ORIGINAL ARTICLE

Colonoscopic Findings in Patients with Chronic Diarrhea at Mohammad Hoesin Hospital Palembang

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ABSTRACT

Background: Chronic diarrhea is a common problem encountered by clinicians. Colonoscopy is a tool with high accuracy and sensitivity to depict abnormalities and has the advantage in distinguishing the abnormalities that cause chronic diarrhea. Nevertheless, the colonoscopic findings in patients with chronic diarrhea vary by age. The objective of this study is to observe abnormalities found in lower gastrointestinal tract in patients with chronic diarrhea who underwent colonoscopy and its relationship with age.

Method: An observational analytic study, data retrieved from medical record of outpatient and inpatient with chronic diarrhea at Mohammad Hoesin Hospital Palembang from January 2011 until December 2012. Chronic diarrhea diagnosis was based on clinical findings, laboratory result, and colonoscopy procedure. Patients were then divided into groups based on age (< 40 and > 40). Data were analyzed with SPSS 12.0.

Results: There were 92 patients consisted of 56 (60.9%) male and 36 (39.1%) female. Mean age was 47.67 ± 16.83 with age interval 15-85 years. Group I of 35 (38%) patients, whereas group II of 57 (62%) patients. The colonoscopic findings were ulcerative colitis 33 (35.9%), normal 27 (29.3%), colon tumor 20 (21.7%), colitis tuberculosis 5 (5.4%), Crohn's disease 3 (3.3%) and polyp 4 (4.3%). Based on age, the incidence of ulcerative colitis was most frequently encountered in both groups, whereas normal colon and colon tumors were encountered most in group II. No correlation was found between age and colon abnormality (p = 0.87).

Conclusion: The most common finding was ulcerative colitis followed by normal colon and colon tumor. There was no correlation between age and colon abnormalities.

Keywords: chronic diarrhea, colonoscopy, age

ABSTRAK

Latar belakang: Diare kronis merupakan masalah yang biasa dijumpai oleh klinisi. Kolonoskopi merupakan alat diagnostik dengan akurasi dan sensitifitas sangat baik untuk mendeteksi kelainan saluran cerna dan mempunyai keunggulan dalam membedakan penyebab dari diare kronis. Namun gambaran kolonoskopi pada penderita diare kronis dapat bervariasi berdasarkan usia. Tujuan penelitian ini adalah untuk melihat kelainan saluran cerna bagian bawah pada penderita diare kronis dan hubungannya dengan usia.

Metode: Penelitian observasi analitik, data diambil dari data rekam medik pasien rawat jalan dan rawat inap yang menderita diare kronik di Rumah Sakit Mohammad Hoesin Palembang periode Januari 2011 - Desember 2012. Diagnosis diare kronis diketahui dari hasil temuan klinis, pemeriksaan laboratorium dan prosedur kolonoskopi. Penderita dikelompokkan menjadi dua kelompok usia (< 40 dan > 40 tahun). Data dianalisa dengan SPSS 12.0.

Hasil: Dari 92 penderita diare kronis, laki-laki 56 (60,9%) dan perempuan 36 (39,1%) dengan rerata usia $47,67 \pm 16,83$ dan rentang usia 15–85 tahun. Pada kelompok I didapatkan insiden 35 (38%) dan kelompok II sebanyak 57 (62%). Gambaran kolonoskopi yang didapatkan adalah kolitis ulseratif 33 (35,9%), normal 27 (29,3%), tumor kolon 20 (21,7%), kolitis tuberkulosis 5 (5,4%), penyakit Crohn's 3 (3,3%) dan polip 4 (4,3%).

Berdasarkan usia, insiden kolitis ulseratif paling sering ditemui pada kedua kelompok, sedangkan gambaran kolon normal dan tumor kolon banyak ditemui pada kelompok II. Tidak ada korelasi antara usia dengan distribusi kelainan kolon yang ditemui (p = 0,87).

