Profile of Colorectal Cancer Patients in Endoscopic Unit at Dr. Pirngadi Hospital, Medan

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ABSTRACT

__Background:__ Colorectal cancer is the third most prevalent cancer and the second leading cause of cancer death worldwide every year. Rates of this malignancy vary by country. In Indonesia, the prevalence is estimated to have an increased tendency. The objectives of this sudy was to examine the prevalence and profile of colorectal cancer, which are diagnosed by endoscopic examination.

__Method:__ The study was conducted retrospectively, by examining the result of endoscopic findings of patients with rectal bleeding, altered bowel habit, chronic diarrhea, unexplain abdominal pain, and other signs and symptoms at The Endoscopic Unit Department of Internal Medicine, Dr. Pirngadi hospital from January 2004 to June 2008.

__Results:__ We found 197 patients with colorectal cancer (CRC) from 760 patients examined by colonoscopy (25.9%). One hundred and one patients (51.3%) out of 197 CRC patients were female. Most were in the group of age 51-60 years (28.9%). The most frequent ethnic of the patients were Bataknese (46.2%). The most common symptom was rectal bleeding (70.6%). The most common location of CRC was in the rectum (74.6%). Histopathologic result was adenocarcinoma.

__Conclusion__: The prevalence of colorectal cancer in this study were twenty six percents. Rectal bleeding appeared to be the most common sign in this study. Rectum was the most common site of the cancer. Most of patients were Bataknese. Patients were at advanced stage and most of them were having well-differentiated adenocarcinoma.

__Keywords__: colorectal cancer, rectal bleeding, altered bowel habits, colonoscopy

INTRODUCTION

Colorectal cancer (CRC) is the most frequently occurring cancers worldwide. The incidence of this cancer varies substantially between different regions of the world, with the United States, Europe, Australia, and Japan having the highest prevalence of colorectal cancer. It is generally high in Western industrialized nations.[1,2,3] CRC is the 3rd most prevalent cancer and the 2nd most common cause of cancer death worldwide every year.[1,4,5,6,7] It is responsible for 4,500 Australian deaths each year, with more than 10,000 new cases diagnosed annually, as well as 147,000 cases and 57,000 deaths in United States.[8] In Italy, there are 30,000 cases, and the mortality includes 9,061 male and 7,909 female cases.[6] In Malaysia, colorectal cancer is becoming the most common cause of cancer death;[9] while in Germany, the rate among men is 41 per 100,000 and among women is 52 per 100,000. The frequency of disease raises steadily that increasing with age; with maximum age of approximately 75 years of age.[1]

Patients with colorectal cancer often look for hospital help at advanced stage. Common signs and symptoms of colorecal cancer include rectal bleeding, altered bowel habits, decreased stool caliber, diarrhea, or such combination, or it may present abdominal pain, weight loos, etc. Patients with those

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symptoms, especially above forty years or younger patients should be suspected for colorectal cancer. Family history, life style, environment, and other risk factors must be considered. Colonoscopy is the main and essential diagnostic measure to confirm the diagnosis in patients with symptoms related with colorectal cancer. It also has the potential for providing histological confirmation.[1,4,10,11,12] The aim of this study is to examine the prevalence and profile of CRC from all patients diagnosed by endoscopic examination, who had following indication, i.e. rectal bleeding, altered bowel habit, diarrhea and other symptoms and signs.

METHOD

This study was a retrospective study conducted in CRC patients by examining the result of colonoscopy examination with indications of rectal bleeding, altered bowel habit, diarrhea, abdominal mass at the right abdominal quadrant and left iliac fossa, including other symptoms and signs. It was conducted at The Endoscopic Unit, Division of Gastroentero-Hepatology Department of Internal Medicine Dr. Pirngadi hospital Medan since January 2004 to June 2008. The equipment of Olympus CF-Q 145L were used. Descriptive analysis was done for age, sex, ethnicity, cancer location, symptoms, and histopathological findings. Data analysis was performed by using a statistical program, SPSS version 15.

