

Original Article**Clinical Profiles and Endoscopic Findings of Patients Undergoing Colonoscopy in Nobel Medical College****Rishab Shrestha*, Alisha Rajbhandari, Gaurav Chhetri, Rejina Shahi Regmi and Pradip Chaudhary**Department of Medicine, Nobel Medical College Teaching Hospital, Biratnagar, Nepal
Article Received: 15th December, 2018; Revised: 20th February, 2019; Accepted: 17th March, 2019**DOI: <http://dx.doi.org/10.3126/jonmc.v8i1.24446>****Abstract****Background**

Colonoscopy is an invasive procedure used both diagnostically and therapeutically. Direct visualization and real-time image of entire large colon and distal terminal ileum makes it superior. Patients are unable to undergo colonoscopy because of the limitation in the developing country. Moreover, limited studies are available in our country regarding the colonic diseases.

Materials and Methods

It was a descriptive cross-sectional study done in Nobel Medical College Teaching Hospital, Biratnagar, Nepal from January 2018 to December 2018. Approval was acquired from Institutional Review Committee. All patients undergoing colonoscopy in the hospital was included. After taking proper consent, bowel preparation, pre-medications, colonoscopy was performed, findings noted in pro-forma.

Results

Of the total 176 patients 119 (67.60%) were male and 57 (32.40%) were female; mean age 46.98 ± 17.13 years. Indication for performing colonoscopy was chronic diarrhea in 58(33.0%), chronic abdominal pain in 47(26.70%). Significant lesion observed in 142 patients (80.68%); colitis with unspecified etiology in 69 (39.20%), ulcerative colitis in 28 (15.90%), crohn's disease in 13(7.38%). Colitis was more in male 46(66.67%) and involving rectum was common. Pan-ulcerative colitis was common seen in 11patients (39.28%).

Conclusion

Chronic diarrhoea and chronic abdominal pain were two common indications. Male patients were in higher prevalence opting for colonoscopy. Colitis of unspecified etiology of rectum and ileo-cecal region was most common finding. Ulcerative colitis involving whole of colon and younger age group was predominantly affected.

Keywords: *Colonoscopy, Colitis, Chronic diarrhea, Ulcerative colitis*

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Introduction

Colonoscopy is an invasive procedure used both diagnostically and therapeutically in examination and treatment of the diseases of rectum, colon, and terminal portion ileum [1]. Various diseases like IBD, infective colitis, colonic adenomas, polyps and colonic carcinomas require colonoscopy for their diagnosis. Screening for high-risk patient for colonic carcinoma begins from 50 years onwards [2]. Direct visualization and real-time image of entire large colon and few centimeters of distal terminal ileum makes colonoscopy superior to other modalities of investigations opted for colonic pathology.

Furthermore, addition to imaging, mucosal biopsy for diagnostic purpose and minimal invasive therapeutic procedure can be done during the procedure. Indications for performing colonoscopy include screening or surveillance for colon cancer, evaluating colonic or distal small bowel pathologies, assessing a response to treatment in patients with known colonic disease whereas, indications for therapeutic intervention include polypectomy, stricture dilation, stent placement, colonic decompression and foreign body removal. Of all the advantages, colonoscopy is not routine investigations due to its limitation by instruments, skilled manpower and painful invasive procedure. The procedure also required sedation, which even limits its availability [3].

Patient presenting with lower gastrointestinal pathology are not able to undergo the investigation because of the limitation especially in the developing country like Nepal. Very limited studies are available in our country regarding the colonic diseases in respect to developed countries. Considering above facts this study was designed to see the clinical profiles and endoscopic finding of the patient undergoing colonoscopy at tertiary care center in eastern part of Nepal.

Materials and Methods

This study is a descriptive cross-sectional study done in Nobel Medical College Teaching Hospital, Biratnagar, Nepal from January 2018 to December 2018. The study was started after acquiring the approval from Institutional Review Committee of Nobel Medical College. Written consent was taken after patient been explained about the procedure, its complications and advantages. All patients undergoing colonoscopy in the

hospital within the 12 months duration was included in the study. Patient presented for follow-up colonoscopy was excluded. On an average 40 colonoscopies were performed in previous three months, so the sample size of more than 160 patients was taken. History, physical examination and relevant data of all the patients were collected as per predesigned Pro-forma. Patient's data includes Name, age, sex, symptoms, and endoscopic findings. Bowel preparation was done using 2 liters of Poly Ethylene Glycol given 8 hours prior to procedure and patient kept on liquid diet from 48 hours prior to procedure.

During procedure patient was laid on left lateral position, intravenous Hyoscine butyl bromide was given. Per-rectal examination was done following which colonoscopy was performed with Olympus CV 170 video-colonoscopy. Abnormalities in the colonoscopy were noted; biopsy was taken. Data collected was entered in MS Excel and mean, median, standard deviation; Pearson's chi-square test etc. was analyzed using SPSS 23.0.

