data are sparse, deciding whether to subject a younger adult with non-urgent rectal bleeding to full colonoscopy can be difficult.

Some investigators have suggested the entire colon should be visualized in all patients with rectal bleeding^{5,6}. Colonoscopy is one of the best investigations of choice used to evaluate lower gastrointestinal bleeding^{7,8}. The identification and finding sources of gastrointestinal bleeding depends on whether the bleeding is acute massive hemorrhage or chronic intermittent bleeding^{9,10}. Ability of colonoscopy includes direct visualization; access for tissue biopsy; and the ability to treat bleeding lesions primarily with coagulation, vasoconstrictive agents¹²⁻¹⁴. The goal of colonoscopy is to identify and, if necessary, treat the source of bleeding, in hemodynamically stable patient¹⁵. Many studies have demonstrated that colonoscopy identifies definitive bleeding sites in more than 70 percent of patients^{16,17}. Use of colonoscopy has increased dramatically in recent years, particularly for younger pa-

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tients, while use of sigmoidoscopy has declined¹¹. Most cases of gastrointestinal bleeding resolve spontaneously, regardless of the amount of blood lost^{18, 19}. The stability of the patient and the rate of bleeding identify the order in which various diagnostic procedures should be used, evaluation by colonoscopy of the entire colon providing the opportunity to acquire tissue biopsy and facilitating therapeutic intervention²⁰. In cases where the source of bleeding cannot be confirmed, or if bleeding continues, a colonoscopy should be performed for complete evaluation of the large bowel²¹. Many doctors may consider a limited evaluation of the rectosigmoid area in patients younger than 40 years because only less than 5% of colorectal cancer cases occur in this groups²². In addition, the main leading cause of rectal bleeding in patients younger than 30 years is anorectal disease such as hemorrhoids or anal fissures²³. Once the bleeding is suspected to be coming from a lower GI source, it warrants an evaluation in all cases and proctosigmoidoscopy followed by colonoscopy is the examination of choice for diagnosis and treatment. It is also the most accurate method of imaging the lower gastrointestinal tract^{17, 24}.

Rectal bleeding has various causes that can be divided into different groups, these include: anatomic (diverticulosis); vascular (angiodysplasia, ischemic); inflammatory (infectious, idiopathic, and radiation induced); and neoplastic. The aim of this study was to review the diagnostic findings of colonoscopy in adults younger than 45 years who had non-urgent rectal bleeding.

Patients and Materials

Data was collected retrospectively from the endoscopy unit database of all consecutive flexible colonoscopy examinations over a five year period from 2013 to 2018. A younger patient, for the purpose of the study, is defined as one aged 45 years or less. Patients who had rectal bleeding as their only symptom were included in the study. It was a cross-sectional descriptive study carried out at Department of Gastroenterology, Erbil and Rizgary Teaching Hospital, including 470 patients selected according to following inclusion and exclusion criteria. Inclusion Criteria were male and female patients with age between (12-45) years old patients presenting with visible bleeding per rec-

tum as their main complaint. Exclusion criteria were patients below the age of 12 or above 45 years. Patients with possible upper gastrointestinal bleeding, with bleeding per rectum as a result of acute infectious bloody diarrhea, chronic constipation and melena and patients presented to the out-patient Departments or admitted to (Hewler and Rizgary Hospital) were included in the study.

All data were collected from hardware document files of patients from gastroenterology units of the two hospitals under their agreement. All patients were prepared for colonoscopy by asking them to use colocolon (ethyl glycol) one day prior to the examination. They were administered enema once on the night before and once on the day of examination.

Midazolam 3mg and pethidine 25 mg were used as an anxiolytic and analgesic. Olympus colonoscopy was used for examination. Colonoscopy results were analyzed using the statistical tests. Lesions with suspicion were biopsied and sent to laboratory for Histopathological studies. The ethical approval of the present study was taken from Ethics Committee in Kurdistan Board for Medical Specialties. Data were analyzed using the Statistical Package for Social Sciences (SPSS, version 22). Numerical data were presented as mean and standard deviation (SD). Categorical data were presented as frequencies and percentages. Chi square test of association was used to compare proportions. A p-value of ≤ 0.05 was considered statistically significant.

