Hepatobiliary Abnormalities in Patients with Ulcerative Colitis

Thesis

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General Medicine

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تغيرات الكبد والجهاز المراري المصاحبة للالتهاب التقرحي للقولون

رسالة

توطئة للحصول على درجة الماجستير فى

الباطنة العامة

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List of Abbreviations

Alk.Ph	:	*Alkaline phosphatase*
ALT	:	*Alanine aminotransferase*
AMA	:	*Anti mitochondrial antibody*
ANA	:	*Anti nuclear antibody*
ASCA	:	*Anti-Saccharomyces cerevisiae antibody*
ASMA	:	*Anti smooth muscle antibody*
AST	:	*Aspartat aminotransferase*
CBC	:	*Complete blood count*
CD	:	*Crohn's disease*
CNS	:	*Centerl nervous system*
CRP	:	*C- reactive protein*
D.Bil	:	*Direct bilirubin*
EM	:	*Extraintestinal manifestations*
ERCP	:	*Endoscopic retrograde cholangiopancreato-graphy*
ESR	:	*Erythrocyte sedimentation rate*
F	:	*Female*
GIT	:	*Gastrointestinal tract*
Hb	:	*Hemoglobin*
Hct	:	*Hematocrite value*
HLA	:	*Human leucocytic antigen*
H.pylori	:	*Helicobacter pylori*
HSP	:	*Heat shock protien*
IBD	:	*Inflammatory bowel disease*
IgE	:	*Immunoglobulin E*
IgG	:	*Immunoglobulin G*
IL-1	:	*Interleukin-1*

List of Abbreviations (Cont.)

IL-1ra	:	*Interlukine-1 receptor antagonist*
IL-1A	:	*Interleukin-1alpha*
IL-1B	:	*Interleukin-1beta*
IL-10	:	*Interleukin-10*
LFT	:	*Liver function test*
Lab	:	*Laboratory*
M	:	*Male*
MCH	:	*Mean corpuscular hemoglobin*
MCHC	:	*Mean corpuscular hemoglobin concentration*
MCV	:	*Mean corpuscular volume*
MHz	:	*Mega hertz*
NAD	:	*No abnormality detected*
NFKB1	:	*Nuclear factor -KB1 (NFKB1)*
NSAID	:	*Non steroidal anti-inflammatory drugs*
P-ANCA	:	*Perinuclear antineutrophil cytoplasmic autoantibody*
PBs	:	*Phosphate buffered saline*
Plt	:	*Platelet*
PSC	:	*Primary sclerosing cholangitis*
RBCs	:	*Red blood cells*
RFLPs	:	*Restriction fragment length polymorphisms*
S.D	:	*Stander deviation*
TEC	:	*Technology evaluation center*
TNF	:	*Tumor necrosis factor*
Tot. Bil	:	*Total bilirubin*
U/S	:	*Ultrasound*
UC	:	*Ulcerative colitis*
USA	:	*United States of America*
WBCs	:	*White blood cells*

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الملخـص باللغـة العربيـة

مقدمــة :

إن الالتهاب التقرحي للقولون هو أحد أمراض القولون التي قد تصيب المستقيم فقط أو تمتد لتشمل جزء أو جميع أجزاء القولون، وإلي الآن لم يعرف السبب الحقيقي لهذا المرض ولكن هناك عدة نظريات منها نظرية العامل المناعي و نظرية العامل الوراثي ونظرية تأثير العامل البيئي. ويتميز هذا المرض بظهور أعراض تتعلق بالقولون وأعراض تتعلق بأجهزة الجسم الأخرى مثل الكبد و القنوات المرارية.

الهدف من البحث:

وقد أجري هذا البحث لدراسة تغيرات الكبد و القنوات المرارية في مرضي الالتهابات التقرحية للقولون .

وقد ضمت هذه الدراسة مجموعتين:-

المجموعة الأولى : تضم 20 مريضا يعانون من أعراض القولون المتقرح (نزيف شرجي-إسهال متكرر-آلام بالبطن-نقص الوزن.....).

المجموعة الثانية : وتضم10 أشخاص أصحاء كمجموعه ضابطة للمقارنة.

