ROLE OF ULTRASOUND IN INVESTIGATION OF NON-ULCER DYSPEPSIA

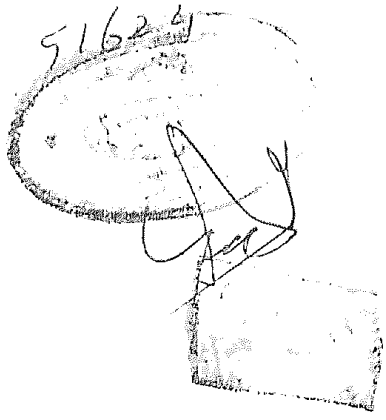
Msc. THESIS
Submitted in Partial Fullfillment
of the M.S. Degree in Tropical Medicine

Presented By
Mohamed Aly Abd El-Salam Mokhles
M.B.,Bch.

Supervised By :
Prof. Dr.
Effat Abdel Moneim El-Fakhfakh
Professor of Tropical Medicine
Ain Shams University

Dr.
Hassan Salah El-Din Hamdy
Lecturer of Tropical Medicine
Ain Shams University

Dr.
Mohamed Amin Sakr
Lecturer of Tropical Medicine
Ain Shams University

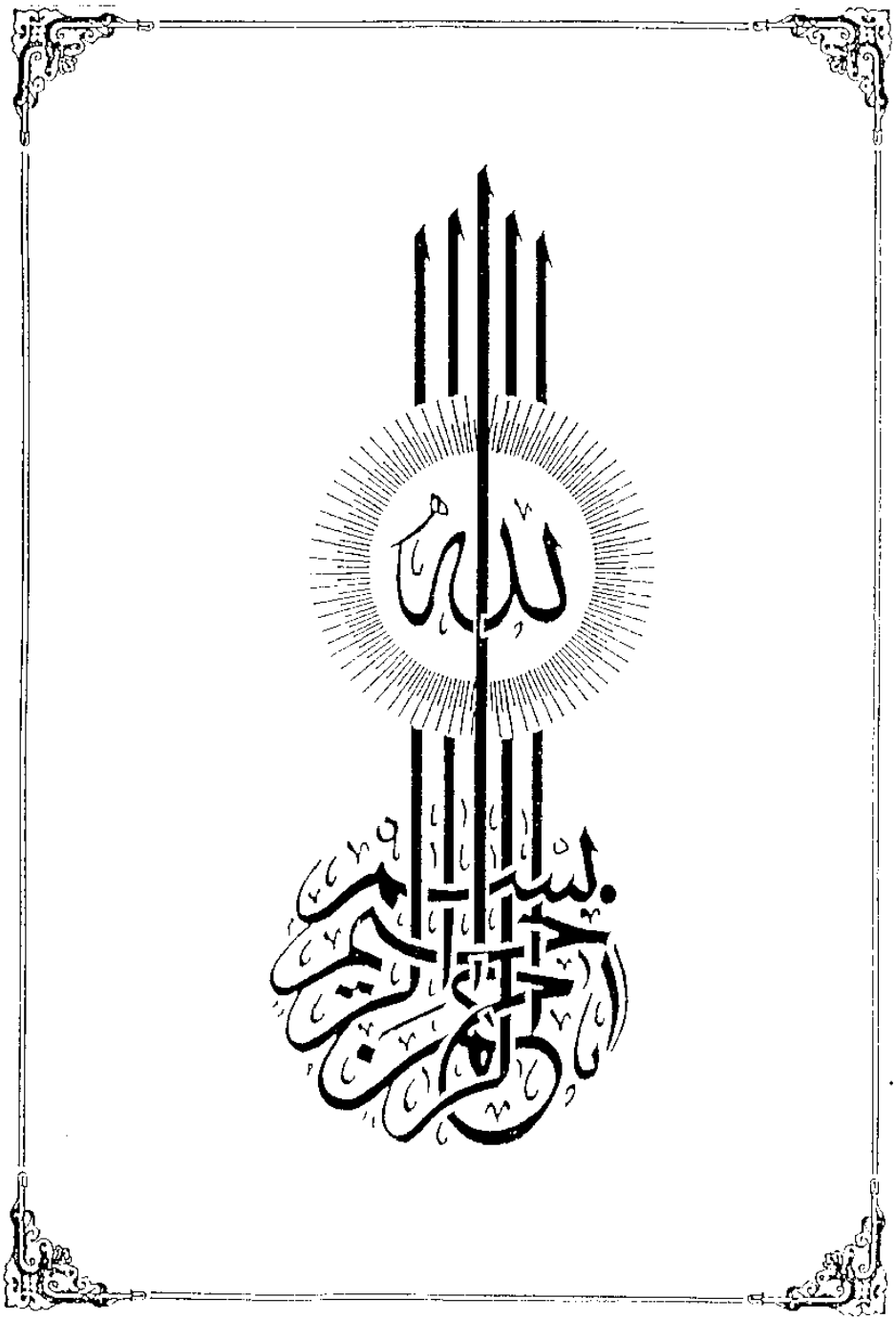


CAIRO
1995

يسم ا لله الرحمن الرحيم

"سبحانك لا علم لنا الا ما علمتنا انك انت العليم الحكيم"

سورة البقرة آية ٣٢



To my lovable parents

& my adorable sister

Yours

Mohamed Mokles

Acknowledgment

