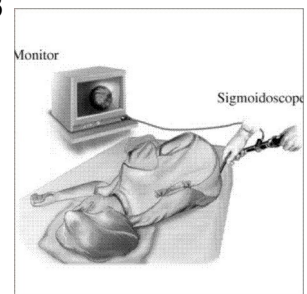


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# LOWER G.I.T BLEEDING; ROLE OF SIGMOIDOSCOPY



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**ABSTRACT... Objectives:** 1. To find out the most common cause of lower Gastrointestinal tract bleeding in our setup as diagnosed with sigmoidoscopy 2 To measure the frequency of colorectal carcinoma with special reference to age and sex distribution 3. To compare the assessment of findings in prepared and unprepared gut on sigmoidoscopy. **Design:** Prospective, descriptive study. **Period:** Eight months study (January 2002 to June 2003). **Setting:** Surgical Unit III, Allied Hospital/PMC Faisalabad. **Patients & Methods:** 50 cases presented with mild to moderate lower GIT (Gastrointestinal tract) bleeding and underwent sigmoidoscopy and biopsy and histopathology reports were studied. **Results:** The most common cause of lower GIT bleeding as diagnosed by sigmoidoscopy was non specific colitis(46%) followed by colorectal carcinoma (18%), ulcerative colitis (16%) and a small percentage of benign rectal polyps, villous adenoma, and carcinoid tumour. Colorectal carcinoma was an important cause of lower GIT bleeding. In this study most of the cases of colorectal carcinoma presented in younger age group (55.5 % < 40 year age group). Male to female ratio was found to be 2:1. Sigmoidoscopy in unprepared gut had good results as compared to prepared gut. Faecal matter obscured the vision in any two cases only in unprepared cases. **Conclusion:** Rigid sigmoidoscopy is an early and valuable initial diagnostic procedure for the detection of cause of lower GIT bleeding, especially in a case of colorectal carcinoma, as early detection saves human life in this case.

**Key words:** Lower Gastrointestinal tract bleeding, sigmoidoscopy, histopathology, colorectal carcinoma, gut preparation.

## INTRODUCTION

Bleeding per rectum is the main symptom of most of the colorectal pathologies. Sigmoidoscopy is obligatory in any patient with symptoms of large bowel or anal disease<sup>1</sup>. Sigmoidoscopic examination is performed for

the diagnosis, prognosis and choice of treatment in patients with minor rectal bleeding and the diagnosis is confirmed histopathologically<sup>2</sup>.

Rigid sigmoidoscopy is still more widely used than flexible sigmoidoscopy in U.K and is probably safer<sup>3</sup>.

Rigid sigmoidoscopy is an out patient and bedside procedure. Distal 20-25 cm of anorectum can be examined With the help of this instrument<sup>4</sup>.

Colorectal cancer is the second leading cause of death from malignancy in the western world<sup>5,6</sup>. Colorectal carcinoma is no more a rare disease in Pakistan. Its incidence is increasing in Pakistan and other developing countries possibly due to gradual westernization of diet<sup>7,8,9</sup>.

3-12 % of patients have one or more synchronous cancers<sup>10</sup>. Barium examination and sigmoidoscopy compliment each other in the search for polyps and tumours in the large bowel<sup>11</sup>. However DCBE (double contrast barium enema) should be performed ten days following sigmoidoscopy and biopsy as there is risk of perforation in the early days<sup>12</sup>.

## PATIENTS & METHODS

This study was carried out in Surgical Unit III Allied Hospital Faisalabad, affiliated with Punjab Medical College Faisalabad, over a span of one and half year from January 2002 to June 2003. Fifty patients were included in the study, presenting through outdoor or indoor with complaints of mild to moderate lower GIT (Gastrointestinal tract) bleeding.

Patients under twelve year of age, severe anal pain, anal stenosis, haemorrhoids, anal fissure, massive lower GIT bleeding and those presenting with signs and symptoms of intestinal obstruction were excluded from the study.

