



Study on the Role of Colonoscopic Biopsy in Rectal Bleeding Patients with Ulcerated Hyperemic Mucosa only



Dalia M Badary^{1*}, Ahmed Ashmawy² and Adnan Ahmed Mohamed³

¹Department of Pathology, Assiut University, Egypt

²Department of Internal Medicine, Assiut University, Egypt

³Department Tropical medicine and gastroenterology, Assiut University, Egypt

Submission: September 14, 2018; **Published:** October 05, 2018

***Corresponding author:** Dalia M Badary, Lecture of pathology, Department of Pathology, Assiut University, Al-Gamaa street, Assiut, Egypt, Tel: 00201066189050; Email: hamasat82@yahoo.com

Abstract

Colonoscopy is the examination of choice for diagnosis and treatment of patients complaining of rectal bleeding. As number of cases with colonoscopy shows only ulcerated hyperemic mucosa is not low, we have performed this study in order to determine the role of colonoscopy in determining the cause of bleeding per rectum in those patients by histopathological evaluation of their biopsies.

Methods: This research included 500 adult patients presented by bleeding per rectum referred to Assiut university hospital (considered the largest center of upper Egypt, receiving cases from all hospitals of upper Egypt) covering the period from 2014 to 2017. All patients were subjected to fibre-optic colonoscopy after necessary preparation and their colonoscopy revealed ulcerated hyperemic mucosa only. Biopsies from these ulcerated hyperemic mucosae taken and diagnosis was based on histopathologic findings

Results: Of the 500 patients enrolled, non-specific in 40 (8%) patients, while the most common pathological finding was solitary rectal ulcer in 200 (40%) followed by ulcerative colitis in 100 (20%), eosinophilic proctitis in 55 (11%), infectious colitis in 40 (8%), indeterminate colitis in 25 (5%), bilharzial proctitis in 20 (4%), hemorrhoids in 10 (2%), ischemic colitis in 5 (1%) patients and colonic adenocarcinoma in 5 (1%)

Conclusion: We conclude that Colonoscopy considered the most cost-effective tool for diagnosis and management of colorectal disorders. Inflammatory and ulcerative colorectal lesions are the most common causes of bleeding per rectum in colonoscopy with no masses. Colorectal carcinoma may be diagnosed early by colonoscopy before forming mass.

Keywords: Colonoscopy; Bleeding per rectum; Colitis; Ulcer; Bilharziasis

Introduction

The gastrointestinal (GI) tract is a highly vascularized organ thus any pathology affecting its mucosa and vasculature can lead to GI bleeding [1]. GI bleeding is an alarming sign for presence of pathology in any age group and must be approached meticulously. Bleeding per rectum which means bleeding from a site distal to ligament of Treitz is considered most common cause of lower GI bleeding [2].

There are several etiologies for rectal bleeding and a complete evaluation and early diagnosis is very important. Bleeding per rectum ranging from mild conditions requiring little or no treatment to severe and life-threatening ones requiring immediate intervention according to the etiologies [3]. The etiologies include hemorrhoids, anal fissures, solitary rectal ulcer, inflammatory bowel disease (IBD), diverticulosis, proctitis, ischemic colitis, infectious colitis, colonic polyps and cancer colon.

Proctosigmoidoscopy followed by colonoscopy is the examination of choice for diagnosis and treatment of patients complaining of rectal bleeding [4]. As number of cases with colonoscopy shows only ulcerated hyperemic mucosa is not low, we have performed this study in order to determine the role of colonoscopy in determining the cause of bleeding per rectum in those patients by histopathological evaluation of their biopsies.

Materials and Methods

This research included 500 adult patients presented by bleeding per rectum referred to Assiut university hospital (considered the largest center of upper Egypt, receiving cases from all hospitals of upper Egypt) covering the period in three years from 2014 to 2017. All patients were subjected to fibre-optic colonoscopy after necessary preparation and their colonoscopy revealed ulcerated hyperemic mucosa only. Biopsies from these

ulcerated hyperemic mucosae taken and diagnosis was based on histopathologic findings. The inclusion criteria were rectal bleeding with ulcerated hyperemic mucosa only at colonoscopy. The study parameters included age sex and histopathological findings. The histopathological diagnosis based on the classification of Atlas of Non-tumor Pathology - Gastrointestinal Diseases [5].

The biopsy samples have been analyzed in detail under light microscope using hematoxylin- Eosin stain. The collected data were submitted to descriptive statistical analysis.

