INCIDENCE OF HELLP SYNDROME AMONG EGYPTIAN PRIMIGRAVIDA WITH SEVERE PRE-ECLAMPSIA

THESIS

Submitted in Partial Fulfillment of
Master Degree in

OBSTETRICS AND GYNAECOLOGY

BY

ALY MOHAMED EZZAT SHEBL
M.B., B.CH. (Ain shams university)

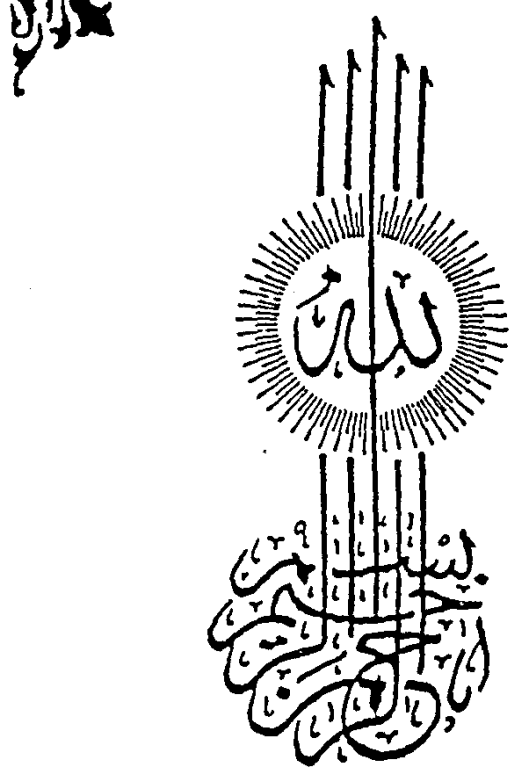
Supervised by

Prof.Dr. MAHMOUD ALY AHMED EL-SHOURBAGY
Professor of Obstetrics and Gynaecology
Faculty of Medicine
Ain Shams University

Dr. SHERIF MOHAMED SALEH EL-GHETANY
Ass. Prof. of Obstetrics and Gynaecology
Faculty of Medicine
Ain Shams University

Dr. NASHWA AHMED ADEL EL-BADAWI
Lecturer of Clinical Pathology
Faculty of Medicine
Ain Shams University