RESULT

A total of 760 (408 males and 352 females) patients, who had colonoscopic examination were reported during the study period. Of these, we found 197 colorectal patients (25.9%), with 96 males (48.7%) and 101 females (51.3%). Female patients were more common than males with ratio of 1.5 : 1; however, the difference was not significant (p = 0.72) (table 1). The frequency of CRC patients in relation to the age group was noted that most patients (28.9%) were in 51-60 years age group (table 1). The prevalence of CRC increases with age. There was positive correlation between age and CRC frequency (r = 0.67, p = 0.001) (figure 1). The mean age of 197 colorectal patients was 54.02 years, ranging from 15-80. The mean age of female patients (55.11) was not significantly different compared to the males (52.88 years) (p = 0.259) (table 2).

Table 1. Frequency of colorectal cancer patients in relation to sex and age group

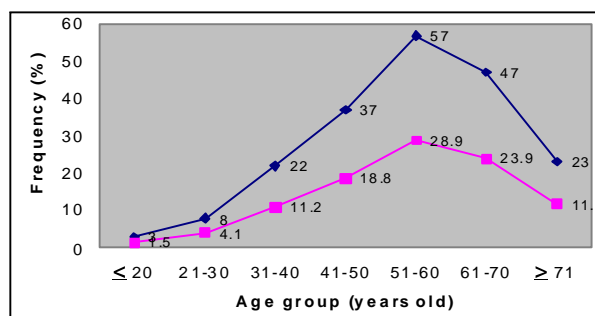| Characteristics		Frequency	%
Sex	Male	96	48.7
	Female	101	51.3
Age group (years)	≤ 20	3	1.5
	21-30	8	4.1
	31-40	22	11.2
	41-50	37	18.8
	51-60	57	28.9
	61-70	47	23.9
	≥ 71	23	11.7

Figure 1. There was positive correlation between age and CRC frequency until the 6th decade of age (r = 0.67, p = 0.001)

Table 2. Mean age of CRC patients

Variable	Male	Female	Total
N	96	101	197
Mean	52.88	55.11	54.02
SD	15.10	12.55	13.86

The mean age of 197 CRC patients was 54.02 year (female patients 55.11 years and male 52.88 years). The difference of mean age between females and males was not significant (p = 0.259). The most frequent sign was rectal bleeding (70.6%), followed by chronic diarrhea, diarrhea with rectal bleeding, altered bowel habits and other symptoms and signs. Among 197 CRC patients, the cancers located in rectum were found in 147 patients (74.6%); in sigmoid colon was obvious for 22 patients (11.2%), in descending colon 15 (7.6%) patients; in ascending colon 5 (2.5%) patients; in caecum 2 (1.0%) patients; in several parts 3 (1.5%) patients; in splenic flexure 2 (1.0%) patients and in hepatic flexure 1 (0.5%) patient. Thus, the lesions were mainly located in the rectum and in the left colon. There were several ethnic groups of CRC patients were found in the study. Most colorectal cancer patients (46.2%) were found in Bataknese group (table 3).

Table 3. The main symptoms and signs, distribution of cancer and ethnicity of CRC patients

Characteristic		Frequency	%
Main symptoms and signs	Rectal bleeding	139	70.6
	Chronic diarrhea	14	7.1
	Diarrhea + rectal bleeding	12	6.1
	Altered bowel habits	10	5.1
	Abdominal mass	8	4.1
	Unexplain abdominal pain	5	2.5
	Difficult to defecate	4	2.0
	Others	5	2.5
Distribution of cancer location	Rectum	147	74.6
	Sigmoid colon	22	11.2
	Descending colon	15	7.6
	Ascending colon	5	2.5
	Caecum	2	1.0
	Combination	3	1.5
	Splenic flexure	2	1.0
	Hepatic flexure	1	0.5
Ethnicity	Bataknese	91	46.2
	Javanese	33	16.8
	South Tapanuli	19	9.6
	Malay	16	8.1
	Karo	16	8.1
	Padang	13	6.6
	Aceh	3	1.5
	Chinese	3	1.5
	Nias	2	1.0
	Banten	1	0.5

DISCUSSION

The prevalence of colorectal cancer based on 760 colonoscopic findings was 25.9% with 197 patients had positive findings of colorectal cancer. Of 197 CRC patients, 101 (51.3%) were female and 96 (48.7%) were male (table 1). The age of patients range from 15 to 80 years old. Most of them were in the age group of 51 to 60 years (table 1). The mean age of female patients was 55.11 and male 52.88 years; while the mean age of total CRC patients was 54.02 (table 2). The study results show that CRC patients were more common in female than in male with sex ratio of 1.05 :1; however, it was not significantly different (p = 0.72), as well as for the mean age of patients (p = 0.259).