Results

Total of 176 patients underwent colonoscopy during the study period. Of them 119 patients (67.60%) were male and 57 patients (32.40%) were female. The mean age was 46.98 ± 17.13 years, ranging from 18 years to 90 years with most patients being in the range of 25 to 55 years. Cecal or terminal ileum intubation rate was 92.62% (163 of 176). There was luminal narrowing following carcinoma colon in 9 out of 13 failed cecal intubation. Indication for performing colonoscopy was chronic diarrhea in 58 patients (33.0%), chronic abdominal pain in 47 patients (26.70%), blood mixed stool in 28 patients (15.90%), rectal bleeding in 17 patients (9.70%) and altered bowel habit in 14 patients (8.0%). Indications for doing colonoscopy are listed in Table 1.

Table 1: Indications for Colonoscopy

Indication	Patients	Percent
Chronic diarrhoea	58	33.0%
Chronic abdominal pain	47	26.7%
Blood mixed stool	28	15.9%
Constipation	5	2.8%
Mass per anum	3	1.7%
Rectal bleeding	17	9.7%
Altered bowel habit	14	8.0%
Chronic anemia	4	2.2%
Total	176	100.0



Significant endoscopic finding was observed in 142 patients (80.68%), most common finding was colitis with unspecified etiology seen in 69 patients (39.20%); ulcerative colitis was seen in 28 patients (15.90%), crohn's disease in 13 (7.38%), carcinoma colon in 21(11.93%), polyps in 8 (4.54%) and haemorrhoids in 3 patients (1.70%); which is illustrated in chart 1.

Colitis was more in male 46 (66.67%) and involving rectum was common, seen in 23 patients (33.33%) followed by caecum in 18 (26.08%) and ileum 15 patients (21.70%). Only single patient has colitis of unspecified etiology involving whole of the colon. Chronic diarrhoea in 28 (40.57%) and chronic abdominal pain in 21 (30.43%) was the main presenting complaints of patient having colitis with unspecified etiology (p value <0.05).

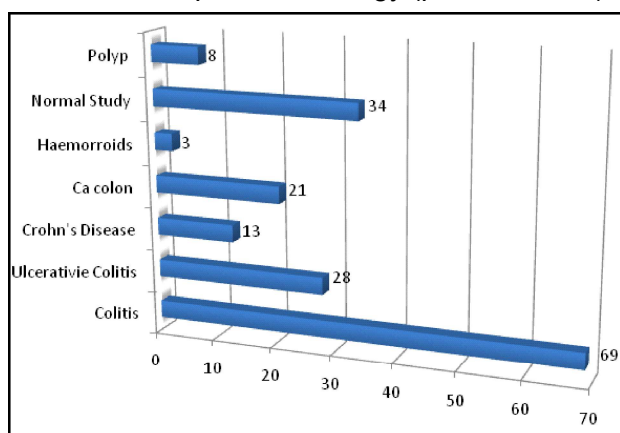


Chart 1: Bar diagram showing colonoscopy findings.

Ulcerative colitis was the second most common abnormal findings in 28 patients (15.90%), of them 11 (39.28%) has pancolitis, 9 (32.14%) has recto-sigmoid, 6 (21.44%) has left sided and only 2 (7.14%) has right sided ulcerative colitis represented in the chart 2. Blood mixed stool in 15 (53.57%) and chronic diarrhoea in 11 (39.28%) were the main presenting complaints of patient having ulcerative colitis (p value <0.05) and it was more common before the age of 30 years.

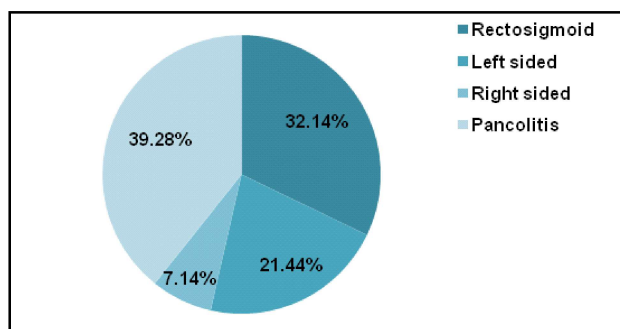


Chart 2: Pie chart showing different Ulcerative Colitis findings

Ulcerative colitis in total was found equally in either of the sexes but pancolitis in 7 (63.63%) and right-sided ulcerative colitis in 2 (100%) seen in male and recto-sigmoid in 5 (55.55%) and left-sided ulcerative colitis in 5 (83.33%) seen in female.

Carcinoma colon was seen in 21 patients (11.93%) of which rectal carcinoma was common in 12 (57.14%) followed by carcinoma of ascending colon in 6 patients (28.57%). Per-rectal bleeding and blood mixed stool was the presenting complaint in more than half of the patients. 52.38% of carcinoma colon patient were more than 50 years but as few as 19% patients were of age below 30 years in the study. Cross-tabulation of endoscopic findings and age group are listed in Table 2.

