بسم الله الرحمن الرحيم

شبكة المعلومـــــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـــسـم ﴾

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15 – 25c and relative humidity 20-40 %

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

The Role Of Helicobacter Pylori In Bile Reflux Induced Gastric injury

Thesis

Submitted For fulfillment for master degree in internal medicine

BY

Khaled Mohammed Salah El-Deen Abdel Azeem

M. B. B. ch

Under supervision of

Prof. Dr./ Adel Abdalla El Sheikh

professor and chairman of

internal medicine dep.

Banha faculty of medicine

Assis. Prof. Dr. Neveine Ahmed Abdel Hafeez

assis, professor of clinical pathology

Banha faculty of medicine

Dr. Mohammed Amr Afifi

Lecturer of internal medicine

Banha faculty of medicine

Dr. Ahmad Abdel Motaleb Gad

Lecturer of internal medicine

zagazig faculty of medicine

Banha faculty of medicine

2000

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Introduction and Aim of the work

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Helicobacter pylori (H. Pylori) was first isolated in 1982, by **Marshal et al** .

Since then it has been found in gastric biopsy specimens and linked to many diseases in the gastrointestinal tract (G.I.T).

H.Pylori infection of the gastric mucous is regarded as the major etiological agent in chronic diffuse, superficial gastritis (**Morris and Nicholson, 1987 and Blasar, 1992**), and an important risk factor for the development of intestinal type of gastric carcinoma **(Parsonnet et al., 1991)** Though other factors such as duodenogastric reflex (DGR) of bile may play a part in gastric injury . It has been accepted that bile reflux affects the gastric mucous and is now regarded as an important cause of reactive gastritis **(Houghton et al., 1986 and Dixon et al., 1986).**

A possible relationship between bile reflex and H.Pylori gastritis or both is a matter of speculation. **(Ladas et al., 1996)**

Aim of the work.

The aim of our work is to find a caused relationship between H.P infection and DGR.

Review of literature

Anatomy of the stomach

The stomach has four main areas:

1) The cardia 2) The fundus

3) The body 4) The pylorus.

The pylorus is formed of two portions :

a) The pyloric canal connecting the stomach with the duodenum

b)The pyloric sphincter: It is a valve through which the pylorus communicates the duodenum. It is formed of many layers of thickened smooth muscles.

The lesser curvature: It is the concave medial border of the stomach The greater curvature: It is the convex lateral border of the stomach.

Anatomy of the external biliary tract

The intrahepatic segmental bile ducts unite to form lobar ducts, which coalesce to form the right and left hepatic ducts. They unite to form the common hepatic duct. It is joined with the cystic duct to form the common bile duct, which is about 8.5 cm in length and terminates in the second part of the duodenum, where it unites with the pancreatic duct to form the ampulla of Vater, which is regulated by sphincter of Oddi.

The gall bladder: it is a pear shaped organ with an average capacity of 50 ml.It is divided into fundus, corpus, infundibulum and neck. The gall bladder enters the common duct system by the cystic duct which has an average length of 4cm **(Schwartz, 1990).**

Blood supply :

1) Arteries : this system is supplied by branches of cystic artery, and twigs of the right hepatic artery **(Gerard, 1995).**

2) Venous drainage : occurs by branches that enter the hepatic veins or the portal veins.

3) The lymph drainage :flows directly to the liver and several nodes along the surface of portal vein and common bile duct (**Gerard,1995).**

Neural supply : both sympathetic and parasympathetic (Vagal) fibers are coming from the coeliac plexus. **(Skandalak et al., 1993).**

Physiology

Physiology of the bile :

The liver secretes bile normally between 600 – 1200 ml. per day. Bile serves two important functions :

1) Digestion and absorption of fat as it contains bile acids that :

a)Emulsify the large fat particles, which could be attacked by lipase enzme in the pancreatic juice.

b)Aid transport and absorption of digested fat end products to, and through the intestinal mucosa)

2)Bile serves as a mean for excretion of several important waste products from blood, including bilirubin, and cholesterol **(Gyton and Hall, 1996).**

Composition of the bile:

Table number (1) shows composition of bile: **Jones et al., 1980**

	Liver bile	Gall bladder bile
Water	97.5 gm / dl	92 gm / dl
Bile salts	1.1 gm/d1	6 gm / d1
Bilirubin	0.04 gm / d1	0.3 gm /d1
Cholesterol	0.1 gm / D1	0.3 to 0.9 gm / d1
Fatty acids	0.04 gm /d1	0.3 gm/d1
Na^+	145 meq/ liter	130 meq/liter
K^+	5meq/liter	13 meq/ liter
Ca^+	5m eq/liter	13 meq/liter
C1-	100meq / liter	25 meq/liter
Hco-3	28 meq/liter	10meq/liter

(Table 1) showing composition of bile

Storage and secretion of the bile:

The bile secreted by the liver is normally stored in the gall bladder. As much as 12 hr. of bile secretion (about 450 m1) can be stored.

The gall bladder can concentrate the bile constituents including water, sodium, chloride. When a fatty meal is eaten, rhythmic contractions of the wall of the gall bladder with simultaneous relaxation of sphincter of Oddi occurs.

By far the most important stimulus for gall bladder contraction is the hormone cholecystokinine (cck).It is also stimulated by acetylcholine- secretion (**Gyton & Hall, 1996).**

Normal gastroduodenal motor function:

Gastric emptying is a highly regulated process reflecting the integration of the propulsive forces of proximal gastric (fundic) tone and distal gastric (antral) contractions and the inhibitory forces of plyroic and doudenal contractions.(Heading et al., 1992).

Proximal stomach (fundus/proximal body)

The proximal stomach (fundus and proximal body)exhibits a tonic pressure, which is influenced by vagal neural input and circulating hormones, such as gastrin, cholecystokinin, and secretin. When solid food and/ or liquids are swallowed, subsequent entry into the stomach is accompanied by relaxation of the fundus. This relaxation is a vagal reflex allowing the proximal stomach to expand its volume ("accommodation") during feeding without significant changes in intragastric pressure (" receptive relaxation").

These properties allow the proximal stomach to serve as a reservoir for food and provide a site for contact between food and