

Evaluation of colonoscopy results in HIV infected cases

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ABSTRACT

Objective: GI system plays an important role in the clinical symptoms and pathogenesis of HIV infection. Significant progress has been made towards understanding the role of the GI system in both the early and late stages of HIV infection. In this study, our aim is to evaluate the results of colonoscopy in HIV-infected patients followed up in our clinic.

Material and Methods: HIV (+) cases followed in our clinic were included in our study. The computer records of the cases were retrospectively examined and the findings of the patients who underwent colonoscopy were recorded. Age, gender, CD4 values and colonoscopy results of these patients were recorded simultaneously.

Results: A total of 27 HIV-infected patients who underwent colonoscopy were included in our study. The mean age of the cases was 41.2, and the rate of males was 92.6% (25/27). It was observed that the mean age of patients with colonoscopy findings was 41.8, and the mean age of those without colonoscopy findings was 41.1. It was determined that 44.4% (12/27) of our cases in total had colonoscopic findings. While normal colonoscopic findings were reported in 15 (55.6%) of patients, benign anorectal diseases (fissure, hemorrhoids) were found in 7 (25.9%) and polyps were found in 3 of them (11.1%). CMV colitis was diagnosed in 2 (7.4%) patients with pathological diagnosis.

Conclusion: As a result, although the number of our cases is small, it is observed that approximately 55% of patients have normal colonoscopy findings, but those with perianal disease and polyps have a higher CD4 count than those with normal colonoscopy. It has been revealed that patients with CMV infection also have a CD4 count of <200. Studies with more patients in HIV-infected patients will contribute to the diagnosis, follow-up, and treatment preferences of the patients.

Keywords: HIV, CD4, colonoscopy

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INTRODUCTION

Human immunodeficiency virus (HIV) is the etiological agent of acquired immunodeficiency syndrome (AIDS). It has been reported that the total number of HIV/AIDS cases in our country between 01 October 1985 and 31 December 2019 was 26,164 [1, 2].

The disease associated with AIDS can affect almost all organ systems and it appears to be a target in the gastrointestinal (GI) system. Diarrhea is a common symptom that can be seen in AIDS patients during the course of their illness [3].

GI system plays an important role in the clinical symptoms and pathogenesis of HIV infection. Significant progress has been made towards understanding the role of the

GI system in both the early and late stages of HIV infection. The mucosal immune system plays a role in the AIDS pathogenesis of this infection. GI symptoms can be seen frequently in HIV-infected patients [4-6].

The integrity and function of the gut may be impaired in HIV-infected cases. Diarrhea, which can be seen in HIV-infected patients, is one of the important symptoms and can be an important source of morbidity and mortality, and often decreases the quality of life. In this case, it is important to search for treatable causes [7-9].

Endoscopic evaluation with biopsies can be used in the diagnosis and management of GI disorders in HIV-infected cases. GI disorders may have different presentations in these patients and are generally not

