Original Article

Etiological Patterns of Per Rectal Bleeding

Md. Anowar Hossain[1], Mst. Iffatara[2], Bimal Chandra Roy[3], Md. Shohel Rana[4], Md. Golam Rahman[5]

Abstract:
Context: Per rectal bleeding make the people worried about carcinoma of rectum in the different age groups. Most of the people with per rectal bleeding came to us with having believe that there may be a chance of hemorrhoids or carcinoma rectum or carcinoma colon. In the US, colorectal cancer ranks 3rd after prostate and lung cancer in men and after breast and lung cancer in women in both incidence and mortality. There is no study at the northern part of Bangladesh actually based on etiological patterns of per rectal bleeding. **Methods:** Aim of the study was to find out the causes of all patients presenting with per rectal bleeding in different ages from 1 year to more than 60 years. We used to confirm our diagnosis by details history, clinical examination, DRE, anoscopy, flexible sigmoidoscopy, colonoscopy, PBF & Hb electrophoresis. **Result:** In 1080 patients we found 17 etiological patterns responsible for per rectal bleeding. 380(36.11%) patients were diagnosed as hemorrhoids, 260(24.07%) anal fissure with sentinel piles, 100(9.07%) anal fissure with hemorrhoids, 40(3.70%) carcinoma rectum & 10(0.93%) diagnosed as carcinoma colon. **Conclusion:** Per rectal bleeding with bowel habit change make the diagnosis different. Hemorrhoids are the most common cause of per rectal bleeding. As per rectal bleeding could be single symptom for carcinoma rectum, all surgeons & physicians should keep it in mind.

Indexing words: Rectal bleeding, Differential diagnosis, Anoscopy, Sigmoidoscopy, Colonoscopy, PBF, Hb electrophoresis

Introduction:
Rectal bleeding is a common presentation of patients attending the general surgeons. Overall, colorectal carcinoma is the second most common malignancy in western countries, with approximately 18000 patients dying per annum in UK[1]. Per rectal bleeding is one of the important symptoms presenting as colorectal carcinoma but in most of the cases per rectal bleeding associate with benign diseases of anorectal region. A survey of industrial employees in UK aged over 40 years found that 11.8% of 916 persons completing symptom questionnaires admitted to recent rectal bleeding[2]**.** In a study of Australian veterans aged over 50 years living in Sydney, flexible sigmoidoscopy to 30 cm or more revealed only 4 polyps in the 15% admitting rectal bleeding[3]**.**

1. Associate Professor (CC), Dept. of Surgery, Rangpur Medical College, Rangpur
2. Assistant Professor, Dept. of Obs & Gynae, Rangpur Medical College, Rangpur
3. Professor, Dept. of Surgery, Rangpur Medical College, Rangpur
4. Junior Consultant, Dept. of Surgery, Rangpur Medical College Hospital, Rangpur
5. Associate Professor (CC), Dept. of Surgery, Rangpur Medical College, Rangpur

Lower gastrointestinal bleeding was defined as bleeding originating distal to the ligament of Treitz owing to the distinct nature of small intestinal bleeding. Bleeding originating between the ligament of Treitz and ileocaecal valve now referred to as middle gastrointestinal bleeding. Acute lower gastrointestinal bleeding is defined as the onset of hematochezia originating from either the colon or the rectum[4,5]**.** Presentation of per rectal bleeding varies according to causes. Some patient presented with painful per rectal bleeding e.g. anal fissure, locally advanced carcinoma rectum etc. Some are painless e.g. uncomplicated hemorrhoids, early rectal carcinoma. Some patients with per rectal bleeding may present with dysentery or altered bowel habits e.g. carcinoma rectum, ulcerative colitis etc. As presentation of per rectal bleeding varies according to etiology, details history, through clinical examination and endoscopy of colorectal part are very much important to evaluate the cause of per rectal bleeding.

Methods:
We aimed to diagnose by taking history, doing DRE, sigmoidoscopy, colonoscopy, PBF, Hb

electrophoresis. All patients were questioned about the other gastrointestinal symptoms, food habit, occupation and family history. Data was collected in a pretested data collection sheet.

The study cross sectional study was carried out at SOPD and indoor of general surgery department of Rangpur Medical College & Hospital and Kasir Uddin Memorial Hospital. Data was collected over 12 months periods from 1/1/2018 to 31/12/2018 and included 1080 patients. All patients aged from 1 year to more than 60 years presenting with bleeding per rectum in SOPD irrespective of cause and gender and consenting to participate were included. Patients of Chronic liver disease (CLD) and hematological diseased patients were excluded from the study. The collected data were tabulated and statistically analyzed using SPSS statistical package (version 23). p value of ≤0.05 was considered statistically significant.

Table 1: Age distribution of the subjects.

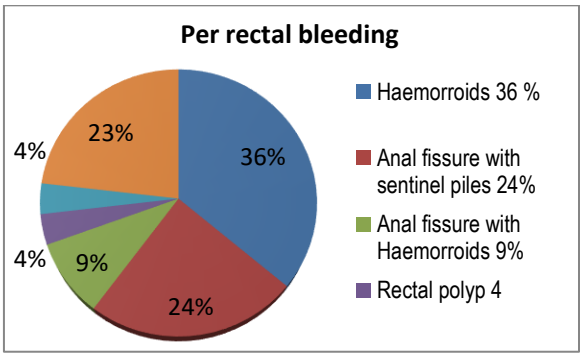
Age in years	**1-20**	**21-40**	**41-60**	**>60**
Numbers of patients	131	549	331	69

Table 2: Etiological patterns of per rectal bleeding with their percentage in different age groups.