Table 2: Crosstable showing the Endoscopic findings and age group

Endoscopy Findings	Age Group			Total n(%)
	<30 years n(%)	31-50 years n(%)	>51 years n(%)	
Colitis unspecified	16(9.0)	30(17.0)	23(13.0)	69(39.2)
Ulcerative Colitis	2(1.1)	14(7.9)	12(6.8)	28(15.9)
Crohn's Disease	4(2.2)	6(3.4)	3(1.7)	13(7.3)
Carcinoma colon	4(2.2)	6(3.4)	11(6.2)	21(11.9)
Haemorrhoids	0(0)	0(0)	3(1.7)	3(1.7)
Normal Study	9(5.1)	12(6.8)	13(7.3)	34(19.3)
Polyps	2(1.1)	2(1.1)	4(2.2)	8(4.5)
Total	37(21.0)	70(39.7)	69(39.2)	176(100)

Crohn's disease was seen in 13 patients (7.39%), male being common in 11 (84.62%) and age group below 50 years more affected. Polyps are less commonly diagnosed in just 8 patients (4.55%) of them rectal polyp was present in half of the patient.

Discussion

Colonoscopy is considered the gold standard for colon cancer screening and surveillance, which starts beyond the age 50 years [1]. In conditions like unexplained gastrointestinal bleeding, chronic diarrhea, and inflammatory bowel disease colonoscopy provide meticulous diagnostic advantage, severity and treatment response [4]. There were more males than females in this study, the ratio being nearly 2:1. Male predominance amongst colonoscopy patient was also seen in similar study in western Nepal by S, Chaudhary et al [5], as well in Rawalpindi, Pakistan in study by Salamat et al [6]; Mysore, India by Dinish et al [7]; Lagos by Onyekwere et al [8];



Calabar all in Nigeria by Ngim et al [9]. This suggests that diseases requiring colonoscopy are common in males in respect to females. The mean age of the study was 46.98 years similar to the study done in western Nepal by Chaudhary S et al [5], in Lagos by Osinowo A [10], in Nigeria by BO Ismaila et al [11]; wheremean age being 45.23years, 46.9 years, 43.5 years respectively whereas some study done in Pakistan by Salamat A [6], in Jamaicaby Plummer et al [12] and in Nigeria by Arigbabu et al [13] had mean ages of 50years, 60.6years and 56.40years respectively. This may suggest that lower gastrointestinal diseases are seen slightly earlier in our country.

Chronic diarrhoea and chronic abdominal pain are two common indications for undergoing colonoscopy in this study whereas, rectal bleeding, chronic diarrhea and chronic abdominal pain were common indication for colonoscopy in other studies by Ngimet al [9], Osinowo A [10], Salamat A [6],Plummer et al [12]. But in the study done in Chinese and American tertiary hospital by Wang et al [14] the commonest indication was screening for colorectal carcinoma. This finding gives a clue that developing country like ours are still focusing on treatment rather than preventive medicine. The commonest significant endoscopic finding in the study is colitis of unspecified etiology, which is also the commonest finding in the study done in western part of Nepal by Chaudhary S [5]. Ulcerative colitis is the second common significant finding in the both studies.

Most of the patients in the study by Chaudhary had Normal colonoscopic study, which was second common finding in this study. Colitis of unspecified etiology of rectum and sigmoid colon was predominant in the study by chaudhary while apart from rectum lesion more proximal at caecum and ileum was common in this study. Haemorrhoid was common finding in other studies done in African countries [8, 10, 12]. In comparative study done in China and USA by Wang H [14] common finding was polyps both in China and USA followed by colitis. In the study done in Rawalpindi [4], inflammatory bowel disease was dominant colonoscopy finding.

In this study Pan-ulcerative colitis was dominant followed by recto-sigmoid ulcerative colitis, left sided and right sided. In comparison, study done by Sood A [15], left sided ulcerative colitis was

common followed by pancolitis and rectosigmoid where as in other study by Farmer RG [16] recto-sigmoid ulcerative colitis was common followed by pancolitis. Moreover, in this study significant number of patient with ulcerative colitis was diagnosed which limits its rarity in our country and probably the disease being diagnosed more frequently that open new area for further research. In the study rectal carcinoma was common followed by carcinoma of ascending colon whereas in the study done by Chaudhary S [5] carcinoma colon was seen in 8.33% with rectal carcinoma being the common, which was similar to our study. Carcinoma was not common in other study done in African and Asian countries [6-9].

Simple Endoscopic finding was only included for the diagnosis of the disease in the study that limits the diagnostic abilities. Newer advances of dye and magnifying endoscopy techniques would have made difference. Pathological analysis in comparison to the endoscopic finds would add etiologies in unspecified colitis and rule out some inflammatory bowel disease. Injectable Hyosine butyl bromide was only the drug given, no sedatives were used in the study which gives idea that cecal intubation could be performed without sedation acknowledging pain.

Conclusion

In this study chronic diarrhoea and chronic abdominal pain were two common indications for colonoscopy in our study with male patient in higher prevalence. Colitis of unspecified etiology of rectum and ileo-cecal region was most common finding in the study. Finding of Ulcerative colitis involving whole of colon and younger age group was predominantly affected. Carcinoma colon was equally prevalent below 50 years in comparison to elderly population.

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