نتيجة البحث:

وقد أثبتت هذه الدراسة وجود تغيرات بالكبد و الجهاز المراري ذات دلالة إحصائية مؤثرة بنسبه كبيرة في مرضي الالتهاب التقرحي للقولون. وقد بلغت هذه النسبة 55%. وكان من أهم هذه التغيرات في هذه الدراسة الكبد الدهني وتليف الكبد وتكون حصوات بالحوصلة المرارية.

توصيات البحث:

يعتبر التصوير بالموجات فوق الصوتية من الطرق السهلة و الدقيقة لدراسة مرضي الالتهاب التقرحي للقولون ومعرفة مدي تأثر الكبد و الجهاز المراري بهذا المرض.

كما تعتبر الاختبارات الخاصة بالمناعة من الطرق المفيدة جدا في تشخيص مرض الالتهاب التقرحي للقولون ومعرفة مدي الإصابة به والتفرقة بينه وبين مرض كرونز، وكذا تأثيره علي الكبد و الجهاز المراري مع النصح بعمل مزيد من التجارب باستخدام عدد أكبر من المرضي.

INTRODUCTION

Ulcerative colitis is defined as an inflammatory disorder of the colonic mucosa, characterized by relapses and remissions. It may affect just the rectum (proctitis) or extend proximally to involve part or all of the colon (total colitis). It never spreads proximally to the ilioceacal valve (except for back wash ileitis) ***(Bernstein et al., 2002)***.

The exact etiology is still uncertain but multiple theories were emerged including genetic predisposition, environmental factors and immune dysfunction ***(Carucci and Levine, 2002)***.

Ulcerative colitis is associated with wide spectrum of pathologic findings in the liver and biliary tract. Abdominal ultrasonography represents a noninvasive, rapid and sensitive means to study hepatobiliary abnormalities in patients with ulcerative colitis ***(De Fazio et al., 1992)***.

Various immunologic changes have been documented in patients with ulcerative colitis. These changes are accompanied by an increased B-cell population and plasma cells with increased production of immunoglobulin G (IgG) and immunoglobulin E (IgE). A small proportion of patients with ulcerative colitis have antismooth muscle and cytoskeletal antibodies ***(Annese et al.,2001)***.

Aim of the work

To study hepatobiliary abnormalities in patients with ulcerative colitis using biochemical, immunological and imaging studies.

Ulcerative Colitis

Etiology and Pathogenesis :

Ulcerative colitis (UC) is an idiopathic, chronic-relapsing progressive inflammatory bowel disease. The inflammatory process is limited to mucosa. It affects the distal rectum and extends for varying distance proximally. Clinically it manifests most often through diarrhea, blood and/or mucous in stools, tenesmus, abdominal pain and weight loss. The severity of intestinal symptomatology depends on the level of inflammatory process, which is the activity of the disease. By complementary analysis of clinical symptoms and signs as well as laboratory parameters, it is possible to clinically grade UC activity as mild, moderate and severe. Activity assessment has therapeutic and prognostic significance ***(Humphrey et al., 1995; and Glickmann, 1994)***.

Etiology :

There are no known etiological factors; changes in colonic mucus and metabolism of arachidonic acid in the colon have been postulated. Many immunological abnormalities have been described but are likely to be secondary to colonic damage. Many associations have been described ***(Hamilton et al., 1995).***

Etiological Factors :

Microbial Aspects :

Many micro-organisms have been implicated. However none was proved as a definite pathogen. Serologic evidence of excessive exposure to known viruses as CMV infection in refractory UC was discovered ***(Adani et al., 2001).***

The clinical and proctoscopic similarity of UC to colitis caused by Chlamydia led to extensive studies of a possible etiologic relationship with negative results. Some results confirmed the low prevalence of Helicobacter pylori infection in IBD. The significantly higher age of onset and bimodal pattern of age –specific incidence in seropositive IBD patients suggests that H.pylori infection significantly modifies the development of IBD and may have a protective effect ***(Vare et al., 2001).***

Immune Mechanisms :

No conclusive evidence has been obtained for an abnormality in immunologic homeostasis preceding the onset of UC. Most, if not all, of the immunologic phenomena appearing and disappearing with activity and quiescence of the disease ***(Cantrell et al., 1990).***