Simpulan: *Kolitis ulseratif merupakan gambaran kolonoskopi yang sering ditemui, diikuti kolon normal dan tumor kolon. Tidak ada korelasi antara usia dengan kelainan kolon yang ditemui.*

Kata kunci: *diare kronik, kolonoskopi, usia*

INTRODUCTION

Chronic diarrhea is defined as the passage of soft or watery stool more than 3 times per day with or without blood and/or mucous or the passage of stool more than 200 g per day and last for more than 4 weeks.[1] Chronic diarrhea is a condition frequently encountered by patients and clinicians. Its prevalence varies widely in different populations.[2] In Western countries, its prevalence is around 4-5% of population.[3] A study in North Jakarta revealed that the number of patients with chronic diarrhea admitted to the hospital was around 1.0% of all patients with diarrhea, whereas the rate in Bangladesh was 0.8%.[2] The presence of chronic diarrhea will cause impaired quality of life and reduced productivity. The etiologies of chronic diarrhea vary that causing the diagnosis of this disease sometimes to be difficult and the treatment does not give optimal results.[2] To overcome this, there are several diagnostic modalities to determine the cause of chronic diarrhea such as laboratory tests, colon in loop, sigmoidoscopy, ileo-colonoscopy, and colonoscopy.[4]

Since 1970, colonoscopy has played an important role in the diagnosis and treatment of abnormalities in the colon and rectum. Colonoscopy is an accurate examination to determine abnormalities found in the colon-rectum. Abnormalities that can be evaluated include those in the area of caecum, ascending colon, transverse colon, descending colon and rectosigmoid. Colonoscopy can show a picture of the tumor, inflammatory bowel disease (IBD), infectious colitis, polyps, foreign bodies and hemorrhoid. The need for colonoscopy continues to increase every year because this examination is quite safe with less complication. Abnormalities found in lower gastrointestinal tract of chronic diarrhea varies widely in different populations.[5] The aim of this study was to see the abnormalities found in lower gastrointestinal tract in patients with chronic diarrhea who underwent colonoscopy and its relationship with age.

METHOD

This study was an observational analytic study in patients with chronic diarrhea who underwent colonoscopy examination in Mohammad Hoesin Hospital Palembang from January 2011 to December 2012. Data were retrieved from medical record of outpatient and inpatient of chronic diarrhea patients. Chronic diarrhea diagnosis is made based on clinical findings, laboratory, and colonoscopy. Colonoscopy examination was performed using colonoscopy Olympus type GIF Q150.

Inclusion criteria for this study were all patients with chronic diarrhea with age interval 15-85 years who underwent colonoscopy. Exclusion criteria were patients contraindicated for colonoscopy, patients who had chronic diarrhea with known etiology, chronic diarrhea due to intestinal disorders, thyroid or pancreatic disease.

Data were presented descriptively based on age, sex, laboratory results, and colonoscopy findings. Patients divided into two groups of age < 40 years and age > 40 years. Data were analyzed with SPSS version 12.0.

RESULTS

In this study, there were 92 patients with chronic diarrhea who underwent colonoscopy, consisting of 56 (60.9%) male and 36 (39.1%) female. Mean age was 47.67 ± 16.83 with age interval 15-85 years.

Colonoscopy examination revealed ulcerative colitis in 33 (35.9%), normal 27 (29.3%), colon tumor 20 (21.7%), colitis tuberculosis 5 (5.4%), Crohn's disease 3 (3.3%) and polyp 4 (4.3%). Based on age, the incidence of ulcerative colitis was most frequently encountered in age group < 40 and > 40 years (42.8% and 31.5%), whereas normal colon and colon tumors were found with higher incidence in age group > 40 years. There was no correlation between age and distribution of colon abnormality found (p = 0.87). Most patients (80.4%) had a history of chronic diarrhea in one month before colonoscopy procedure with bloody stools 26.1%.

