Frequency of Microscopic Colitis In Patients with Diarrhea predominant Irritable bowel syndrome in Egyptian patients

Thesis

Submitted for partial fulfillment of master degree in Internal Medicine

Presented by

Donia Barakat Ali Sharaf El-Din

M.B., B.Ch

Supervised by

Prof. Dr. Khaled Hamdy Abd - El Mageed

Professor of Internal Medicine and Gastroenterology

Faculty of Medicine, Ain Shams University

ASS. Prof. George Safwat Riad

Assistant Professor of Internal Medicine and Gastroenterology

Faculty of Medicine, Ain Shams University

ASS. Prof. Nevine Ibrahim Mousa

Assistant Professor of Internal Medicine and Gastroenterology

Faculty of Medicine, Ain Shams University

Faculty of Medicine

Ain Shams University

2018

تواتر التهاب القولون المجهري في مرضى القولون العصبي غالب الاسهال في المرضى المصريين

رسالة

توطئة للحصول علي درجة الماجستير في الباطنة العامة

مقدمة من

دنيا بركات علي شرف الدين/الطبيب

بكالوريوس الطب و الجراحة

تحت إشراف

أ.د/ خالد حمدي عبد المجيد

أستاذ الباطنة العامة والجهاز الهضمي

كلية الطب- جامعة عين شمس

صفوت رياض أ.د/ جورج

أستاذ مساعد الباطنة العامة والجهاز الهضمي

كلية الطب- جامعة عين شمس

أ.د/ نيفين إبراهيم موسى

استاذ مساعد الباطنة العامة والجهاز الهضمي

كلية الطب- جامعة عين شمس

كلية الطب

جامعة عين شمس

٢٠١٨

سورة البقرة الآية: ٣٢

Acknowledgement

*First, I would like to thank **Allah** a lot for Blessing this work until it has reached its end, as a part of his generous help throughout our life.*

*My profound thanks and deep appreciation to **Prof.Dr.khaled Hamdy Abdel-ElMageed** , Professor of Internal Medicine and Gastroenterology, Faculty of Medicine, Ain Shams University for his great support and advice, his valuable remarks that gave me the confidence and encouragement to fulfill this work.*

*I am also thankful to **Ass.Prof George Safwat Riad ,** Assistant Professor of Internal Medicine and Gastroenterology, Faculty of Medicine, Ain Shams University for his valuable supervision, co-operation and direction that extended throughout this work.*

*I would like to direct my special thanks to **Ass.Prof.Nevine Ibrahim Mousa,** Assistant Professor of Internal Medicine and Gastroenterology, Faculty of Medicine, Ain Shams University, for his invaluable help, fruitful advice, continuous support offered to me and guidance step by step till this essay finished.*

*Finally my deep thanks to **my family** for supporting me throughout my life.*

Contents

LIST OF ABBREVIATIONS

5-HT	: 5- hydroxytryptamine
AGA	: American Gastroenterology Association
ALT	: Alanine aminotransferas.
AST	: Aspartate aminotransferase.
BSFS	: Bristol stool form scale
CC	: Collagenous colitis
CD	: Celiac Disease
CD4T	: Cluster of differentiation 4T
CD8	: Cluster of differention 8
EPX	: Eosinophilic protein X
FBD	: Functional bowel disorder
FODMAP	: Fermentable oligosaccharides, disaccharides, monosaccharides, and polyols
GI	: Gastrointestinal
HAPCs	: High amplitude propagated contractions
IBS	: Irritable bowel syndrome
IBS-C	: Irritable bowel syndrome constipation predominant
IBS-D	: Irritable bowel syndrome diarrehea predominant
IBS-M	: Irritable bowel syndrome with mixed diarrhea and constipation
IBS-U	: Irritable bowel syndrome unclassified
IEL	: Intraepithelial lymphocytes
LC	: Lymphocytic colitis
LI	: Lactose intolerance
MPO	: Myeloperoxidase
NCGS	: Non-celiac gluten sensitivity
T3	: Triiodothyronine
T4	: Throxine
TNF	: Tumor necrotizing factor
TSH	: Throid stimulating Hormone

List of Table

List of Figures

ABSTRACT

Background: Irritable bowel syndrome (IBS) is a gastrointestinal disorder characterized by chronic abdominal pain and altered bowel habits in the absence of any organic cause. Irritable bowel syndrome is considered a functional illiness wih no diagnostic biomarkers or pathologic findings. The most common diagnosis made in patients with chronic diarrhea is IBS. MC is a clinical syndrome of unknown etiology, characterized by chonic watery diarrhea in the absence of macroscopic changes in the large bowel, but with histological examination changes **Objective:** The aim of this study is to determine the frequency of microscopic colitis in patients with IBS of diarrhea predominant sub type. **Methods:** This prospective study had been conducted on 100 subjects, age range 19-65 year from National Hepatology and Tropical medicine reaserch Institute and Ain Shams University hospital inpatient and outpatient clinics. The study was carried on over 2 years (2016-2018) duration. The study subjects were fulfilling Rome criteria. The main complain of the selected patients was abdominal pain associated with chronic watery diarrhea. **Results:** This study showed that patients with microscopic colitis can be misdiagnosed as IBS – diarrhea predominant due similar presentation and normal macroscopic picture in endoscopy. In this study we found that 14 (14%) had microscopic colitis. This study showed that there is a significant difference between patients with normal biopsy and others with microscopic colitis as regard age and sex. **Conclusions:** Our study showed that MC is not uncommon in Upper Egypt patients with chronic watery diarrhea and normal colonoscopic findings. Biopsy of the normal colonic mucosa in patient with chronic watery diarrhea is emphasized to reach a definite diagnosis of MC. Abdominal pain, nocturnal diarrhea and weight loss were the most common clinical manifestations of MC. MC types, LC, and CC have almost similar clinical presentations and there is no diagnostic laboratory marker; thus, histopathologic diagnosis is the only reliable method for differentiation between these subtypes. Nocturnal diarrhea and slight weight loss can be helpful in distinguishing microscopic colitis from diarrhea predominant IBS. Collaboration between treating physicians, endoscopists and pathologists is crucial for diagnosing MC.