Serial	**Pattern of per rectal bleeding**	**Number of patients according to age**				**Total patients**	**Percentage**	**p value**
		1-20 years	**21-40 years**	**41-60 Years**	**>60 years**			
01.	Anal fissure with sentinel piles	49	180	30	00	259	24.07	<0.01
02	Hemorroids	42	179	130	40	389	36.11	
03	Anal fissure with hemorroids	00	50	51	00	101	9.26	
04	Rectal polyp	32	10	00	00	42	3.70	
05	Carcinoma colon	00	00	10	00	10	0.93	
06	Carcinoma rectum	00	10	20	9	39	3.70	
07	Fistula in ano	0	30	30	00	60	5.56	
08	Hemorroids with rectal polyp	8	00	00	00	8	0.93	
09	Hemorroids with IBS	00	20	00	00	20	1.85	
10	Anal fissure with proctitis	00	10	10	00	20	1.85	
11	Anal fissure with anal stenosis	00	30	00	10	40	3.70	
12	Ulcerative colitis	00	10	20	00	30	2.78	
13	Anal fissure with ODS	00	00	10	10	20	1.85	
14	Hypertrophied anal papilla	00	10	00	00	10	0.93	
15	Anal fissure with Hb E trait	00	10	00	00	10	0.93	
16	Recurrent per rectal bleeding following hemorroidectomy	00	00	10	00	10	0.93	
17	Use of corrosive agents to the anal canal	00	00	10	00	10	0.93	
	Total Number of patients	**131**	**549**	**331**	**69**	**1080**	**100%**	

17 etiological patterns found presenting as per rectal bleeding. Out of 1080 patients 389 (36.11%) were hemorrhoids, 259 (24.07%) anal fissure with sentinel piles, 101 (9.26%) anal fissure with hemorrhoids, 60 (5.56%) Fistula in ano, 42 (3.70%) rectal polyp, 40 (3.73%) carcinoma rectum, 10 (0.93%) carcinoma colon, 40 (3.70%) anal fissure with stenosis, 30 (2.78%) ulcerative colitis, 20 (1.85%) hemorrhoids with IBS, 20 (1.85%) anal fissure with proctitis, 20 (1.85%) anal fissure with ODS, 8 (0.93%) hemorrhoids with rectal polyp, 10 (0.93%) hypertrophied anal papilla, 10 (0.93%) anal fissure with Hb E trait, 10 (0.93%) recurrent rectal bleeding following hemorroidectomy, 10 (0.93%) use of corrosive agents to the anal canal(P value <0.01).

Figure 1: Pie Chart shows top 5 causes of per rectal bleeding with others



Discussion:

In most of the cases of per rectal bleeding, we can diagnose these patients with DRE and proctoscopy. Commissioning guide 2013 red flag symptoms and signs in patients with rectal bleeding include associated change in bowel habit especially diarrhea or increased frequency, anemia, weight loss, abdominal or rectal mass. This means that the general surgeons need to have high index of suspicion of other pathology if symptoms and/or clinical cause do not follow common patterns suggestive of benign diseases. Persistent or unexplained symptoms could trigger need for investigations. While most rectal bleeding is caused by hemorrhoids and fissures or combination of both, bleeding can be caused by cancerous and precancerous conditions also.

Precancerous polyp at the end of the colon can mimic bleeding from hemorrhoids. Polyp and colon cancer are more common with aging thus clinical examinations and investigations of bleeding per rectum are important and should be more intensive in patients over the age of approximately 40 years where per rectal bleeding is the main symptom. As majority of per rectal bleeding due to pathologies in anal canal and rectum, simple DRE, proctoscopy and sigmoidoscopy can detect cause of per rectal bleeding in most of the cases. So every patient with per rectal bleeding should undergo DRE, proctoscopy and sigmoidoscopy, provided that there is no contraindication in doing these. In case of painful anal condition, examination under anesthesia should be done to detect the cause of bleeding. Rectal bleeding is not rare in early age. Rectal polyp, anal fissure and hemorrhoids are common causes of per rectal bleeding.

With the ages of time rate of carcinoma increasing day by day. We found 40 patients of carcinoma rectum out of 1080 patients presenting with per rectal bleeding. Dark red bleeding thought to be of diagnostic value for carcinoma rectum and colon[6,7,8,9,10]. Fresh bleeding per rectum usually indicates benign anorectal pathologies, like hemorrhoids, anal fissure, rectal polyp etc.

Conclusion:

Hemorrhoids are the most common cause of per rectal bleeding. Low fiber diet, red meat, fast food, chronic constipation, familial predispositions are important causes of increased incidence of hemorrhoids. DRE and proctoscopy/anoscopy in bed side practice are very much important in proper diagnosis. Suspicious mind make the diagnosis correct at the end with ones power of knowledge and skills.

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