STUDY OF ENDOSCOPIC UPPER GIT LESIONS IN EGYPTIAN PATIENTS WITH CHRONIC LIVER DISEASE DUE TO EITHER HCV INFECTION OR SCHISTOSOMIASIS

Thesis

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بسم الله الرحمن الرحيم

يَرْفَعِ اللهُ الَّذِينَ آمَنُوا مِنْكُمْ وَالَّذِينَ أُوتُوا
الْعِلْمَ دَرَجَاتٍ وَاللهُ بِمَا تَعْمَلُونَ خَبِيرٌ

صدق الله العظيم

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LIST OF ABBREVIATION

ALP	Alkaline Phosphatase
APC	Argon Plasma photo Coagulation
BCS	Budd-Chiari Syndrome
CCTV	Closed Circuit Television
DU	Duodenal Ulcer
EBL	Endoscopic Band Ligation
EGF	Endothelial Growth Factor
EIA	Enzyme Imuno Assay
GAVE	Gastric Antral Vascular Ectasia
GERD	Gastro Esophageal Reflux Disease
GOV	Gastro Oesophageal Varices
HCC	Hepatocellular carcinoma
HCT	Hematocrit
HCV	Hepatitis C virus
HVPG	Hepatic Veins Pressure Gradient
IDUs	Injecting drug users
IGV	Isolated Gastric Varices
IRES	Internal Ribosome Entry Site
MLP	Mosaic Like Pattern
O.V	Oesophageal Varices
PHG	Portal Hypertensive Gastropathy
PVT	Portal Vein Thrombosis
RIBA	Recombinant Imuno Blot Assay
TIPS	Transjugular Intrahepatic Portocaval Shunt
UGI	Upper Gastro Intestinal
VEGF	Vascular Endothelial Growth Factor

INTRODUCTION

Endemic chronic liver disease is a special situation present in Egypt in which schistosomiasis, virus C infection ,or both combined are the main etiological factors.

The prevalence of HCV antibodies increases from ٢.٧% in those <٢٠ years of age to more than ٤٠% in males aged ٤٠-٥٤ years. The peak in HCV prevalence in the ٤٠-٥٤ year age group corresponds to the aging of the cohort of children infected through schistosomiasis treated parentraly in the ١٩٦٠s-٧٠s (accounting for ١٢.٤% of all HCV infections observed today among adults). Following this initial founding event, the HCV spread in the community through iatrogenic factors, and particularly injections (٣٧.٩% of the overall attributable fraction in adults). In children, however, no iatrogenic factors were associated with increased risk of infection, suggesting a change in the pattern of HCV spread ***(Arafa, ٢٠٠٥).***

HCV may cause very little detected illness in young adult Egyptians. However, cirrhosis can be the end stage of chronic liver disease ***(Dagher, ٢٠٠١).*** At least two thirds of cirrhotic patients develop esophageal varices during their lifetime. Severe upper gastrointestinal (UGI) bleeding as a complication of portal hypertension develops in about ٣٠%-٤٠% of cirrhotics ***(Jensen, ٢٠٠٢).***

Esophageal and gastric varices are common manifestations of advanced chronic liver disease, but other endoscopic gastrointestinal manifestations of portal hypertension may occur. In the upper gastrointestinal tract, portal hypertensive gastropathy, particularly when severe, and gastric antral vascular ectasias are important alternative causes of gastrointestinal bleeding.

Endoscopy can assess the presence and size of gastroesophageal varices, the appearance of the variceal wall, and the presence and severity of portal hypertensive gastropathy ***(Escorsell, ٢٠٠١).*** It has greatly facilitated the management of some patients with chronic liver disease. Upper endoscopy plays a pivotal role in the diagnosis and management of oesophageal and gastric varices ***(Lau, ١٩٩٧).*** It is used for the prophylaxis of the first bleeding episode, therapy of active bleeding and prophylaxis of recurrent bleeding ***(Biecker, ٢٠٠٥).***

The portal hypertensive gastropathy (PHG) and duodenopathy (PHD) define a wide spectrum of diffuse macroscopic lesions that appear in the gastric mucosa of patients with portal hypertension ***(Elnaser, ٢٠٠٥).***

Gastroduodenal ulcers and gastroduodenal erosions are particularly frequent in cirrhotic patients and are significantly related to hypertensive gastropathy ***(Auroux, ٢٠٠٣).***

Although HCV and schistosomiasis lead to chronic liver disease and portal hypertention, yet the last complications may differ according to the aetiology. Schistosomiasis is a mesenchymal lesion leading mainly to periportal fibrosis and the insult is mainly around the portal vessels.On the other hand HCV causes parenchymal insult which leads to portal hypertention.Although both etiology,lead at the end to portal hypertention,it is suspected that the manifestations of portal hypertention and the prognosis of the disease are different.