First I would like to express my deepest thanks to the tropical medicine department Ain Shams University and the head of the Department Prof. Dr. Mohamed Aly Madwar for the endless help and for giving me the chance to do this work.

I am deeply grateful to Prof Dr. Effat Abd- El Moneim El Fakhfakh Prof. of Tropical Medicine Ain Shams University for giving me much of her time, experience, golden advises and supervising keenly my work till it was completed. I do owe her a lot.

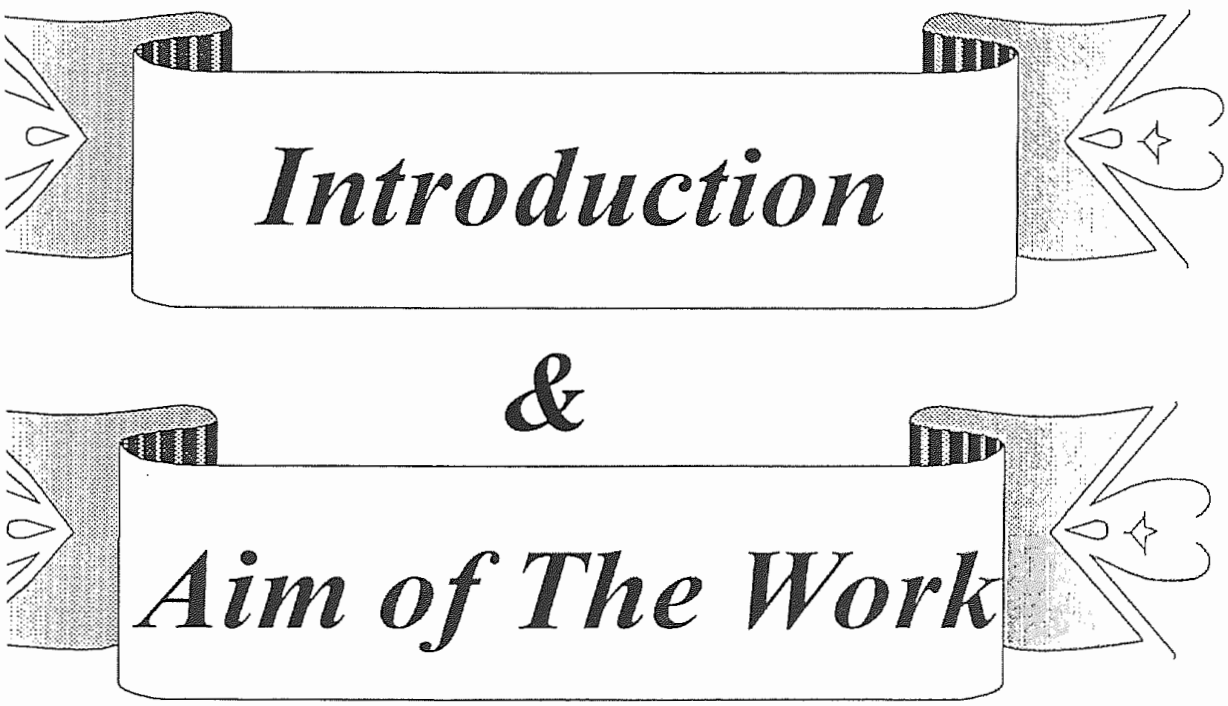
I am really indebted to Dr. Hassan Salah El- Dein Hamdy Lecturer of tropical Medicine Ain Shams University for supervising my work and doing the sonographic examination of the thesis, for me he was an elder brother more than being a supervisor, his effort is obvious in each part of the thesis. There can be no words sufficient to thank him.