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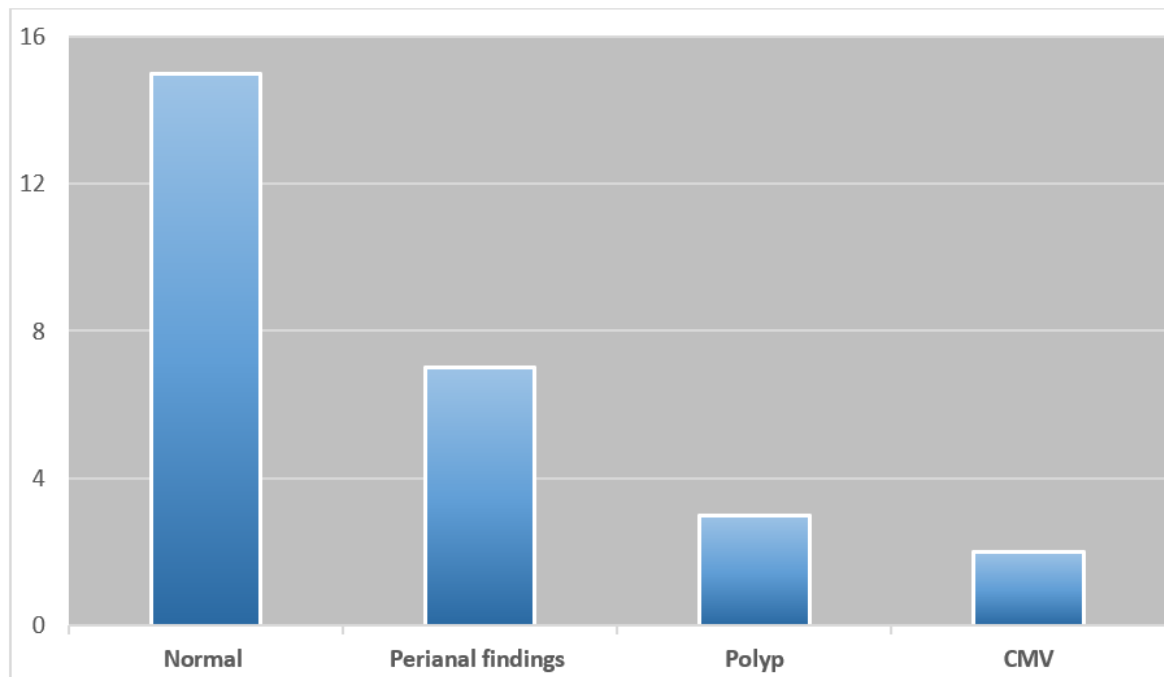


Figure 1. Distribution of colonoscopic findings in the patients

Table 1. Age-gender distribution of patients

	n	%	Age (Ave)	Gender (M/F)
Normal	15	55.6	41	15/1
Perianal findings (fissür, hemoroid)	7	25.9	44	7/1
Polyp	3	11.1	48	3/0
CMV	2	7.4	25	2/0

Table 2. Distribution of colonoscopic findings in CD4 subgroups

	CD4<200		CD4>200	
	n	%	N	%
Normal	7/12	58	5/12	42
Perianal findings (fissür, hemoroid)	1/6	17	5/6	83
Polyp	0/3	0	3/3	100
CMV	2/2	100	0/2	0

specific. In these cases, endoscopic evaluation is effective in the diagnosis and management of the patients. The incidence of GI disorder in HIV-infected patients changes especially with the new generation HIV treatment regimens [10].

MATERIAL AND METHODS

HIV (+) cases followed in our clinic between 2015-2020 were included in our study. The computer records of the cases were retrospectively examined and the findings of the patients who underwent colonoscopy were recorded. Age, gender, CD4 values, and colonoscopy results of these patients were recorded simultaneously.

Ethics committee approval was obtained from the clinical research ethics committee of the Istanbul Research and Training Hospital (Approval number: 2639, 25.12.2020).

RESULTS

A total of 27 HIV-infected patients who underwent colonoscopy were included in our study. The mean age of the cases was 41.2, and the rate of males was 92.6% (25/27). It was observed that the mean age of patients with colonoscopy findings was 41.8, and the mean age of those without colonoscopy findings was 41.1.

It was determined that 44.4% (12/27) of our cases in total had colonoscopic findings. While normal colonoscopic findings were reported in 15 (55.6%) of patients, benign anorectal diseases (fissure and hemorrhoids) were found in 7 (25.9%) and polyps were found in three of them (11.1%). CMV colitis was diagnosed in 2 (7.4%) patients with pathological diagnosis (**Figure 1**). CD4 values of a total of 23 patients could be reached. Age-gender distribution and CD4 counts are shown in **Table 1** and **Table 2**.

DISCUSSION

The spectrum of GI symptoms in HIV infection ranges from odynophagia and dysphagia to abdominal pain, nausea, vomiting or diarrhea. GI disorders are common in these immunocompromised patients due to opportunistic infections, drugs, or other etiologies. HIV/AIDS patients have some GI complaints during the course of the disease. With the use of antiretroviral therapy (ART), the incidence of opportunistic infections in these patients decreases and the picture of gastrointestinal diseases seen in HIV may also change. Comprehensive medical history and physical examination are also important for accurate diagnosis and treatment in these patients [11].