At the time of admission, history, findings on clinical examination and relevant investigations were recorded on a performa in every patient. Fifty percent of patients underwent gut preparation with phosphate soda enema, in the evening and night before procedure.

Procedure was carried out without any anesthesia, only two patients needed narcotic analgesics for pain relief. Sigmoidoscopy was performed in left lateral (Sim's) position, being more comfortable for the patient. The instrument was lubricated with xylocaine gel 2% and passed gently into the anal canal towards patient's

umbilicus. Examination was carried under direct vision with out blind advancement with just sufficient air insufflated to keep the rectal wall apart. Following observations were made;

1. Abnormal faeces, blood, mucous or pus in the lumen.
2. Focal mucosal lesions e.g. polyps, carcinoma.
3. Diffuse lesions e.g. inflammation.

Biopsy of the suspected lesion was taken from the edge of the lesion using cusp forceps then oriented on a filter paper before fixation in formalin to allow best possible preparations for histopathological examination. Ten days following endoscopy, reports showing colorectal carcinoma or rectal polyps underwent DCBE to rule out any synchronous lesion<sup>1</sup>.

Data analysis was carried out on the basis of history, examination, endoscopic and histopathological findings that were recorded on the performa at the time of admission. The data was systematically tabulated and analyzed to bring the data into a comparable form. Simple percentages were calculated for the attainment of frequency distribution of personal traits of patients. Graphical method was used to present the different categories of data.

## RESULTS

In this study 50 cases presenting with lower GIT bleeding were studied to find out the most common cause of lower gastrointestinal tract bleeding with the help of rigid sigmoidoscopy. There were 35 male and 15 female patients.

Bleeding per rectum was the main symptom, and among the other symptoms; tenesmus, altered bowel habit, abdominal distention and mass formation was found in patients with colorectal carcinoma, while, abdominal pain, fever, mucous discharge, weakness was found in patients with non specific colitis and ulcerative colitis. Digital rectal examination showed finger staining with blood in most of the cases and in four cases palpable lesion in rectum was detected.

The most common cause of lower GIT bleeding on endoscopy was found to be non specific colitis (25 cases), This was followed by colorectal carcinoma, ulcerative colitis and rectal polyps. No mucosal pathology could be detected on sigmoidoscopy in four cases, however blood in the lumen was found coming from proximal site (Table-I).

Nonspecific colitis was found to be the most common cause on histopathology; 23 cases followed by colorectal carcinoma, ulcerative colitis, benign rectal polyps, adenoma and unremarkable normal mucosa (Table-II).

Disease	No. of cases	% Age
Non specific colitis	25	50%
Growth	11	22%
Ulcerative	8	16%
Polyps	2	4%
No mucosal lesion	4	8%

Disease	No. of patients	% Age
Non specific colitis	23	46%
Colorectal carcinoma	9	18%
Ulcerative colitis	8	16%
Benign rectal polyps	2	4%
Villous adenoma	1	2%
Carcinoid tumour	1	2%
Unremarkable mucosa	2	4%

**Note:** the above table is showing histopathology of 46 cases, as in 4 cases no lesion was detected on sigmoidoscopy, so biopsy was not taken.

Colorectal carcinoma was found in 18% of our population presenting with lower GIT bleeding. As adult patients

were included in my study, patients with colorectal cancer range between 16 and 70 year. Most of the patients were in a younger age group i.e. 55.5% patients were <40 years old. Mean age was 43 year. Out of nine cases of colorectal carcinoma, six were males and three were females making a male to female ratio of 2:1. All the females were in younger age group.

Seven cases belonged to rural areas and two to urban side, making a rural: urban ratio of 3.5:1. This could be a reflection of higher population residing in the villages.

Endoscopy showed fungating appearance in five cases circumferential involvement of lumen in three patients and one had a nodular appearance.