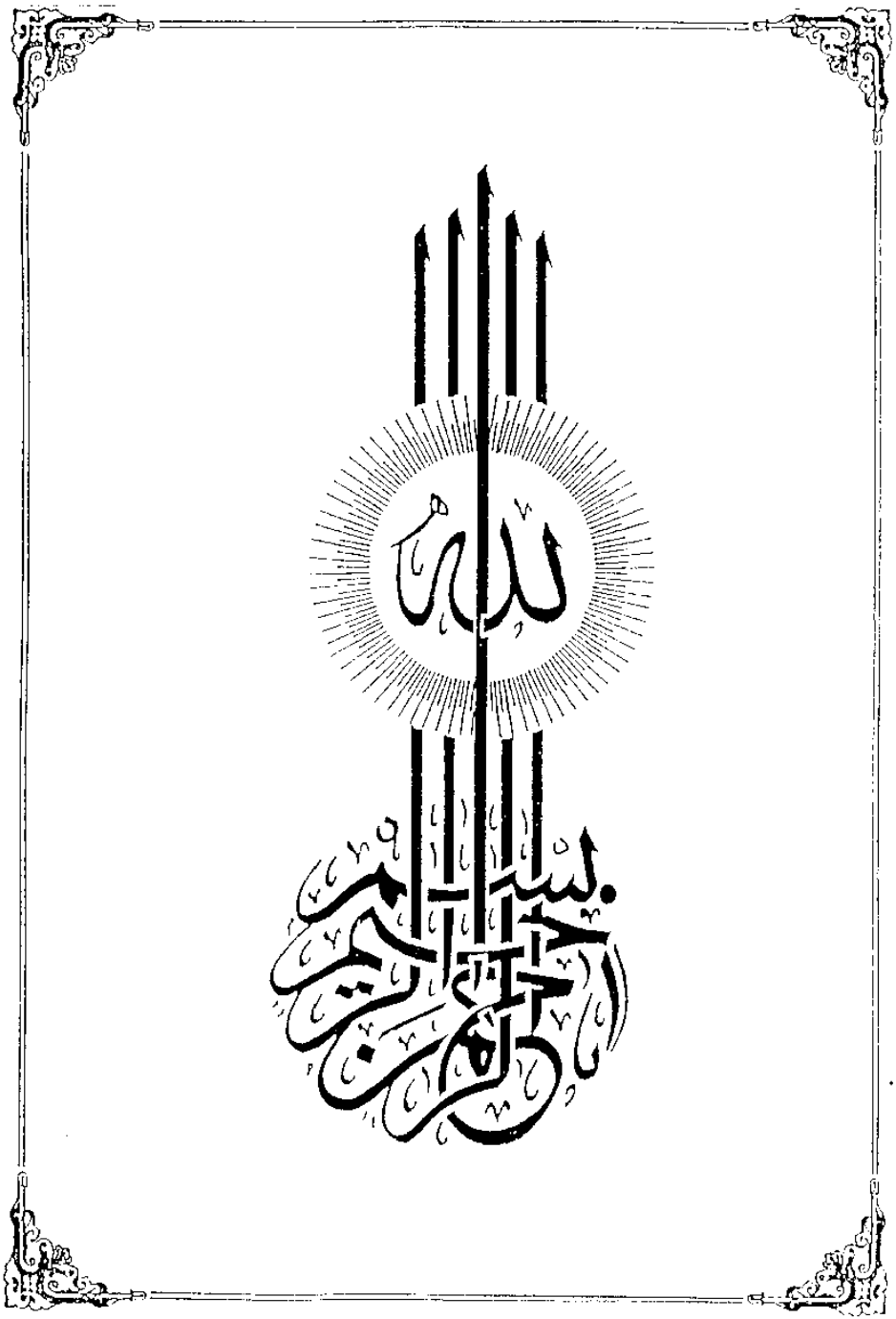
FACULTY OF MEDICINE
AIN SHAMS UNIVERSITY
1993



**قالوا سبحانك لا علم لنا إلا ما علمتنا
إنك أنت العليم الحكيم **

صدق الله العظيم

البقرة : آية ٣٢



DEDICATION

TO MY FAMILY

ACKNOWLEDGMENT

I would like to express my deepest gratitude and appreciation to **PROF. DR. MAHMOUD ALY AHMED EL-SHOURBAGY,** Professor of Obstetrics and Gynaecology, Faculty of Medicine, Ain Shams University, for choosing the subject of this thesis, his continuous guide and valuable suggestions. I felt a great honor to work under his kind supervision.

I am also greatly indebted to **ASS. PROF. DR. SHERIF MOHAMED SALEH EL-GHETANY,** Assistant Professor of Obstetrics and Gynaecology, Faculty of Medicine, Ain Shams University, for his faithful help, sincere guidance, and honest assistance that facilitated the completion of this work.

I am again sincerely thankful to **DR. NASHWA AHMED ADEL EL-BADAWI,** Lecturer of Clinical Pathology, Faculty of Medicine, Ain Shams University, for her continuous interest, willing cooperation, persistent support and the precious time she has given me throughout the course of this work.

CONTENTS

INTRODUCTION

INTRODUCTION

Severe pregnancy induced hypertension is a high-risk problem for mother and fetus. Data have been presented by Weinstein (1982), that describe what may be a separate entity called the HELLP syndrome (Hemolysis, elevated liver enzymes, and low platelet count) in severely preeclamptic patients **(Mackenna et al., 1983).**

HELLP syndrome is a multisystem disease form of severe preeclampsia-eclampsia that is characterized by microangiopathic hemolytic anemia, hepatic dysfunction, and thrombocytopenia and that, in most severe cases, progresses to disseminated intravascular coagulation **(Martin et al., 1991).**

Management of these cases has been conflicting, with some authors recommending immediate delivery and others recommending a more conservative active approach to prolong pregnancy in an attempt to achieve better fetal maturity **(Sibai et al., 1986).**

Pregnancies complicated by this syndrome are associated with poor maternal and perinatal outcome **(Sibai, 1990).**

AIM OF THE WORK

AIM OF THE WORK

This work is intended to evaluate the incidence of HELLP syndrome in severe preeclamptic Egyptian primigravid patients and correlate the laboratory findings with fetal and maternal outcome.