I was honored by working under the supervision of Dr. Mohamed Amin Sakr Lecturer of tropical Medicine Ain Shams University who had accurately supervised my work and done the endoscopic examination of the thesis. His directions and recommendations were of great benefit during my work progress and to him I present my deep hearted respect and regards.

Also I would like to thank deeply Prof.Nahed Mokhles for faithfully doing the statistical work of the thesis with much concern.

Finally, I wish to thank all my colleagues who had helped me in this work.

Table of Contents


Introduction
&
Aim of The Work

INTRODUCTION AND AIM OF THE WORK

Dyspepsia has considerable implications for individual suffering medical workload , and financial cost *(Colin Jones, 1988).*

Although it maybe an early symptom of a serious illness such as peptic ulceration , cholelithiasis , or gastric carcinoma , but, often no organic lesion can be identified *(Tibblin, 1985)* and nearly half of gastroenteroloical practice involves the management of patients in whom no organic lesion can be identified *(Harvey et al., 1983)* despite the use of the latest techniques *(Heatley and Rathbone , 1987).*

The term functional dyspepsia was recommended for symptoms without identifiable abnormalities *(Heading, 1991 b)* or Non-Ulcer Dyspepsia (NUD) as reported by Grant Thompson , 1984 , which unfortunately tends to become a life long disorder *(Heatley and Rathbone, 1987)* . This group of patients can never be ignored as they are progressively increasing , as *Heading 1991 (b)* claimed that ulcer disease represents only a quarter of patients with dyspeptic symptoms , and according to *Harvey et al.,1983* , the proportion of newly referred patients who have functional rather than organic abdominal disorders has been estimated at 30-70% . If endoscopy is unhelpful in detecting mucosal lesions , an ultrasound examination of the gallbladder should be considered *(Colin Jones, 1988)* , and gastrointestinal motility studies would provide

valuable data as they have shown that approximately half the patients with dyspeptic symptoms of unknown origin have some delay in gastric emptying with antral hypomotility *(Malagelada and Stanghellini , 1985).* Thus , dealing with the problem of NUD , should be considered seriously , and we were very much concerned about investigating the role of the ultrasound as a new tool in studying motility disorders in the gastrointestinal tract which are now considered as basic underlying mechanism in NUD .


Review
of
Literature

CHAPTER I

DEFINITION OF NON ULCER DYSPEPSIA

Many doctors consulted by dyspeptic patients presenting with a combination of symptoms often related to eating , including epigastric discomfort and pain , bloating, indigestion , feeling of fullness, eructation, flatulence, nausea , heart burn, find it difficult to make a clinical judgement when faced with these presenting symptoms and consequently decisions on management are also difficult ***(Heatley and Rathbone , 1987),*** much of the difficulty arises from the fact that any analysis must attempt to subdivide the overall symptoms complex of dyspepsia ***(George et al.; 1993)*** .