Sigmoidoscopy could not be performed beyond lesion because of narrow lumen in three cases, so biopsy was taken at that site. Sigmoidoscopy could not detect any lesion in four cases, so in these cases and those with histopathology reports of colorectal carcinoma and rectal polyps; DCBE was performed ten days later. In former four cases DCBE could detect abnormality in three cases and in later cases no synchronous lesion could be detected with this contrast study, so later on colonoscopy was done in these cases that showed carcinoma caecum in two cases and descending colon involvement in one case. Fourth case was that of non specific colitis in descending colon.

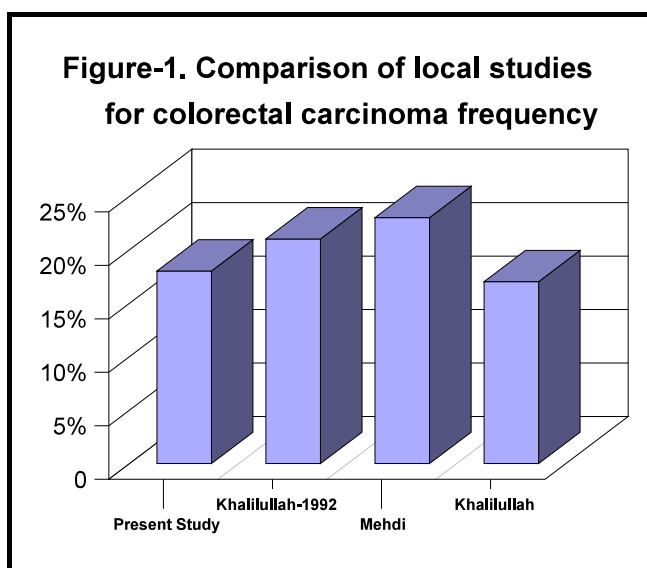
Assessment of findings in prepared v/s unprepared gut, showed that administering enema added to the inconvenience of the patients as well as of the endoscopist, as important finding of luminal contents were missed by administering enema. In unprepared gut field was obscured by Faeces in two cases only, in one of these irrigation of lumen was done with irrigation channel of sigmoidoscope, while in the second, endoscopy was repeated on the next day after patient had passed stool.

## DISCUSSION

There are many diagnostic procedures that can be used to detect the cause of bleeding per rectum like; rigid sigmoidoscopy, flexible sigmoidoscopy, colonoscopy,

DCBE. Each of these has its own advantages and limitations; however rigid sigmoidoscopy is the traditional first line colonic examination in a patient with colonic symptom<sup>13</sup>. Most colonic pathologies causing lower GIT bleeding are within the reach of a 75cm sigmoidoscope<sup>14</sup>

The histology of the colonic mucosal biopsies revealed that the majority of our patients who have bleeding per rectum are in fact suffering from non specific colitis (46%). This correlate with other studies in this region<sup>15,16</sup>. Colorectal carcinoma was considered as disease of western world, where it is second commonest cause of death from malignancy<sup>5,6</sup>. However this is no more a rare disease in Pakistan as the studies of Khalilullah et al (1992)<sup>15</sup>, Mehdi et al<sup>16</sup> and Khalilullah et al (2001)<sup>17</sup> are showing (Fig.1)



Male to female ratio in our study (2:1) was higher than that reported from USA (1.21:1) but was close to the studies of Mehdi(1.9:1)<sup>16</sup> and Sial(2.08:1)<sup>18</sup>, and Saudi (2.24:1) reports<sup>19</sup>. This disparity could be due to the fact that our women remain under reported because of cultural and religious traditions. As compared to west, our patients present in younger age group<sup>20-23</sup>.

The peak age of colorectal carcinoma in western world is 60-70 year, fewer than 20% cases occurring before 40 year<sup>24</sup>. Another western study shows less than 1% cases

occurring before forty year<sup>25</sup>. In this study 55.5% patients presented before 40 years that is even higher than the studies of Abdul Gafoor<sup>9</sup>, Sial<sup>18</sup> and Talpur<sup>26</sup>. A study from Nepal also shows increasing incidence of colorectal carcinoma in younger age group<sup>27</sup> (Table III).

