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Research Article

**SCREENING IMPLICATIONS FOR COLONIC NEOPLASTIC
LESIONS IN THE REGION OF SOUTH ASIA**¹Iqra Malik, ²Kashif Nawaz, ³Rabia Latif¹Jinnah Hospital Lahore²Nishtar Hospital Multan³DHQ, Faisalabad**Abstract:**

Objective: To filter out the colonic cancer cases by employing either sigmoidoscopy or colonoscopy and to explore the intestinal region for prevalence of neoplastic regions.

Methods: The design of the study was cross sectional. The study was conducted at Mayo Hospital Lahore from Jan 2015 to Dec 2017. The patients were diagnosed to have CRC or polyps more than 1 cm were included in the research after colonoscopy. The polyps found away from spleen were referred to as distal lesions and those found near splenic bend were termed as proximal / central lesions.

Results: Abnormal colonic tumor growth was diagnosed in 217 patients. Out of 217, 31 patients were diagnosed with more severe polyps' formations. The mean age of the sample was 55.8 years (33.2% were less than 50 years and 66.8% were above 50 years). The prevalence of CRC was 66.4% in the distal colonic region, 30 % in central colonic location and 3.7% patients were diagnosed with both lesions.

Most of the patients reported with the symptoms of rectum bleeding (39.6%), loss in weight (31.8%). The symptoms and location of neoplastic lesions was statistically insignificant among older and younger subjects.

Conclusion: The study concluded that a significant number of CNLs were found in right colonic region of relatively younger patients. Colonoscopy is the option of choice for diagnosis, early assessment and treatment of Colonic Neoplastic Lesions. A broader study with multiple variable parameters is needed for extended research.

Key Words: Colonic Neoplastic Lesion, Colorectal Carcinoma, Proximal, Distal, Adenomas.

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INTRODUCTION:

Colon cancer (Colorectal carcinoma, CRC) is becoming a bigger problem of the modern world affecting many people around the globe. It is most commonly observed in people with ages greater than 50 years. The prevalence of CRC in Asian countries is relatively higher as compared to European / American communities. A very limited work has been done in Pakistan on this critical health issue. The incidences of CRC in patients below 50 years of age was reported in a recent study [1]. Usually, CRC cases have been observed in the left colon region of intestine (findings of multiple studies) relative to the right sided lesions. Some studies (including national and international) found that the lesions were shifted to right side. The increase in the number of polyps at central region & decrease at terminal region was considered to be the contributing factors of left to right CRC shifting.

Due to rise in occurrences of colonic cancer among patients greater than 50 years of ages, a cut off value of 50 years is recommended for screening of CRC. The difference in ages for eastern and western countries population suffering from colorectal carcinoma is significant. Hence it seems difficult to explain the cut off age for screening of CRC in general. The diagnosis for CRC prevalence is either done by Sigmoidoscopy or Colonoscopy. Sigmoidoscopy is a limited procedure and diagnosis is made for the colonic cancer at terminal up to splenic turn. No doubt, Sigmoidoscopy is easier as compared to Colonoscopy in respect of patients' comfort. Colonoscopy can discover the cancer polyps anywhere in the colon but is associated with more complications and patients discomfort. Colonoscopy is a complex procedure and requires more expertise [2].

In our region, no special emphasis is given on endoscopic exams to discover CRC. The endoscopy is carried out at some major hospitals or private clinics which are out of reach of the communities residing in remote areas and not able to visit such hospitals due to financial constraints. Therefore, the relationship between patients' ages and neoplastic lesions is unpredictable in our population.

METHODS:

Definition: Colorectal Carcinoma and advanced adenomas both fall under the heading of CNLs. Advanced adenomas are described as tumor polyps greater than 1 cm with 25% diffusions through thin membranes called villi. Such tumors require invasive treatment for the removal of polyps. In our study, full colonoscopy was conducted for the patients at Mayo Hospital Lahore from Jan 2015 to Dec 2017. The

patients screened for CNLs through colonoscopy and suffering from the disease were selected for the study. The mean age of the patients ranged from 16 years to 50 years. The endoscopy procedure was carried out with complete care. Drugs were used to reduce the pain during colonoscopy. Olympus CF AL scope was used for this procedure in all cases. During the process, heartbeat, BP and other important parameters were noted after every 5 minutes. After the colonoscopy the interval for the measurement of vitals was increased to 15 minutes for next 2 hours. The results were noted for the type and site of colonic lesions. Distal lesions (distal to spleen) and proximal lesions (between cecum and spleen) were segregated. Sigmoidoscopy can be used in cases of distal lesions. The samples were dispatched for the study in cell changes to histopathology lab for further investigations.

The subjects were evaluated for 2 weeks in Mayo Hospital OPD according to the findings of the samples' results. Ethical approval for the conduct of the study was obtained from the Ethical Review Committee of the hospital.