In the same time, management of patients with dyspeptic symptoms must aim to identify , investigate and treat those most likely to have an organic illness and to identify and treat those in whom organic lesions are unlikely ***(Colin Jones ;1988)*** the latter group , represented about 46% of patients complaining of dyspepsia according to ***Grant Thompson;1984*** , which lead him to discover the syndrome of Non Ulcer Dyspepsia (NUD)

and according to *Harvey et al ; 1983* nearly half of the gastroenterological practice involves the management of patients in whom no organic lesion can be identified.Thus, the defenition of NUD is of more than just theortical interest *(George et al.; 1993).*

Inspite of ***Grant Thompson's 1984*** famous phrase "dyspepsia defies definition" and ***Talley & Philip's 1988*** point of view , that the nomenclature is confusing and definitions are vague , up to ***Heading's 1991(a)*** suggestion that the term of NUD is confusing and should be abandoned , yet , ***George et al.; 1993*** stated that the term of NUD is so widely used and it seems more appropriate to examine the confusion that surrounds its use and to see whether any widely agreed meaning can be established for it.

Different definitions of Non-Ulcer Dyspepsia :-

According to ***Grant Thompson's 1984*** it is defined as "chronic recurrent often meal related epigastric discomfort initially suspected to be due to peptic ulcer , but subsequently found not to be " , while ***Talley and Piper ; 1985*** defined it as a condition in which investigations showed no evidence of focal gastroduodenal disease or oesophagitis. Moreover, ***Talley and Philips, 1988*** defined NUD as a set of symptoms which

prompt a physician to believe that an ulcer may be present , but no ulcer is found on evaluation.

Working Parties Definitions :-

The first of these parties was the one chaired by *Colin-Jones ; 1988* and defined dyspepsia as upper abdominal or retrosternal pain , discomfort , heart-burn, nausea, vomiting or other symptoms referable to the proximal alimentary tract and considered NUD as a subset of this diagnosis defined as " upper abdominal or retrosternal pain ,discomfort , heart-burn, nausea, vomiting or other symptoms considered to be refrable to the proximal alimentary tract and lasting for more than four weeks, unrelated to exercise and for which no focal lesion or systemic disease can be found responsible ". This group furtherly found it possible to divide NUD patients into a number of groups based largely on symptoms which suggest causative factors.

I. Gastrooesophageal or reflux like dyspepsia :-

It is not difficult to diagnose from the history but there maybe no difference in symptom , type , frequency or severity between patients with focal lesions on endoscopy and those without , as the symptoms are typical; substernal or epigastric discomfort and heart-burn , meals,

drinking hot liquids or changes in posture might aggregate these complaints.

Rumination as denoted by *Levine et al., 1983* is an uncommon condition whose symptoms superficially resemble gastro-oesophageal reflux but it is a voluntary process charaterized by regurgitation of a small amount of food which is then rechewed and swallowed , it is usually postprandial and not affected by posture and manometric studies maybe helpful in difficult cases.

II- Dysmotility like-Dyspepsia :-

This overlaps with the irritable bowel syndrome (IBS) and is associated with a feeling of flatulence , bloating , distension , early satiety and nausea.

Manning's et al., 1978 criteria would be useful for differentiation from irritable bowel syndrome , in which at least 3 of 4 most symptoms closely associated with IBS , abdominal distension , more frequent stools with the onset of pain , pain eased after bowel movement and looser stools at the onset of pain , should be present .

III- Ulcer-like Dyspepsia :-

Group of patients having symptoms suggestive of an ulcer - woken by pain at night , getting pain relief from eating small meals or antacid , episodic pain , using one or two fingers to point to localized epigastric discomfort.

IV- Aerophagia :-

Most frequently post prandial and maybe related to stress. Features include repetitive belching or bloating , frequent dry swallows and gulping and charateristic forward movement of the neck when swallowing.

V- Idiopathic or Essential Dyspepsia :-

25% of patients of NUD do not fit into the groups indicated above , they have no specific features on history or examination.

Heading 1991(b) , stated that the categorization of dyspepsia into reflux-like , ulcer-like and dysmotility like assists neither diagnosis in individual patients , nor identification of relevant pathophysiology and that there is no well-founded reason to believe that relationships between symptoms and their causes are any closer in functional dyspepsia . But ,