AIM OF THE WORK

The aim of this work is to screen the endoscopic upper GIT lesions in patients with chronic liver disease caused by either HCV or schistosomiasis, in a trial to evaluate the impact of each disease separately.

HEPATITIS C
HISTORY and EPIDOMIOLOGY

The history of hepatitis C began a little more than ٢ decaes ago, when researchers transmitted non-A, non-B hepatitis from patients with transfusion-associated hepatitis to chimpanzees, demonstrating that the disease resulted from a transmissible agent. A major break-through came in ١٩٨٩ with the cloning of the hepatitis C virus (HCV) ***(Zein, ٢٠٠٣)***.

In the first years after the discovery of HCV, its primary role in post-transfusion hepatitis and its tendency to induce persistent infection after exposure were widely documented. These early years generated considerable debate about whether HCV was associated with significant morbidity or mortality in infected patients. Compelling evidence, however, linked HCV infection to liver failure and hepatocellular carcinoma (HCC) and was followed by a series of well-designed studies that suggested an increase in liver-related mortality among patients with chronic HCV infection ***(Seeff, ٢٠٠٢)***.

We now firmly recognize that HCV infection is associated with substantial morbidity and mortality and that it clearly represents a global health challenge. Chronic hepatitis C (HCV) infection is typically charecterised by slwoly progressiv hepatic fibrosis, with progression from

stage ٠ (no fibrosis) to stage ٤ (cirrhosis) taking place approxiamtely ٠.١٠-٠.١٥ fibrosis units (median) per decade. However, it is recognised that some patients do not progress while others rapidly develop significant fibrosis ***(Zein ٢٠٠٣)***.

Hepatitis C virus (HCV) infects over ١٧٠ million individuals worldwide. Chronic hepatitis C also represents an important public health threat and economic burden because it is responsible for a high incidence of cirrhosis and hepatocellular carcinoma and accounts for approximately ٣٠% of all patients undergoing liver transplantation ***(Pawlotsky et al., ٢٠٠٤)***.

Hepatitis C virus (HCV) was well adapted to emerge worldwide in the late ٢٠th century. Transmitted primarily through percutaneous routes, it took advantage of two emerging epidemics: an epidemic of recreational injection drug use in industrialized countries and an epidemic of unsafe injections primarily in developing countries, made possible by the expanded use of parenteral therapeutics and declining injection equipment prices after the World War II. The result at the beginning of the ٢١st century is a large pool of HCV-infected people, many of whom have asymptomatic, slowly progressing liver disease.

The greatest burden from HCV infection will come from the long-term complications of this chronic liver disease, namely cirrhosis and hepatocellular carcinoma,

which in any individual may take decades to develop. Whether increases in HCV infections in the ٢٠th centurry will lead to increases in HCV-related complications in the ٢١st will depend on three factors: the number of people currently infected with the virus, the stage of disease in these individuals, and the natural history of HCV infection ***(Alter ٢٠٠٢)***.

Data from natural history studies suggest that progression to cirrhosis is much slower in people infected as children or young adults, of whom fewer than ٥% have progressed to cirrhosis in the first ٢٠ years, than in people infected as older adults, of whom ١٠-٢٠% have progressed to cirrhosis in the first ٢٠ years Beyond ٢٠ years there are few data on what to expect and no data to suggest whether disease progression will accelerate or decelerate. In addition, co-morbidities such as alcohol use and human immunodefficiency virus may substantially alter the natural history of chronic hepatitis C ***(Seeff, ٢٠٠٢)***.

In Egypt, where unsafe injection practices during a disease eradication programme may have inadvertently lead to the largest known epidemic of HCV infection, the current prevalence of infection correlates with what would be expected if incidence of infection had increased in the