Results

A total of 500 patients (300 males and 200 females) with mean age 40 years. The presenting symptoms were hematochezia

in 300 (60%), bloody diarrhea in 190 (38%), and positive occult blood test in 10 (2%) patients. The most common accompanying symptom was abdominal pain in 300 (60%) patients followed by fever in 100 (20%), weight loss in 80 (16%), and iron deficiency anemia in 20 (4%) patients.

Biopsy samples were non-specific in 40 (8%) patients, while the most common pathological finding was solitary rectal ulcer in 200 (40%) followed by ulcerative colitis in 100 (20%), eosinophilic proctitis in 55 (11%), infectious colitis in 40 (8%), indeterminate colitis in 25 (5%), bilharzial proctitis in 20 (4%) , hemorrhoids in 10 (2%) , ischemic colitis in 5(1%) patients and colonic adenocarcinoma in 5 (1%) (Figure 1).

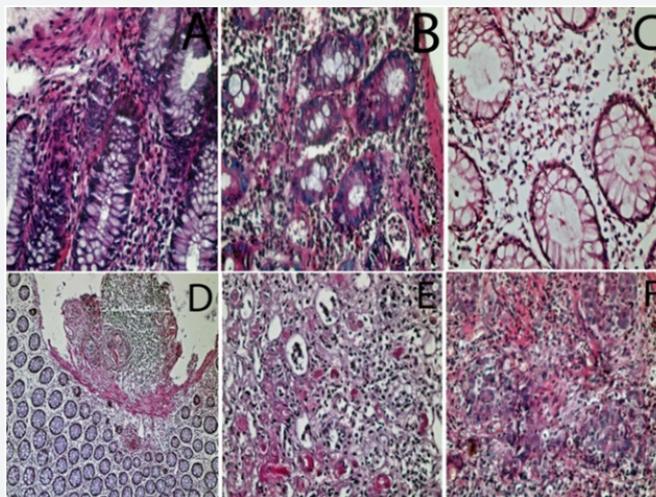


Figure 1: A) Solitary rectal ulcer: muscularis mucosa fibers splay between the glands; H&E staining (x400). B) Ulcerative colitis. Crypt abscesses and mucin depletion; H&E staining (x400). C) Eosinophilic proctitis: excessive eosinophils at lamina propria; H&E staining (x400). D) Bilharzial colitis: Multiple ova in the submucosa; H&E staining (x200). E) Ischemic colitis: multiple thrombi at blood vessels in lamina propria with degenerated glands; H&E staining (x400). F) Colonic adenocarcinoma: malignant glands infiltrate the submucosa; H&E staining (x400).

Discussion

The colon is the main target of several functional and pathological disorders, which have an acute or chronic presentation. Colonoscopy is a main effective method for surveillance of colonic lesions. Several studies were done to evaluate the role of colonoscopy in diagnosis and management of gastrointestinal disorders [6,7].

Our study involved 500 patients, whose colonoscopy revealed ulcerated hyperemic mucosa only to determine the role of colonoscopy in determining the cause of bleeding per rectum in those patients by histopathological evaluation of their biopsies.

Solitary rectal ulcer represents the most common cause of rectal bleeding in our study 40% of cases which is nearly similar to [8]. Ulcerative colitis represented 20% of cases and indeterminate colitis represented 5% of cases with which is similar to the finding by some authors [6,9].

Nonspecific colitis was the endoscopic findings in 40 cases only which represented 8% of all cases which appear to be very low in relation to specific pathology in 460 cases which is similar

to many studies [10,11]. This makes colonoscopy in those patients with a great value.

Colonoscopic finding in 5 cases (1%) were diagnosed as cancer colon was hyperemic ulcerative mucosa only revealed the importance of biopsy in those patients. Eosinophilic proctitis and infectious colitis represent also 55 (11%) and 40 (8%) respectively which is considered is not low in relation to other studies [12]. While hemorrhoids and ischemic colitis represent only 2% and 1% respectively, but this considered high in relation to other studies [8].

Bilharzial colitis was found in 20 cases (4% of all cases of the study) which is nearly similar to many authors [10,13,14] while Thakeb et al., [15] in 1987 found bilharziasis in 68.7%. The difference reflects the advanced management of bilharziasis in Egypt in the last three decades.

Conclusion

Colonoscopy considered the most cost-effective tool for diagnosis and management of colorectal disorders. Inflammatory and ulcerative colorectal lesions are the most common causes of

bleeding per rectum in colonoscopy with no masses. Colorectal carcinoma may be diagnosed early by colonoscopy before forming mass (with ulcerative hyperemic mucosa only).

Competing Interest

The authors declare that they have no competing interests.

Funding

The authors received no financial or other support for the research reported in this manuscript.

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DOI: [10.19080/ARGH.2018.11.555805](https://doi.org/10.19080/ARGH.2018.11.555805)

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