Studies	%age of patients below 40 yrs of age
Abdul Ghafoor (1998) <sup>9</sup>	45.6%
Sial (1999) <sup>18</sup>	43.8%
Talpur (2000) <sup>26</sup>	45.6%
Landi (1998) <sup>24</sup>	20%
Singh Y (2002) <sup>27</sup>	28.6%
Present study (2003)	55.5%

In this study 66.6% cases of colorectal carcinoma belonged to rural side and 33.3% to urban sidemaking a rural to urban ratio in my study was 3.5:1. Talpur KA and colleagues also reported higher frequency in rural areas as compared to urban areas<sup>26</sup>.

Ulcerative colitis is global in distribution and is relatively more frequently diagnosed than Crohn's disease in eastern population of adults<sup>28</sup>. In this study its frequency is found to be 16% that is similar to the study<sup>15</sup> and the study of Al-Nakib from Kuwait, who reported its frequency to be 2.27 per 100,000 of total population<sup>29</sup>. Most of the patients in the present study presented between thirty and fifty years. One case of ulcerative colitis with long history, in this study, showed the evidence of dysplastic changes.

Previously it was thought that gut preparation should be done, as faecal loading of colon obscures the view of endoscopist<sup>30</sup>. However our observation was that except in two cases no hindrance in view of gut pathologies occurred and gut preparation was rather more inconvenient for the patients.

## CONCLUSION

Bleeding per rectum is the most common symptom of many large gut disorders that need detailed clinical assessment. Rigid sigmoidoscopy is an integral part of examination of distal large gut. Rigid sigmoidoscopy is an out patient and bedside procedure that does not need any gut preparation, as gut preparation is inconvenient for the patient and also removes important endoscopic findings. Most common cause of lower GIT bleeding in our setup as diagnosed with rigid sigmoidoscopy is non specific colitis. Colorectal carcinoma is not a rare pathology in our set up, its early detection is very important as it saves the life of the patients.