In this study, it was determined that the mean age of the cases was 41.2, and the rate of males was 92.6% (25/27). The mean age of our patients with colonoscopy findings was 41.8 years, and the mean age of those without colonoscopy findings was 41.1. It was determined that 44.4% (12/27) of our cases in total had colonoscopic findings. While normal colonoscopic findings were reported in 15 (55.6%) of our patients, benign anorectal diseases (fissure, hemorrhoids, and condyloma) were found in 7 (25.9%) of the patients.

In a study conducted on the subject, it has been determined that the leading cause of diarrhea is amebic or CMV colitis in 62% of 40 HIV cases who underwent endoscopy for diarrhea whose etiology could not be determined by noninvasive methods [9].

In [10], 304 HIV (+) and 199 HIV (-) cases were included in the study. While hemorrhoids were seen most frequently with 49% in HIV (+) cases, it has been determined that 31% have polyps. In the same study, it was reported that those with a CD4 count of <200 had a lower rate of hemorrhoids and diverticulosis compared to those with a CD4 count >200.

In a study [11] in which 159 patients over 50 years of age and applied to the infection outpatient clinic were included, it was determined that 86% were male and the mean age was 58. Endoscopic abnormalities were detected in 61% of the patients; tubular adenoma in 21.9% of the patients, tubular adenoma in 3.1%, hyperplastic polyp in 15.6% and nonspecific colitis in 16.7% in histological examination [11].

In [12], 41 of 51 patients with GI findings had upper GI system endoscopy and 21 had colonoscopy; the mean age of the patients was 39, and it was determined that the most common symptoms in these patients were diarrhea and oral lesions. It was stated that 87% of them had a CD4 count below 200 and only 24% received ART. 17% of these patients had esophageal candidiasis and 26.7% of them had chronic gastritis. Nonspecific colitis was diagnosed with a rate of 44.8% in the left colon and 51.7% in the right colon. Again, in the same study, CMV colitis was found in 13.7% in the left colon and 13.7% in the right colon [12].

In another study where the mean age was 41, and 48% of patients was male, 390 HIV-infected patients were followed up in total. It was determined that the mean CD4 count of patients was 411. In this study, the frequency of anorectal pathology was 22.8% and hemorrhoid and proctitis were the most common pathologies. It has been reported that anorectal pathology may be common among HIV-infected patients [13]. In another study [14], a total of 136 HIV-infected patients underwent screening with colonoscopy to determine the prevalence of colon neoplasms, and it was determined that the frequency of neoplastic lesions in HIV-infected patients was higher than in the control group. It was stated that screening with colonoscopy can be recommended for HIV-infected patients; however, it has been reported that

more studies are required to determine the age of onset and optimal screening frequency [14].

In [15], 50 patients with a mean age of 53.6 were included and it was determined that 30 of these patients had a CD4 count of >500, 20 of them <500, and four of these patients had a CD4 count of <200. 52% of these patients were found to have polyps, and patients with a CD4 of >500 had more adenomas than those with <500. Adenoma rate at a CD4 count of >500 was 47%; while it was 15% at a CD4 count of <500 ($p=0.03$) [15].

Looking at the results of a study conducted with HIV-infected patients over 50 years of age, 60.1% had normal colonoscopy findings, 6.8% hyperplastic polyp, 20.4% low risk adenoma, 11.7% high risk adenoma and 1.1% had colorectal cancer [16].

In the study [17], conducted to determine the frequency of GI infections in HIV-infected cases, 88% of 294 patients were male and the mean age was 36.5. By identifying patients with GI-pathologies, mucosal biopsies were obtained in a standard manner, and samples were examined by a single pathologist. Opportunistic infections were observed in 27 patients who received ART. In conclusion, although the use of ART provides a decrease in GI opportunistic infections in these patients, it was reported that GI symptoms should not be ignored by the physicians who evaluate HIV patients [17].

CONCLUSION

As a result, although the number of our cases is small, it is observed that approximately 55% of patients have normal colonoscopy findings, but those with perianal disease and polyps have a higher CD4 count than those with normal colonoscopy. It has been revealed that patients with CMV infection also have a CD4 count of <200. Studies with more patients in HIV-infected patients will contribute to the diagnosis, follow-up, and treatment preferences of the patients.

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Data sharing statement: Data supporting the findings and conclusions are available upon request from the corresponding author.

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