







بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

وَفَوْقَ كُلِّ ذِي عِلْمٍ

عِدَّةُ اللَّهِ الْعَظِيمِ



## **ACKNOWLEDGMENT**

Thanks to **Allah** most Gracious, most merciful.

I would like to express my best gratitude and appreciation to **Prof. Dr. Ibrahim Abdallah** who had generously supplied me with much help and advice. It was a great honour to be supervised by such a highly qualified professor in all aspects personally and scientifically.

I wish to thank **Prof. Dr. Omnia Fahmy** for her kind help and guidance.

I'd also like to thank **Prof. Dr. Enas Asfour** for the precious time she spent during this work.

A special thank to **Prof. Dr. Mohamed El Bockl** who carried out most of the work at the endoscopy room, and for the precious time and effort he spent during reviewing this thesis.

Finally I want to thank **Prof. Dr. Malak Bahgat** for her help and guidance during this work.



## LIST OF ABBREVIATIONS

ALP:	Alkaline phosphatase
ALT:	Alanine aminotransferase
AST:	Aspartate aminotransferase
C.I. :	Congestion Index
EVL:	Endoscopic variceal ligation
EST:	Endoscopic sclerotherapy
FHVP:	Free hepatic venous pressure
GIT:	Gastrointestinal tract
H.S.:	Highly significant
HVPG:	Hepatic vein pressure gradient
IVC:	Inferior vena cava
LCF:	Liver cell failure
N.S.:	Non significant
PV:	Portal vein
PVP:	Portal vein pressure
S.:	Significant
SV.	Splenic vein
US:	Ultrasound
WHVP:	Wedged hepatic venous pressure



## LIST OF TABLES

<u>Table</u>	<u>Title</u>	<u>Page</u>
I	History of study group	200
II	Clinical Finding in both groups	201
III	Laboratory data of both groups	202
IV	Prevalence of hepatic B and C in the study group	203
V	Classification of both groups according to Child-Pugh	203
VI	Endoscopic finding in the study groups	204
VII	Results of treatments in the study groups	205
VIII	Complications of therapy	206
IX	Relation between bleeding rate, mortality rate and Child-Pugh grade	207
X	Doppler measurements for EVL group before and after treatment (variceal eradication)	208
XI	Doppler measurements for sclerotherapy group after treatment (variceal eradication)	209



## CONTENTS

	<u>Page</u>
- INTRODUCTION AND AIM OF THE WORK	
- REVIEW OF LITERATURE	
- Chapter I Portal Hypertension .....	3
- Chapter II Investigation of portal venous system .....	43
- Chapter III Color Doppler Examination of portal venous system in portal hypertension .....	54
- Chapter IV Esophageal and Gastric varices .....	71
- Chapter V Management of Esophageal varices .....	106
- Chapter VI Sclerotherapy .....	144
- Chapter VII Esophageal variceal ligation .....	164
- Chapter VIII Combination endoscopic treatment of esophageal varices .....	182

<b>PATIENT AND METHODS .....</b>	<b>184</b>
<b>RESULTS .....</b>	<b>189</b>
<b>DISCUSSION .....</b>	<b>214</b>
<b>SUMMARY AND CONCLUSION .....</b>	<b>228</b>
<b>REFERENCES .....</b>	<b>231</b>



## **Introduction**

All over the world there are many shared health problems, but every community has its own. In this country, portal hypertension and its sequelae come on the top of the list of the major health problems.

In Egypt, variceal bleeding is the major cause of upper G.I. bleeding "*Sallam et al., 1992*"

Acute variceal bleeding is a clinical catastrophe, so it is not surprising that much effort has been made to develop methods for control of acute variceal bleeding and subsequent eradication of the esophageal varices. "*Rector and Reynolds, 1985*"

Endoscopic sclerotherapy is an accepted treatment for variceal bleeding, but is associated with substantial local and systemic complications "*Steigman, et al 1992*"

In search for a practical alternative to sclerotherapy, endoscopic variceal ligation (EVL) emerged aiming at mechanical ligation with subsequent strangulation, thrombosis and eventual eradication of the varices "*EL-Newihi et al., 1992*"

**Aim of the work:**

- So this work was intended to compare the efficacy of E.V.L versus sclerotherapy in the control of variceal bleeding and eradication of esophageal varices.
- Study the effects of E.V.L and sclerotherapy on portal hemodynamics.