The incidence of colorectal cancer was similar between males and females, (with ratio 1.2 : 1).[3] In Germany, CRC are more common in female than male. In other countries, CRC are found more common in males than females.[6,9,13,14] Abimanyu in Banjarmasin found 34 colorectal cancer patients with rectal bleeding, and among them there were 21 (61.7%) males and 13 (38.3%) females.[13] We found that there was significant positive correlation between age and CRC frequency until the 6th decade of age (r = 0.67, p = 0.001). Our study result is similar to many other studies with the maximum age of 75 years old.[1]

Establishing the CRC diagnosis will depend on clinical history, family history, clinical examination or anal palpation, and laboratory results. Diagnosis must be confirmed by colonoscopic examination and biopsy. Other examinations such as barium enema may also be used, if total colonoscopy cannot be performed due to partial obstruction of the colon. Clinical manifestations of CRC are often related to tumor size and location. Common signs and symptoms of the cancer located in the proximal colon (caecum to splenic flexure) include abdominal pain, weight loss, and iron deficiency anemia due to chronic ocult bleeding; while cancer in the distal part (descending colon to rectum) may present with altered bowel habits, decreased stool caliber, or rectal bleeding or combination of these. CRC located in rectum and sigmoid colon 50-60% will have rectal bleeding and altered bowel habits; while 40-60% cancer in the rectum with the palpable mass will be detected by digital anal palpation. Approximatelly 20% patients with sigmoid cancer will have palpable mass in left iliac fossa. More than 90% CRC patients have cancers located in rectum and sigmoid with symptoms of altered bowel habits, i.e. increased defecation frequency and/or change in fecal caliber or looser stools, rarely, it includes hard stool and decreased defecation frequency. Approximatelly 30-75% patients with colon cancer at the caecum to the splenic flexure shows the symptoms and signs of iron deficiency anemia, 40-55% of them have abdominal mass, especially at the right iliac fossa, and 10-30% were accompanied by complications due to obstruction.[1,10,15]

Rectal bleeding was the main symptom found in 70.6% of CRC patients in this study (table 3). Rectal bleeding as the main symptom and important sign in colorectal cancer had been explained in many studies.[13,16,17] Bataknese was the most common ethnic of colorectal patients (46.2%), followed by

Javanese (16.8%), South Tapanuli (9.6%), Malay (8.1%), Karo (8.1%), Padang (6.6%) and other ethnics (table 3). In the United States, there were the different rate of incidence and mortality among several race or ethnics. The incidence and mortality of colorectal cancer are most commonly found among black population, i.e. two times more common than others. Colorectal cancer was sensitive to the change in lifestyle or environment.[18] The histopathological results of endoscopic biopsy were available from the medical record at Pirngadi hospital belongs to 120 patients. All of the biopsy from those patients revealed well-differentiated adenocarcinoma. Meanwhile, histopathological results of other patients were not documented since the patients did not give the results to the hospital or they brought the specimen of the biopsy to the private laboratory other than Pirngadi hospital.

CONCLUSION

The prevalence of colorectal cancer in this study is twenty six percent of total patients examined by colonoscopy. There is no significant differences in mean age as well as in CRC frequency between male and female CRC patients. There is significant positive correlation between age and CRC frequency until the sixth decade of age. The main symptoms and sign of the patients is rectal bleeding. Rectum is the most common site of the cancer. Most of CRC patients are Bataknese. Patients were in advanced stage and most of them had well-differentiated adenocarcinoma. Based on the result of this study as well as other studies in Indonesia, the prevalence of colorectal cancer is estimated to have increased tendency and is becoming the common cause of cancer death.

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