

## COLONOSCOPY: A STUDY OF FINDINGS IN 332 PATIENTS

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### Abstract

Colonoscopy is usually the most sensitive and accurate diagnostic tool for the evaluation of colonic disease. Presentation of gastrointestinal disorders may vary in different communities. The purpose of this paper was to identify the pattern of colonic disease and outcome of colonoscopy in our community especially Chittagong, south-east part of Bangladesh. Data of 350 patients male 217(62%) and female 133(38%) were retrieved which included indications, endoscopic findings and therapeutic outcome. The caecum or terminal ileum was reached in 332(94.3%) patients. Pathological findings were seen in 191(57.43%) patients. The most common indications were clinical suspicion of IBS in 112 (33.73 %), lower gastro intestinal bleeding in 108 ( 32.53 %), pain in 47 (14.15%), Chronic diarrhea in 41 ( 12.34%) and mass lesion in 6 (1.08%) patients respectively. The findings were haemorrhoids in 119( 35.84%), polyp in 29( 8.73%), carcinoma in 22( 6.2%), ulcerative colitis in 7( 2.10%), worm infestation in 38(11.44%), ileocaecal tuberculosis in 3 (0.90%)patients. The site of pathology was 82% in the descending, sigmoid colon, rectum and anal canal. Rest of the pathology was in the proximal colon. Successful polypectomy in 22 patients and foreign body removal in 2 patients were done safely without any complication. An open access to colonoscopic evaluation is ideal to rule out colonic disease. It is a safe, highly diagnostic, and therapeutic tool for the colonic disease.

**Key words:** colonoscopy; abdominal pain; lower GI bleeding; mass lesion; therapeutic yield.

### Introduction

Colonoscopy is an established procedure in the work up and screening of patients with lower

gastrointestinal symptoms<sup>1,2,3</sup>. The demand for colonoscopy has been increasing over the years, given the relative safety and the low complication rate associated with the procedure<sup>1,2,4-12</sup>.

Data has been reported from western part of the world documenting the value of colonoscopy in the diagnosis of colonic disease<sup>4,5,13</sup>. Presentation of gastrointestinal disorders may vary in different communities. Investigation techniques relevant to GIT have developed quite fast, but like many other developments their use is restricted to few centers of excellence at the capital city of Bangladesh. Colonoscopy facility is very limited in Chittagong. The purpose of this paper was to identify the pattern of colonic disease and its therapeutic yield in Chittagong, the south-east part of the country as compared with those in western countries.

### Materials and methods

This study was conducted in a private diagnostic center cum 40 bedded hospitals at Chittagong. The records of 350 patients undergoing elective colonoscopy over the period of March 2002 to September 2005 were reviewed retrospectively. All the patients were referred by General Practitioners and private hospitals of Chittagong. Colonoscopy was performed in out patient setting. Detailed informed consent was obtained before the procedure in every patient. Standard colon preparation were accomplished with one day of low roughage diet, laxative at bed time and by polyethylene glycol /mannitol purgative. Patients underwent monitored conscious sedation with intravenous midazolam or pethidine. Patients with pulmonary or cardiac disease were hemodynamically monitored during the procedure. Procedures on pediatric or apprehensive patients were done under light anesthesia. The Olympus Video-Colonoscopy was used. When an abnormality was detected, biopsies were taken for pathological evaluation. The final diagnosis was made after endoscopic and histopathological assessment.