Results

The total number of patients was 470. Their mean age was 31.96 ± 7.65 years, the median was 32 years, ranging from 12 to 45 years. Table 1 shows the highest proportion (44.6%) of the patients aged 30-39 years, and only 5.9% aged less than 20 years.

The number of males was 264, and the number of females was 207. The male: female ratio was 1.27: 1 as presented in the Table 1.

Table (1):Demography distribution of patients.

Demography	No.	(%)
Age (years)		
< 20	28	(5.9)
20-29	140	(29.7)
30-39	210	(44.6)
≥ 40	93	(19.7)
Gender		
Male	264	(56.1)
Female	207	(43.9)
Total	471	(100.0)

Table 2 shows that more than one third of patients had hemorrhoids, either alone (35.7%), or associated with polyp (2.3%), with proctitis (1.5%), with diverticulosis (0.9%),

with other diagnoses (0.9%), fissure (0.6%), solitary rectal ulcer (0.4%), colorectal tumor (0.4%), inflammatory bowel disease (0.4%), and polyp and diverticulosis (0.2%). So collectively, 43.5% of patients had hemorrhoids (alone or with other diseases). Next to hemorrhoids is the inflammatory bowel disease (IBD) (8.3%), polyp (4.9%), colorectal tumor (4.7%), fissure (4%), and solitary rectal ulcer (3.6%). The Table shows also that 21.3% of patients found. No significant association was detected between gender and diagnosis categories (p-value = 0.289).

Table (2):Colonoscopic findings with gender and the incidences.

Diagnosis	Male		Female		Total	
	No.	(%)	No.	(%)	No.	(%)
Hemorrhoids	99	(37.6)	69	(33.3)	168	(35.7)
Normal	53	(20.2)	47	(22.7)	100	(21.3)
IBD	26	(9.9)	13	(6.3)	39	(8.3)
Polyp	14	(5.3)	9	(4.3)	23	(4.9)
Colorectal tumor	8	(3.0)	14	(6.8)	22	(4.7)
Other	13	(4.9)	9	(4.3)	22	(4.7)
Fissure	8	(3.0)	11	(5.3)	19	(4.0)
Solitary rectal ulcer	6	(2.3)	11	(5.3)	17	(3.6)
Proctitis	9	(3.4)	6	(2.9)	15	(3.2)
Hemorrhoids & polyp	10	(3.8)	1	(0.5)	11	(2.3)
Hemorrhoids & proctitis	5	(1.9)	2	(1.0)	7	(1.5)
Diverticulitis	2	(0.8)	3	(1.4)	5	(1.1)
Hemorrhoids & diverticulitis	3	(1.1)	1	(0.5)	4	(0.9)
Hemorrhoids & other Diagnoses	0	(0.0)	1	(0.5)	4	(0.9)
Hemorrhoids & fissure	2	(0.8)	1	(0.5)	3	(0.6)
Polyp & fissure	1	(0.4)	2	(1.0)	3	(0.6)
Hemorrhoids & ulcer	1	(0.4)	1	(0.5)	2	(0.4)
Hemorrhoids & colorectal tumor	1	(0.4)	1	(0.5)	2	(0.4)
Hemorrhoids & IBD	1	(0.4)	1	(0.5)	2	(0.4)
Polyp & other diagnoses	0	(0.0)	1	(0.5)	1	(0.2)
Hemorrhoids, polyp and diverticulosis	1	(0.4)	0	(0.0)	1	(0.2)
Proctitis & polyp	0	(0.0)	1	(0.5)	1	(0.2)
IBD & proctitis	0	(0.0)	1	(0.5)	1	(0.2)
IBD & fissure	0	(0.0)	1	(0.5)	1	(0.2)
Total	263	(100.0)	207	(100.0)	470	(100.0)

p-value = 0.289 (calculated by Pearson Chi-square test). IBD= inflammatory bowel disease

Discussion

One of the frequent complain of patient in outpatient clinic is lower gastrointestinal bleeding that is usually mild non urgent self-limiting. Lower gastrointestinal bleeding is different from upper GI bleeding in epidemiology, prognosis, and management. The diagnostic yield of colonoscopy in lower GI bleed has been found to be 78.7% which supports almost similar results in other studies¹⁷.