Keywords: Microscopic colitis, collagenous colitis, lymphocytic colitis, irritable bowel syndrome, chronic watery diarrhea**.**

INTRODUCTION

The term microscopic colitis (MC) may be now considered as an umbrella term for two conditions (lymphocytic colitis (LC) and collagenous colitis (CC)), both characterised by chronic or recurrent watery diarrhoea, normal radiological examinations, normal or near-normal endoscopic appearance and specific microscopic abnormalities in colonic biopsies ***(Pardi & Kelly, 2011*)**.

Collagenous Colitis differs from Lymphocytic Colitis in that it presents a sub-epithelial collagen band adjacent to the basal membrane whereas the hallmark of LC is a dense lymphocytic infiltration into the epithelium. Several variants of these two conditions have been reported but these are probably not specific entities ***(Geboes & Villanacci, 2005).***

Microscopic colitis may be associated with other autoimmune diseases or with administration of some drugs weeks or months before onset of the symptoms. A detailed medical history associated with multiple biopsies from normal intestinal mucosa taken throughout the colon is essential for a proper diagnosis ***(Nyhlin et al., 2006).***

One gastrointestinal disorder frequently misdiagnosed as irritable bowel syndrome is microscopic colitis (MC). Its incidence varies between 0.2 and 5.5/100.000 inhabitants/ year and its prevalence between 10 and 16/100.000 inhabitants/year. MC is regarded as a common cause of

chronic watery, non-bloody diarrhea, accounting for approximately 10% of patients presenting with this symptom (reaching 15-20% in elderly patients) (***Calabrese C et at., 2011).***

Irritable bowel syndrome (IBS) is defined as a functional bowel disorder in which abdominal pain is associated with defecation or a change in bowel habit. Most common diagnosis made in patients with chronic diarrhea is IBS (***Longstrenght et al., 2006*).**

Patient with IBS are classified into four patterns which are diarrhea predominant (IBS-D), constipation predominant (IBS-C), mixed type (IBS-M) & alternating type (IBS-A) (***Spiegel et al., 2010).***

The Rome III criteria for the diagnosis of irritable bowel syndrome require that patients have had recurrent abdominal pain or discomfort at least 3 days per month during the previous 3 months that is associated with 2 or more of the following: 1.Relieved by defecation 2. Onset associated with a change in stool frequency 3.Onset associated with a change in stool form or appearance (***Long Streth et al., 2006).***

The Rome IV criteria for the diagnosis of irritable bowel syndrome require that patients have had recurrent abdominal pain on average at least 1 day per week during the previous 3 months that is associated with 2 or more of the following : 1.Related to defecation (may be increased or

unchanged by defecation), 2.Change in stool frequency. 3.Change in stool form or appearance (***Lacy et al., 2016)***.

The symptoms of MC have been frequently attributed to IBS-D, often for many years before diagnosis. Thus, differentiating patients with functional bowel disorders from those with MC can be difficult particularly when colonoscopy is not conclusive **(*Levent Erdem et al., 2008).***

The corticosteroid budesonide is the most effective treatment for patients with microscopic colitis (MC), according to a previous meta-analysis. However, once patients stop taking this drug, the rate of symptom relapse is high (***Stewart et al., 2011)***.

Aim of the work

The aim of this study is to asses the frequency of collagenous colitis and lymphocytic colitis in patients diagnosed with diarrhea predominant –IBS according to Rome IV criteria in a scale of Egyptian patients.

IRRITABLE BOWEL SYNDROME

Definition:

IBS is a functional bowel disorder (FBD) in which recurrent abdominal pain is associated with defecation or a change in bowel habits (***Lacy et al., 2016).***

Functional bowel disorders are a spectrum of chronic gastrointestinal (GI) disorders characterized by predominant symptoms or signs of abdominal pain, bloating, distention, and/or bowel habit abnormalities (eg, constipation, diarrhea, or mixed constipation and diarrhea), It can be distinguished from other GI disorders based on chronicity (> 6 months of symptoms at the time of presentation), current activity (symptoms present within the last 3 months), frequency (symptoms present, on average, at least 1 day per week), and the absence of obvious anatomic or physiologic abnormalities identified by routine diagnostic examinations, as deemed clinically appropriate (***Lacy et al., 2016)***.

Epidemiology

Functional bowel disorders are highly prevalent disorders found worldwide. These disorders have the potential to affect all members of society, regardless of age, sex, race, creed, color, or socioeconomic status (***Lacy et al., 2016)*.**