

Original Article

Pattern of Diseases in Female Patients Presenting with Bleeding Per Rectum

Asifa Dian*
 Muhammad Hanif *
 Hamid Hassan**
 M. Musaddiq ***

Objective: To determine the pattern of diseases in female patients presenting with bleeding per rectum at Benazir Bhutto Hospital Rawalpindi.

Study Design: Cross sectional descriptive study

Place and Duration of Study: The study was conducted at surgical department of Benazir Bhutto Hospital Rawalpindi from January 2012 to June 2012.

Materials and Methods: 100 females with bleeding per rectum were included in the study. Proper history and examination was performed and diagnostic procedures like digital rectal examination and proctoscopy were undertaken. Examination under anesthesia, sigmoidoscopy, colonoscopy and biopsies were undertaken in selected patients to reach final diagnosis.

Results: The average age of the female patients was 34 with range of 11 to 75 years. Anal fissure (59%) was the leading cause of bleeding per rectum. Second frequent cause of rectal bleeding was hemorrhoids (34%). Colorectal cancer was diagnosed in 4% and IBD in 2% patient. One patient was suffering from cryptococcal fungal infection.

Conclusion: Anal fissure is most common cause of bleeding per rectum in female patients followed by hemorrhoids. Incidence of colorectal cancer in patients with rectal bleeding is not negligible in our setup.

Key words: Bleeding per rectum, Anal fissure, Hemorrhoids, Colorectal cancer.

*Assistant Professor
 **Associate Professor
 ***Professor

Department of General Surgery,
 Holy Family Hospital, Rawalpindi

Address for Correspondence

Dr. Asifa Dian
 Assistant Professor Department of
 General surgery Holy Family
 Hospital, Rawalpindi
 Email: asifadayan911@hotmail.com

Introduction

Bleeding per rectum refers to lower gastrointestinal (GI) bleed. Bleeding which occurs distal to ligament of Treitz is considered a lower gastrointestinal bleed.^{1,2} It is common symptom with annual incidence of 20%.² Rectal bleeding is relatively more common in females than males.^{3,4} Although it is common in the community but a small number of patients visit their health care provider and 30-50% of them are referred to hospitals.⁵ Patients with lower GI usually present with haematochezia.¹

Bleeding per rectum may be painful or painless with changes in bowel habits.^{5,6} Previously, rectal bleeding was considered as a high risk for colorectal cancer; however, it has low predictive value for carcinoma.^{4,5} Rectal bleeding may caused by many different conditions. Hemorrhoids are most common cause of bleeding per rectum.⁷ Other causes include anal fissure, inflammatory bowel disease (IBD), colorectal malignancy, infections and radiation therapy.⁸ Hemorrhoids and anal fissures cause frank rectal bleeding. In both sexes, colorectal cancer is the most common internal malignancy incidence of which rises above 40%.^{8,9}

Benazir Bhutto Hospital Rawalpindi is flooded with patients from the Punjab and Kashmir, men and women visiting equally. During examination of the female patients we found that many of the patients were reluctant to be examined for the rectum and perineal organs and many of them were presenting with chronic symptoms. Also, we found that the women with bleeding per rectum were visiting us frequently. Some female patients with bleeding per rectum were also reported having colorectal cancer. Chronic symptoms and appearance of CA rectum is of course alarming. In this context, we planned to study the pattern of diseases among women residing in our area so that we may recommend or apply positive modifications in our setup in terms of the well wish of the female patients.

Materials and Methods

The study was conducted at surgical department of BBH Rawalpindi. The patients were selected from OPD over a six months period (from January to June 2012). The sample was collected through non-probability consecutive sampling technique. All the female patients over 10 years of age presenting with bleeding per rectum in outdoor patient department were included in

the study. Patients with known bleeding diathesis, taking medication, those having chronic liver disease (CLD) and chronic renal failure (CRF) were excluded. Permission for the study was granted by the ethical committee of BBH. Written informed consent was taken from all the patients for inclusion in the study. Proper history, thorough examination and mandatory investigations were performed to reach final diagnosis. Proctoscopy, EUA and biopsy were performed where required. Sigmoidoscopy was done in all the patients over 40, with suspected carcinoma (CA) and inflammatory bowel disease (IBD). The patients requiring hospitalization were admitted in the ward. Findings were noted on proforma. Statistical analysis was performed with the help of window software SPSS version 16. Frequencies and percentages were calculated for anal fissure, hemorrhoids, CA rectum and IBD.