## REFERENCES

- Nicholls RJ. **Management of anorectal case.** In: Kyle J, Smith JAR, Johnston DH, eds. *Pye's surgical handicraft* 22 nd ed. Oxford: Butterworth-Heinemann. 1992: 290-91.
- Balken E, Kristioglu I, Gurpinar A, Ozel I, Sinmaz K, Dogruyol H. **Sigmoidoscopy in minor lower gastrointestinal haemorrhage.** Arch Dis Child 1998; 78: 267-8.
- Robinson RJ, Stone M, Mayberry JF. **Sigmoidoscopy and rectal biopsy; a survey of current UK practice.** Eur J Gastroenterol Hepatol, 1996; 8: 149-51.
- Rolands Rolandelli, Joel J, Roslyn. **Diagnostic studies** In: Sabiston DC, Lyerly HK, eds. *Sabiston text book of surgery.* 15<sup>th</sup> ed. Philadelphia: WB Saunders, 1997: 977-9.
- Lewis JD, Asch DA. Colorectal cancer screening with sigmoidoscopy: Primary care issue. LDI Issue Brief. 1999 Jun; 4 (2): 1-4.
- Irving Taylor. Colon Polyps and colon cancer. *Medicine International*, 1996; 2: 106-36
- Mamoon N, Ahmad M, Chuhan UH, Mushtaq S. **Colorectal carcinoma in Northern Pakistan; A clinicopathological study.** JCPSP 1999; 11: 486-89.
- Jaffery NAD, Zaidi SHM. Cancer in Pakistan. *Pak Med Assoc* 1987; 37: 178-83.
- Gafoor A, Jan MA, Bokhari H. **Clinical presentation and diagnosis of colorectal in carcinoma.** JCPSP 1998; 8: 126-28.
- Khan A, Changez HK. **Synchronous tumours of large intestine.** JCPSP 1999; 9: 540-41.
- Jonson JS, Jonasson A, Leppert J. Proctosigmoidoscopy in primary health care *Scand J Prim Health Care.* 1990; 8: 183-6.
- Bartolo DCC, Johnston JMS, Rintoul RF. **Operations on rectum and anal canal.** In Rintoul RF. *Farquharson's text book of operative surgery.* 8<sup>th</sup> ed. Edinburgh: Churchill Livingstone, 1995: 499-532
- Fowlie S, Jones HW, Hignett C, Rossenberg W, Chapman RW. **Investigation of colonic symptoms: the value of sigmoidoscopy.** Br J Clin Pract 1993; 47: 185-6.
- Graham P. **Sigmoidoscopy.** Aust Fam Physician 1996; 25: 1403-4.
- Khalilullah, Malik IA, Akhtar MA, Muzaffar M, Luqman M, Hussain A et al. **Spectrum of colonic disease in Rawalpindi- Islamabad area (Endoscopic and clinicomorphological study)** J PMRC 1992; 31:5-8.
- Mehdi I. **Frequency of gastrointestinal tumours at a teaching hospital in Karachi.** J Pak Med Assoc 1998; 48: 14-17.
- Khalilullah, Hussain A, Durrani AA. **The spectrum of disease in lower gastrointestinal tract: endoscopic biopsy findings.** JCPSP. 2001; 11: 443-8.
- Sial AR, Sheikh SM, Baluch QD, Rathi SL, Chand H. **A study of colorectal carcinoma.** JCPSP 1999; 4: 14-16.
- Danish S, Ajarim. **Patternn of primary gastrointestinal cancer: King Khalid university hospital. Experience and review of published national data.** Ann Saudi Med 1996; 16: 386-91.
- Azeem M, Chaudhry Z, Virik N, Abbas SM. **Surgical management of rectal tumors 3 yr experience at Mayo hospital .** J Surg 2001; 23: 43-7.
- Mehlo IA, Luqman M, Khalilullah, Mallahi MA, Rasool MD. **Colorectal carcinoma in Northern Pakistan: a retrospective study.** Pak J Surg 1990; 6: 31-35.
- Khawaja K, Chaudhry MA, Durrani KM. **Surgery for colorectal cancer.** Proceeding of Seikh Zayed post grad Med 1990; 4: 4-7.
- Gardezi JR, Sial GA, Guraya SY. Colorectal carcinoma: our experience. *Pakistan J Surg* 2001; 17: 15-19.

24. Landi SH. **Cancer statistics**,1998 .Ca Cancer J Clin 1998; 48: 6-8.
25. Atkin WS, Cuzik J, Whyness DK. **Prevention of colorectal cancer by once only sigmoidoscopy**. Lancet 1993; 341: 736-40.
26. Talpur KA., Sattar M, Jan MM, Muhammad AM, Rukhsana M. **Management of colorectal cancer**. JCPSP 2000; 5: 2-6.
27. Singh Y,Vidya P, Hemandas AK, Singh KP, Khakurel M. **Colorectal carcinoma in Nepalese young adults: Presentation and outcome**. Gan To Kagaku Ryoho 2002; 29: 223-9.
28. Venketaswarue K, Augustine P, Katariya S, Barror SL, Malik AK, Metha S. **Idiopathic ulcerative colitis**. Indian Paediatr 1985; 22 161-3.
29. Al- Naqib B, Radha Krishnan S, Jacob GS, Al- Liddawi H, Al- Ruwaib A. **Inflammatory bowel disease in Kuwait**. Am J Gastroenterol 1984;79::91-4.
30. Bulmer M, Hartley J, Lee PW, Duthie GS, Monson JR. **Improving the view in the rectal clinic: a randomized control trial**.Ann R Coll Surg Engl 2000; 82: 210-2.

**It is better to die on your feet than to live on  
your knees**

**Dolores Ibarrari**