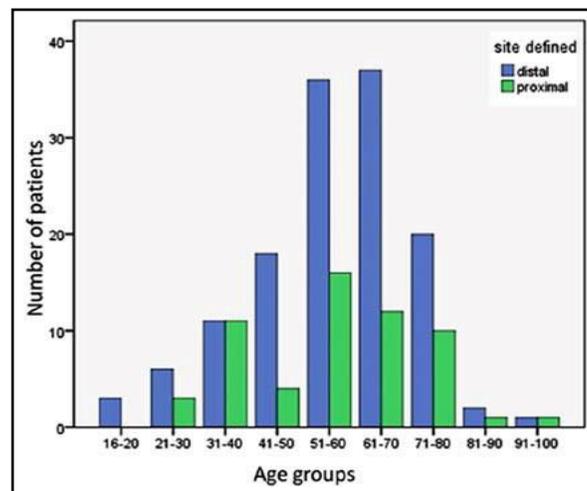
Statistical Analysis: SPSS (Ver 15) was used for statistical analysis of the results. Quantitative and qualitative variables were treated according to the applicable statistical procedures (SD, Mean, Frequency, Percentages etc.). Chi-square test was performed for the comparison of CNLs site and patients' ages. The results were declared significant at a p value of < 0.05.

RESULTS

Among 3,189 colonoscopies performed during the period of the study, 217 CNLs cases were observed. Out of 217 screened patients, 186 patients were found with CRC (85.7%) and 31 were suffering from advanced adenomas (14.3%). The mean age of the study sample was calculated to be 55.8 years. The patients were further divided into two age groups; (>50 years and <50 years). The number of patients in each group was 145 (66.8%) and 72 (33.2%) patients respectively. The patients reported with the symptoms of rectum bleeding (39.6%), reduced body weight (31.8%) and disturbed bowel routines (16.6%). Moreover, stomach pain and anemia were also reported in 1.8% and 10.1% patients respectively. Some patients (10.1%) reported with dual or multiple symptoms. The prevalence of CNL was marked at distal colon in 144 patients (66.4%), at proximal colon in 65 patients (30%) and at both locations in 8 patients (3.7%). The details of the distribution of CNL are given in Table-I. Familial polyps were diagnosed in 3 patients and the youngest member of this category was 16 years old. The results were not statistically significant in relation to age of the patients and prevalence of CNLs (p-value 0.85).

Table1: Distribution of Colonic Neoplastic Lesions (CNL) according to age and site

Site of lesions n (%)	Patients less than fifty years	Patients more than fifty years	P-value
Distal lesions n= 144(66)	49(68)	95(66)	0.85
Proximal lesions n= 65(30)	21(29)	44(30)	0.82
Both Distal and Proximal lesions n = 08(4)	02(3)	06(4)	0.75
Total n= 217	72(33)	145(67)	

**Figure 1:** Number of distal and proximal CNL in relation to different age groups**DISCUSSION:**

Our study was focused on the determination of colonic neoplastic lesions in sample population and its relationship with patients' age and sites of the lesions. Mean age of the sample was 55.8 years as reported by many local and international studies [3]. Seventy-two percent of the sample was below 50 years contrary to the data from western countries where prevalence of CRC is not significant in early age and tends to increase in the patients above 50 years of age. In our set up, 3 cases of familial syndromes were observed for CRC [4]. A study conducted on the topic in a nearby country reported matching results with mean age of the sample below than 55.8 years [5]. Interestingly, a study in UK delivered that mean age of South Asian's CRC victims residing in UK is relatively lower as compared to the permanent inhabitants of the country [6]. This finding supports the results of our study and argues that Asians are likely to develop CRC at younger ages [7]. The finding of our study regarding advance adenomas is much lower than the findings of western data obtained from more expert, technically sound professionals by utilizing modern medical techniques [8]. Lack of cancer screening programs in our country is a major

factor that controls the difference in the numbers of CRC and advanced adenomas in our study as compared to international researches [9].

Rectum bleeding [BPR] was the major symptom of the patients suffering from CRC in our research. Sigmoidoscopy can easily detect BPR cases [10]. Our study also reported that 90% CRC patients with BPR were having CNL at left colon. Colon distribution for CNL was higher at distal colon (144 patients) as compared to proximal colon (65 patients). A few (8 patients) had CNL at both sites (distal & proximal). The data from west also showed that most of the cases were of right sided colon [11].

Many local and foreign studies have highlighted the shifting of lesions from proximal to distal locations on the right side of colon. The lesions located at right colon are likely to be skipped by Sigmoidoscopy [12]. Our study also reported 1/3 lesions in that area. The data collected during our study was statistically insignificant when compared for age of the patients, indications, and colonic neoplastic lesions. Proximal lesions were 29% and 31% in patients below 50 years and above 50 years respectively [13]. CRC can be prevented. Health care agencies around the globe are striving to fight CRC through effective screening

programs for early detection and identification of the disease [14]. For this purpose, endoscopic evaluation is recommended.

CONCLUSION:

The study concluded that a significant number of CNLs were found in right colonic region of relatively younger patients. Colonoscopy is the option of choice for diagnosis, early assessment and treatment of Colonic Neoplastic Lesions. A broader study with multiple variable parameters is needed for extended research.

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