REVIEW OF LITERATURE

PREGNANCY INDUCED HYPERTENSION

Over the centuries,one of the most lethal conditions arising during pregnancy has been pregnancy induced hypertension which is characterized by Hypertension, oedema, proteinuria, and may proceed to convulsions **(Robertson, 1971).**

DEFINITIONS:

Hypertension is considered to be present when the blood pressure reaches 140/90 mmHg or more, or if there is an increase of "15" mmHg in diastolic, or "30" mmHg in systolic blood pressure compared with that undertaken in the first 16 weeks of pregnancy **(Browne and Dixon, 1980).**

Oedema is general and excessive accumulation of fluid in the tissues, commonly demonstrated by the swelling of the extremities and face. The fluid may be intracellular or extracellular and oedema is not demonstrated until there is a weight gain of 10% **(Cavanagh and Knuppel,1981).**

Proteinuria is the presence of urinary protein in a concentration greater than 0.3 gm/liter in a 24 hour collection. The urine must be a clean voided midstream specimen or one obtained by catheterization **(Cavanagh and Knuppel, 1981).**

NOMENCLATURE

More than 100 names have been used in the English and German literature to describe the different hypertensive diseases of pregnancy. Moreover, there have been almost as many classifications **(Rippmann, 1969).**

In the last 20 to 30 years a considerable number of names have been introduced including:

Preeclampsia (PE), preeclamptic toxaemia (PET), EPH gestosis (Edema-Proteinuria-Hypertension), pregnancy induced Hypertension (PIH) and Gestational Hypertension (GH).

The term preeclamptic toxaemia is still in use, a term based on the idea that it is due to an unknown circulating toxin **(Browne and Dixon, 1980).**

The term preeclampsia is a specific human disorder unknown in animals. It occurs after the 20th week of gestation, but it may develop before this time in the presence of trophoblastic disease and isoimmunization **(Page and Christianson, 1976).** If the patient develops convulsions in additions, the condition is termed eclampsia **(Browne and Dixon, 1980).** The term EPH gestosis was not an entity on its own but a syndrome of Edema (E), proteinuria (P), Hypertension (H) **(Chesley, 1978).**

Pregnancy induced Hypertension (PIH) is mainly a disease of primigravidae and is characterized by oedema, proteinuria, and hypertension-all developing late in pregnancy more likely in young patients from the lower socioeconomic classes, and in hyperplacentosis in association with diabetes mellitus, Rh disease, hydatidiform mole,or multiple gestation **(DeVoe and O'Shaughnessy,1984).**

This term pregnancy induced Hypertension (PIH) has been adopted to replace the diagnostic labels preeclampsia and eclampsia **(Welt and Crenshow, 1978).**

INCIDENCE OF PREGNANCY INDUCED HYPERTENSION

Most estimates of the incidence of PIH are based on hospital admission, rather than on total populations which makes it difficult, if not impossible, to establish the true incidence (Davey, 1986).

Pregnancy induced hypertension (PIH) occurs in 5-7% of all pregnancies, the prevalence may be much higher 10-30% in certain groups such as young primigravidae and low income patients (Gant et al., 1980).

So, according to DeAlvarez (1983) The predisposing factors of PIH are :

1- Primigravidae: 65% of cases of preeclampsia occur during the first pregnancy, if the first pregnancy ended in abortion,the incidence of severe preeclampsia in the second pregnancy was reduced to 1/3 of that in all first pregnancies. This suggests that even a three months pregnancy confers some protection against the development of preeclampsia in the second pregnancy (Chesley, 1984).

2- Multiple pregnancy: PIH occurs in 37% of primigravidae with twin pregnancy, which is more than twice the expected rate for singleton pregnancies in the same area (McMullan et al., 1984).

3- Vascular diseases: as vascular hypertension and renal diseases.