The results of this study were significant in that approximately 4.7% of patients younger than 45 years with rectal bleeding had colorectal tumor, including 14 female and 8 males with that were mostly rectosigmoid tumors and less frequently proximal colon (20) patients between age (35-43), one patient was (29) years and one patient was (44) years age these indicated that family history and genetic factor may play a role so screening program is important issue for early detecting of diagnosis, and proper management before the tumor become in advancing stage. Although an increase in rectal cancer found in younger patients, O'Connell et al demonstrated an increase in rectal cancer in patients aged 20 to 40 years²⁷, especially rectosigmoid tumors, because many physicians may consider a limited evaluation of the anorectosigmoid region in patients younger than 40 years because only 5% of colorectal cancer cases occur in this group of patient²². In addition, the most common cause of rectal bleeding in patients younger than 30 years is anal pathology such as hemorrhoids or fissures²³. In a retrospective study by Wong RF et al. they found that the most common etiologies for bleeding in these patients were haemorrhoid (60.5%), (21.5%) had normal outcome, diverticulitis (8.5%), colitis (5.8%), rectal ulcer/anal fissure (6.3%) and (1.8%) had colorectal tumor^{25,30}.

Many studies have shown that hemorrhoids are the most common cause of lower GI bleeding. Hemorrhoids have also been shown to co-exist with other pathologies of rectal bleeding including fissure, polyp, and rectal ulcer and less frequently malignancy. This emphasizes the importance of colonoscopy in patients who present with a simple condition like hemorrhoids. These study reached results with hemorrhoids being the most common finding on flexible colonoscopy in 99 males (37.6%) and 69 female (33.3%) out of 470 patients and with associated

pathologies (43.5%) were found, that were almost all of these pathologies were benign incidence of hemorrhoids is slightly higher in males than females. In this study majority of patient with rectal bleeding were between age (20-40) that were 350 patient from total 470 patients. Most of the study of the rectal bleeding does not stratify patients by age²⁹. In many study of patients aged 20 to 40 years, a history of rectal bleeding was reported in nearly 20%²⁸.

Inflammatory bowel disease is a disease of young ages in the west. In this study, it was seen that out of 39 patients (8.3%) had the disease, twice common in male patients. This reflects changing etiological patterns in our region compared to west; as inflammatory bowel diseases having their onset usually between 15–45 years of age, being the third cause of lower GI bleeding. In this study, among 39 patients diagnosed to be sufferings from IBD, that were 26 male and 13 female (10 Crohn's and 29 ulcerative colitis), in 29 cases of ulcerative cases 20 were females and 9 were males, in 10 cases of Crohn's cases 6 were males and 4 were females. The mean age at diagnosis of IBD are ranged from (33.4 – 45) years³⁰. The median ages at diagnosis of ulcerative colitis are, in general, 5 to 10 years later than those associated with Crohn's disease³¹. In the study done by Acosta JA et al., The incidence range of IBS was 8.6% in younger than 40 years⁶. And C.K Porter et al. that the incidences were 19.6% among adult group³². Also, many studies found deferent incidence in adult groups²⁵. This study should be interpreted in the context of the limitations in that not all patients with rectal bleeding are referred to Gastroenterology Unit for evaluation, and this is particularly true for younger patients²⁶.

Conclusions

Haemorrhoids in young were the main cause of bleeding per rectum in this study, followed by IBD while infrequent polyps, fissure, diverticuli, and solitary rectal ulcer. The prevalence of colorectal cancer was of 4.7% among patients under 45 years old and that commonly these cancers were found in the rectosegmoid region and less frequently were found in proximal colon. Females were affected more than males.

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