Results

All the included 100 patients were females ; the age was 11 to 75 years. 72 patients were married and 28 were single. All the patients presented to us with history of bleeding per rectum. Mean age of the patients was 34 years. Our study showed five types of diseases which caused rectal bleeding in females including anal fissure, hemorrhoids, colorectal cancer, IBD and cryptococcal fungal infection (table-I). Anal fissure was the most frequent condition (59%). One married patient of age 22 was diagnosed cryptococcal fungal infection on biopsy.

Table-I: Frequency of diseases in females presenting with bleeding per rectum (n=100)

Disease	Number of Patients	Percentage
Anal fissure	59	59%
Hemorrhoids	34	34%
Colorectal cancer	4	4%
IBD	2	2%
Cryptococcal infection	1	1%

Anal fissure was the leading cause of rectal bleeding in females with maximum patients in third and fourth decades of life. However, no female patient was found with anal fissure above 40. Second most common cause of bleeding per rectum in females was hemorrhoids with peak incidence in fourth and fifth decades of life. 50% patients with hemorrhoids presented with anal pain. 4 (4%) patients were diagnosed with colorectal cancer in fifth and sixth decades of their life (table-II). Three out of four (75%) patients with colorectal cancer presented painful rectal bleeding. Two patients were diagnosed with IBD, one in third and one in fourth decades of life.

One married patient of 22 years was suffering from cryptococcal fungal infection that was diagnosed on histopathological examination.

Table II: Distribution of causes of rectal bleeding in females according to age groups

Age Decades	11-20	21-30	31-40	41-50	51-60	60-70	Above 70
Number of patients	12	36	24	19	5	3	1
Anal fissure	12	33	14	-	-	-	-
Hemorrhoids	-	1	9	16	4	3	1
Colorectal cancer				3	1		
IBD		1	1				
Cryptococcal infection		1					

Discussion

Bleeding per rectum is one of the common symptoms in our area of the world resulting from various conditions. Although causes of this bleeding are often benign in nature but increasing incidence of colorectal cancer is challenging. We studied 100 female patients with rectal bleeding and found some different results from the studies done previously. Almost all of the previous studies included patients from both the genders. In this regard, our study is unique that we included and studied female patients only. We found that majority of the women presenting with rectal bleeding were suffering from anal fissure.

In this study, 59% females were suffering from anal fissure; of which 78% were painful. Many of the studies including both men and women reveal that hemorrhoid is most common cause of rectal bleeding. Anal fissure not has been reported as a source of rectal bleeding as large as found in our study. It is an unexpected incidence of anal in fissure in such a large population. However, it might be due to female patients only. In our society females hesitate to get checked up for their perineal and pelvic organs and severe pain of anal fissure might have caused them to seek health care advice. And it might be possible that the females having hemorrhoids with less severe pain had not come for check up, causing a big change in the results. This indicates that our areas need much awareness about health and fitness. Gayer et al¹⁰ studied 1112 patients presenting with lower gastrointestinal bleeding and they found no case with anal fissure, but 22.5% hemorrhoids. Manzoor et al² studies 200 patients with bleeding per rectum and found that anal fissure (27%) was the second most common cause. In our study, maximum cases of anal fissure were presented in third and fourth decades of the life. In this regard, Dziki et al¹¹ study

supports our study as they also reported peak incidence of anal fissure in third and fourth decades of life.