### Results

The caecum or terminal ileum was reached in 332 (94.3%) patients. (Table-I) shows the age and sex distribution. (Table-II) shows the important indications of colonoscopy. (Table-III) shows the pathological findings in 191 patients (57.43%) (Table - IV) Shows the site of lesions

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**Table I : Shows the age and sex distribution with percentage (n = 350).**

Male	Female	Age distribution in year		
217(62%)	133 (38%)	3-15	16-45	> 46
		11 (3.30%)	257 (73.16%)	82 (23.54%)

**Table II : Shows the important indications of colonoscopy (n = 332).**

Indication	Number of Patient	Percentage of Total
Per rectal bleeding	108	32.53
IBS	112	33.73
Pain	47	14.15
Chronic diarrhea	41	12.34
Constipation	9	2.71
Mass	6	1.80
Alteration of bowel habit	3	0.90
Anaemia	2	0.60
Weight loss	2	0.60
Foreign body removal	2	0.60

**Table III : Shows the type of lesion (n = 191)**

Type of lesion	Number of Patient	Percentage of Total (n = 332)
Haemorrhoids	119	35.84
Polyp	29	8.73
Carcinoma	22	6.2
Non specific colitis	7	2.10
Ulcerative colitis	7	2.10
Worm infestation	38	11.44
Ileocaecal tuberculosis	3	0.90
Normal	141	42.46

(Number shown is higher as same patient had different types of lesion)

**Table IV : Site of lesions**

Site of Pathology	Number of Patient
Rectum and anal canal	121
Descending colon	22
Transverse colon	20
Sigmoid colon	15
Caecum	7
Ascending colon	6

**Table V : Endoscopic Management**

Endoscopic Management	Number of Patient
Polypectomy	22
Foreign body removal	2

Of 108 patients presenting with per rectal bleeding, cause was identified as haemorrhoids in 63, Polyps in 23, carcinoma in 12, ulcerative colitis in 3,

radiation colitis in 2 and polyposis coli in 1 patient respectively. No source of bleeding from colon could be detected in 4 cases for patients during active bleeding, cause of bleeding was found to be of mid gut origin.

Abdominal pain was the indication of colonoscopy in 47(14.15%) patients. The findings were neoplastic lesion in 5, anal fissure in 9, haemorrhoids in 4, worm infestation in 3 and proctitis in 2 patients respectively. No obvious finding could be traced in rest 24 persons.

Chronic non-bloody diarrhea was the main indication in 41(12.34%) patients. The findings were polyp with worm infestation in 3, solitary rectal ulcer in 1 and Polyposis coli in 1 patient respectively. Rest of the patients revealed no abnormality.

One hundred and twelve patients of clinically suspected Irritable bowel syndrome were under gone the procedure. The reports were normal in 74, haemorrhoids in 27, anal fissure in 7, fissure with haemorrhoid in 2, rectal carcinoma in 1, and proctitis in 1 patient respectively.

Six patients underwent colonoscopy for mass lesion, which were identified clinically and radiologically. The finding was carcinoma in 2, tuberculosis in 3 and caecal colitis in 1 patient respectively.

Surveillance was carried out in 4 patients who had previously colonic resection for carcinoma, and 4 patients of ulcerative colitis. Recurrence of carcinoma was found in 2 patients out of 4.

Iron deficiency anemia was the main indication in 2 patients. No abnormality was detected in both of the patients at colonoscopy.

In this study 22 patients with the history of bleeding from moderate to large sized polyp under gone polypectomy and 2 patients had successful removal of foreign body from their colon (1 child with history of ingestion of metallic wire piece 2 inches long and another with accidental entry of ball pen top per rectum) avoiding major surgery (Table-V). No complication happened except in one patient who experienced post polypectomy minor bleeding and was managed conservatively. No colon perforation occurred in this series.

#### Discussion

There is still some controversy regarding open-access endoscopic service versus a strict criteria for doing the procedure<sup>1,3,14</sup>. Clearly, the answer lies in a better selection of patients for the procedure based

on the diagnostic yield. On the contrary, strict selection criteria for the procedure are bound to miss patients with significant and potentially treatable colonic pathology<sup>15</sup>. Neither strict criteria nor double-contrast barium enema were used in our study for the selection of patients before the procedure.