Table 1. Patients characteristics

Characteristic	n (%)	Mean ± SD
Sex		
Male	56 (60.9)	
Female	36 (39.1)	
Age (year)		
15 – 85	92	47.67 ± 16.83
Age group (year)		
I < 40	35 (38)	
II > 40	57 (62)	
Duration of diarrhea (months)		
1	74 (80.4)	
2	15 (16.3)	
3	3 (3.3)	
Laboratory result (routine fecal examination)		
Normal	51 (55.4)	
Mucous	8 (8.7)	
Blood	24 (26.1)	
Bacteria	9 (9.8)	
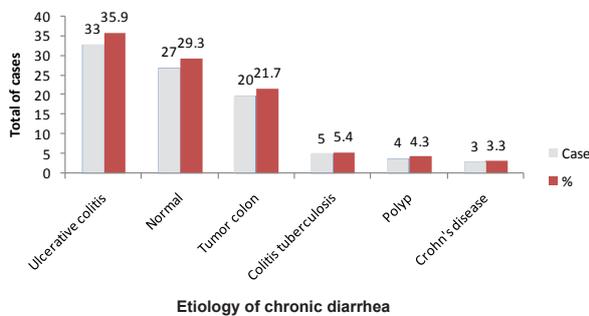
Figure 1. Colonoscopic findings
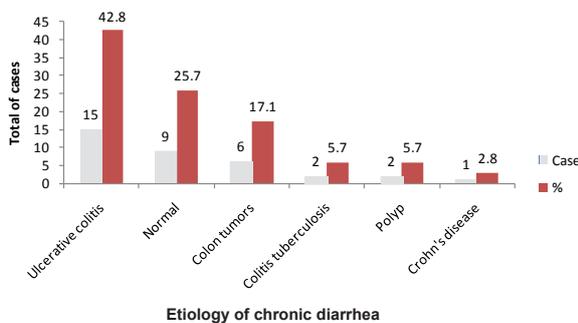
Figure 2. Colonoscopic findings in age group < 40 years
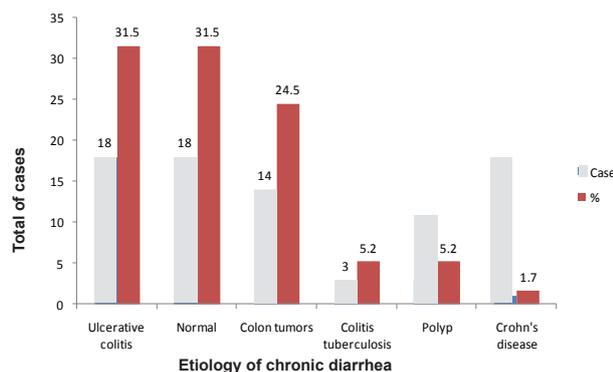
Figure 3. Colonoscopic findings in age group > 40 years

DISCUSSION

Chronic diarrhea is defined as the passage of soft or watery stool more than 3 times per day with or without blood and/or mucous or the passage of stool of more than 200 g per day and last for more than 4 weeks.[1] Its prevalence varies widely in different populations. In Indonesia, the exact number is still unknown but in Western countries, it has been reported to be around 4 – 5% in the general population. The etiology of diarrhea depends on the socioeconomic status of the population. In developing countries, chronic diarrhea is frequently caused by chronic bacterial and parasitic infections, although malabsorption and inflammatory bowel disease are also common. In developed countries, common causes are irritable bowel syndrome (IBS), IBD, malabsorption syndromes (such as lactose intolerance and celiac disease).[6]

In this study, we found that the incidence of chronic diarrhea were more prevalent in male than female (60.9% vs. 39.1%) with a mean age of 47.67 ± 16.83. This result did not differ with study conducted by Rafi et al and Khan et al which showed the incidence in male was more prevalent than female with a mean age of 40.[3,6]

The most frequent colonoscopic findings in this study were ulcerative colitis (35.9%) followed by normal colonoscopy (29.3%) and colon tumors (21.7%). The results did not differ much from the study conducted by Khan et al which showed ulcerative colitis (45%) as the most common cause of chronic diarrhea.[6] Similarly, study by Pasha et al and Shah et al also obtained ulcerative colitis as the most common cause of chronic diarrhea (69% and 31%).[7,8] This result suggested that there had been a shift in the causes of chronic diarrhea in developing countries, which previously said the cause of most chronic diarrhea was a bacterial and parasitic infection.

Normal colonoscopy was found as second most common finding in our study (29.3%) after ulcerative colitis. This is almost comparable to results reported by Rafi et al who reported normal colonoscopy as second most common etiology (36%) after ulcerative colitis (40%). Chronic diarrhea in patients with normal colonoscopy is probably due to irritable bowel syndrome.[3]

Based on age, there was no difference in the distribution of colonoscopic description either at age < 40 and > 40 years. Ulcerative colitis was the most common finding in both groups. This result was in contrast to several studies that revealed the incidence of inflammatory bowel disease tended to occur in

young adults (25-30 years).[9] The study showed that the incidence of colon tumors were more prevalent in age > 40 years. This result did not differ much from some studies that showed the incidence of colon tumors tended to increase at 50 years old.[10-12] Data was analyzed with Spearman test and the results revealed that there was no relationship between the age with distribution of colonoscopy description (p = 0.87).

CONCLUSIONS

The most common colon abnormalities found in chronic diarrhea patients from colonoscopy procedure were ulcerative colitis followed by normal colon and colon tumor. There was no correlation between age and colon abnormalities.

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