In our study, hemorrhoids made up 34% of rectal bleeding in female patients. In other words, hemorrhoids were the second most common cause of bleeding per rectum in women. However, the incidence of hemorrhoids is much less as compared to other studies. Benita et al¹² studied 547 patients with bleeding per rectum where 94% patients were with hemorrhoids. Shennak and Tarawneh¹³ also observed hemorrhoids as the leading cause of rectal bleeding. In a study by Manzoor et al², hemorrhoids made up 58% of the total rectal bleeding. In our study, most of hemorrhoids were encountered in the female patients who were in their fourth and fifth decades of life. Rhee and Lee¹⁴ reported hemorrhoids and fissures as most common cause of rectal bleeding (65.5%). However, in their study maximum patients with hemorrhoids were in the fourth decade of life which supports our study. Wienert et al¹⁵ reported that incidence of hemorrhoids increases at the beginning of second decade of life. But our study reported only one patient with hemorrhoids in the second decade of life. Considering these changes in the results, we recommend more expert studies to evaluate bleeding per rectum in women.

Our study reported 4 (4%) cases with colorectal cancer in women presenting with bleeding per rectum. Robertson et al¹⁶ studied 604 patients with rectal bleeding and reported 3.6% incidence of colorectal cancer which is very close to that shown in our study. Similarly, Siegel et al reported 2.9% incidence of colorectal cancer in women in United States.¹⁷ In the studies by Manzoor et al² and Anwer et al¹⁸ the mean ages of the patients with colorectal cancer were 50 and 46.5 years respectively. Our study reveals that in our areas, the incidence of colorectal cancer in women cannot be ignored. Women above 40 with bleeding per rectum, therefore, should consult their health care provider in order to get early evaluation and management. In our study, IBD was diagnosed in 2 (2%) patients. A recent study by Molodecky et al¹⁹ reported 6.3 per 100000 persons per year incidence of IBD in Asia and Middle East. In this regard, IBD is also considerable in females presenting with rectal bleeding in our setup. In one report by Shah and Uzma²⁰ from Karachi demonstrated that they have seen three cases of IBD which were mistaken for intestinal tuberculosis. This shows that IBD must be suspected and ruled out in patients presenting with rectal bleeding. So complete history, proper examination and necessary tests must be carried out in women with rectal bleeding. Similarly, one female was diagnosed cryptococcal fungal infection on biopsy. A study by Dixon²¹ supports our results in this regard of fungal infection and rectal bleeding. In other words, fungal infections may lead to rectal bleeding.

In our setup, in order reach a definite diagnosis in female patients presenting with bleeding per rectum, a complete history and thorough examination is required. Other symptoms like anemia, hemodynamic instability and abdominal complaints may accompany rectal bleeding.² Digital rectal examination (DRE) and proctoscopy should be performed except in patients with anal fissure.²² Painful bleeding or anal fissure can be examined by examination under (EUA) anesthesia. Acute anal fissures heal spontaneously or can be treated conservatively.²³ Chronic anal fissures require careful examination and non-healing chronic fissures may need surgical procedures.²⁴ Sigmoidoscopy, colonoscopy and biopsy may be carried out in selected patients.

In a nutshell, our study highlights a major difference of results in female patients with bleeding per rectum in our setup. Increased number of anal fissure and CA rectum and decreased incidence of hemorrhoids distinguish our study from the previous ones. Detailed history, thorough examination, mandatory investigations and timely management of women with bleeding per rectum in our setup are of prime importance. Comprehensive and encouraging health awareness programs for women in our society will help in the improvement of health status among women.

Conclusion

Anal fissure is most common cause of bleeding per rectum in female patients followed by hemorrhoids. Incidence of colorectal cancer in patients with rectal bleeding is not negligible in our setup. The most important is the significant incidence of colorectal cancer in females presenting with rectal bleeding.