This study highlights several features observed on colonoscopy. The male female ratio is in accordance with the findings of other studies<sup>16</sup>. Colonoscopic procedures were undertaken more often in men as compared to women. The lower ratio of female is possibly due to the fact that women are more conservative. Colonoscopy was done mostly in younger subjects (mean age 35 year) which well correlates with that of other workers<sup>16</sup>.

The major indications evaluated for their diagnosis in our study are similar to those used in the several studies<sup>1-8</sup>. In this study, the most common indications were clinical suspicion of IBS in 37.73% and diagnostic yield was in 66% patients (74 out of 112).

Complete examination upto the caecum was possible in 94% of the cases which is also similar to other studies<sup>15-20</sup>.

Pathological findings identified in this study was 57.53% which is higher in contrast to others<sup>19</sup>.

In this study the yield of lower gastrointestinal bleeding was 92%. This is higher than that of Robert J et al<sup>19</sup>. Berkowitz et al<sup>1</sup> identified a cause for rectal bleeding in 70% of the cases undergoing colonoscopy, with the findings of diverticulosis, polyps, hemorrhoids, and cancer. In our study haemorrhoids were present in 30.84% patient which is lower than that of Robert Jet al<sup>19</sup> where the incidence was 60.5%. In a survey conducted in U.S.A. reported that the prevalence of per rectal bleeding was higher in young persons: 18.9% for those aged 20-40 years vs 11.3% for those older than 40 years<sup>20</sup>. Haemorrhoids are believed to be the most common cause of rectal bleeding in all age groups, accounting for 27%-72% of cases<sup>21</sup>.

A study from the Indian subcontinent identified several causes for lower GI bleeding in 85% of the cases, with the major findings being inflammatory bowel disease, acute colitis, polyps, radiation colitis, solitary rectal ulcer, and colon carcinoma<sup>22</sup>. But the incidence of inflammatory bowel disease particularly Ulcerative colitis in our study is much lower (2.10%). Even than the increasing incidence

of Ulcerative colitis in India, the neighboring country of Bangladesh alarms us for careful surveillance.

47 (14.15%) patients were scoped for lower abdominal pain. Of them neoplastic lesion was found in only 3(0.90%) cases. Several studies have looked at the incidence of colon cancer among patients presenting with abdominal pain. In a study by Neugut et al<sup>23</sup> abdominal pain as the primary indication for colonoscopy revealed carcinoma in 27.3% of cases. The low yield in our study may be explained by the fact that our patient population is generally younger, with 76% below 45 years of age.

Colo-rectal cancer was found in 22 (6.2%) of the patients in this study. An over all incidence of 4%-19% was reported in some series that included patients older than 50years<sup>21, 24</sup>. In a study of 280 patients younger than 40 done by Acosta et al<sup>25</sup>, the incidence of colon cancer was 0.03%. Lewis et al<sup>26</sup> retrospectively evaluated 570 patients younger than 50 years with rectal bleeding and found only 1 patient with colorectal cancer.

Choosing between sigmoidoscopy and colonoscopy for younger patients with rectal bleeding is a clinical dilemma. Acosta et al<sup>25</sup> concluded in his study that full colonoscopy should be seriously considered in younger population. Although the site of pathology was mostly in the distal colon and rectum in our study; significant number of patients had pathology in proximal colon as well which highlights the importance of full colonoscopy in majority of the indications.

Limitation of this study includes that only two colonoscopist performed colonoscopy. Larger prospective studies with more procedures should be undertaken in future.

This study contributes additional knowledge and reassurance as to the quality and safety of colonoscopy performed in outpatient settings. An open access to colonoscopic evaluation is ideal to rule out colonic disease. It is also of value to reassure the patient on more definitive grounds. Colonoscopy has also a great therapeutic value, which had certainly escaped many patients from extensive surgery. Colonoscopy requires specialized facilities and expertise. More physicians are needed to be trained to perform colonoscopy, which will help the rural and under served areas of the country people.

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