References

1. Zia N, Hussain T, Salamat A, Mirza S, Hassan F, Waqar A. Diagnostic evaluation of patients presenting with bleeding per rectum by colonoscopy. *J Ayub Med Coll Abbottabad*. 2008; 20(1): 73-6.
2. Manzoor A, Shah SA, Inam A. Etiologic spectrum of bleeding per rectum in surgical outpatient department of a tertiary care hospital. *Ann Pak Inst Med Sci*. 2011; 7(4): 180-5.
3. Ellis BG, Thompson MR. Factors identifying higher risk rectal bleeding in general practice. *Brit J Gen Pract*. 2005; 55(521): 949-55.
4. Fijten GH, Blijham GH, Knottnerus JA. Occurrence and clinical significance of overt blood loss per rectum in the general population and in medical practice. *Brit J Gen Pract*. 1994; 44(384): 320-5.
5. Thompson JA, Pond CL, Ellis BG, et al. Rectal bleeding in general and hospital practice; 'The tip of the iceberg'. *Colorect Dis*. 2000; 2(5): 288-93.
6. Wentlandt K, Beck CE. Case 1: A child with gastrointestinal bleeding. *Paediatr Child Health*. 2007; 12(10): 869-70.
7. Ferguson MA. Office evaluation of rectal bleeding. *Clin Colon Rectal Surg*. 2005; 18(4): 249-54.
8. Cheung PSY, Wong SKC, Boey J, Lai CK. Frank rectal bleeding: a prospective study of causes in patients over the age of 40. *Postgrad Med J*. 1988; 64(1): 364-8.

9. Arafa MA, Sallam S, Jriesat S. Colorectal cancer screening amongst first degree relatives of colon cancer cases in Jordan. *Asian Pac J Prev.* 2011; 12(4): 1007-11.
10. Gayer C, Chino A, Lucas C, Tokioka S, Yamasaki T, Edelman DA. Acute lower gastrointestinal bleeding in 1,112 patients admitted to an urban emergency medical center. *Surgery.* 2009; 146(4): 600-7.
11. Dziki A, Trzcinski R, Langner E, Wronski W. New approaches to the treatment of anal fissure. *Acta Chir Iugosl.* 2002; 49(2): 73-5.
12. Tan BKT, Tsang CBS, Nyam DCNK, Ho YH. Management of Acute Bleeding Per Rectum. *Asian J Surg.* 2009; 27(1): 32-8.
13. Shennak MM, Tarawneh MM. Pattern of colonic disease in lower gastrointestinal bleeding in Jordanian patients: a prospective colonoscopic study. *Dis Colon Rectum.* 1997; 40(2): 208-14.
14. Rhee JC, Lee KT. The causes and management of lower GI bleeding: a study based on clinical observations at Hanyang University Hospital. *Gastroenterol Japon.* 1991; 26(3): 101-6.
15. Wienert V, Albrecht O, Gahlen W. Results of incidence analyses in external hemorrhoids. *Hautarzt.* 1978; 29(10): 536-40.
16. Robertson R, Campbell C, Weller DP, Elton R, Mant D, Primrose J. Predicting colorectal cancer risk in patients with rectal bleeding. *Br J Gen Pract.* 2006; 56(531): 763-7.
17. Siegel RL, Jemal A, Ward EM. Increase in incidence of colorectal cancer among young men and women in the United States. *Cancer Epidemiol Biomarker Prev.* 2009; 18(6): 1695-8.
18. Anwar N, Badar F, Yusuf MA. Profile of patients with colorectal cancer at a tertiary care cancer hospital in Pakistan. *Ann N Y Acad Sci.* 2008; 1138: 199-203.
19. Molodecky NA, Soon IS, Rabi DM, Ghali WA, Ferris M, Chernoff G, et al. Increasing incidence and prevalence of the inflammatory bowel diseases with time, based on systematic review. *Gastroenterology.* 2012; 142(1): 46-54.
20. Inflammatory Bowel Disease or Abdominal Tuberculosis? *H Pediatr Gastroenterol Nutri.* 1998; 27(2): 268.
21. Dixon MR. Viral and fungal infectious colitides. *Clin Colon Rectal Surg.* 2007; 20(1): 28-32.
22. Villalba H, Villalba S, Abbas MA. Anal fissure: a common cause of anal pain. *Perm J.* 2007; 11(4): 62-5.
23. Bhardwaj R, Parker MC. Modern perspectives in the treatment of chronic. Anal fissures. *Ann R Coll Surg Engl.* 2007; 89(5): 472-8.
24. Altomare DF, Binda GA, Canuti S, Landolfi V, Trompetto M, Villani RD. The management of patients with primary chronic anal fissure: a position paper. *Tech Coloproctol.* 2011; 15(2): 135-41.