STUDY OF SOME HEAMATOLOGICAL PARAMETERS IN PREGNANCY INDUCED HYPERTENTION

A THESIS

Submitted in Partial Fulfilment for the

M.S. Degree in

(Obstetric and Gynaecology)

BY

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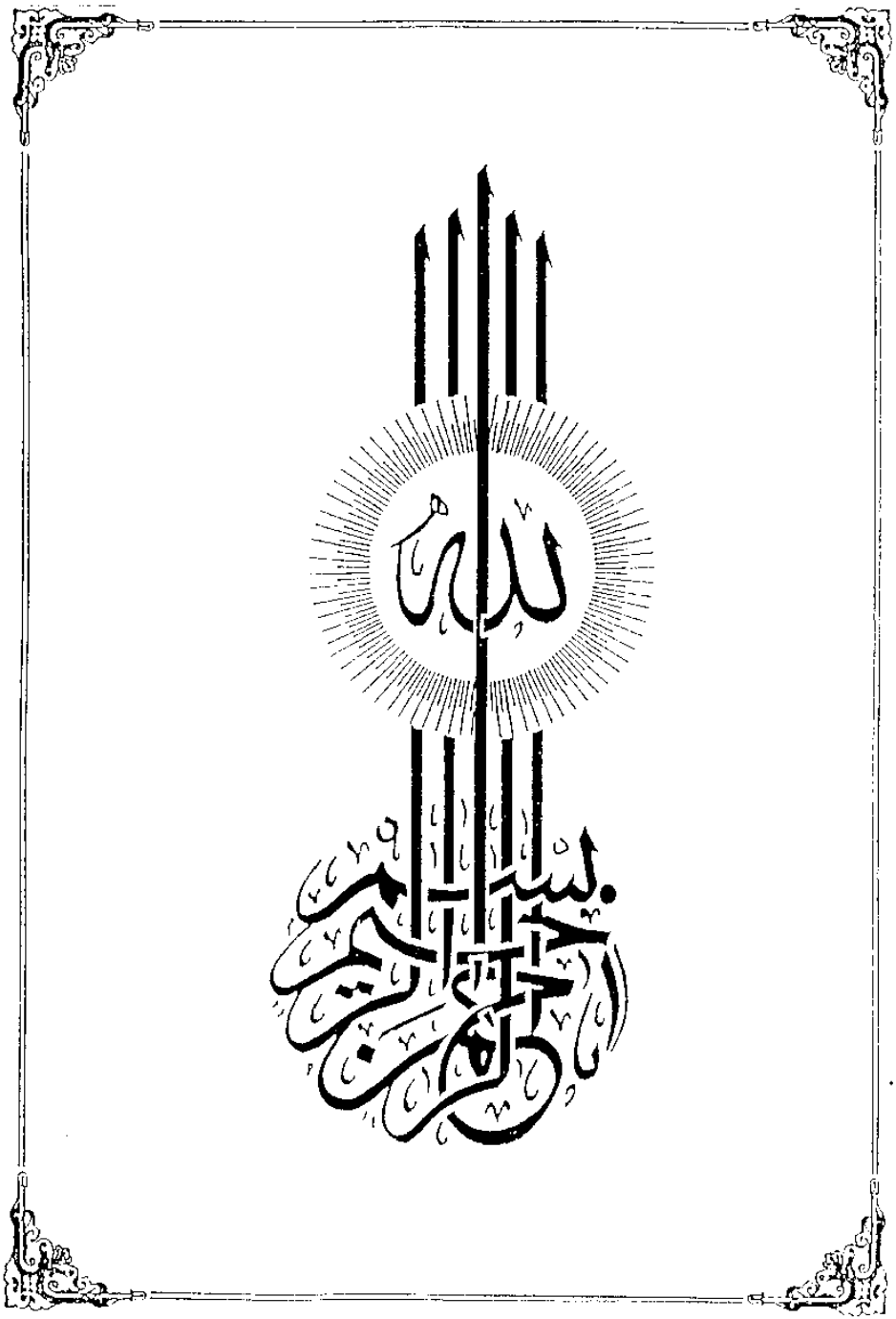

بسم الله الرحمن الرحيم

سبحانك لا علم لنا إلا ما علمتنا
إنك أنت العليم الحكيم

صدق الله العظيم

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AIM OF WORK

AIM OF THE WORK

This work aims at studying certain haematological parameters in a trial to correlate them with the clinical aspect of pregnancy induced hypertension in the Egyptian pregnant women having this syndrome.

REVIEW OF LITERATURE

HYPERTENSION WITH PREGNANCY

The following classification is proposed by Selmon (1978) for hypertensive disorders of pregnancy:-

I- Pregnancy induced hypertension (PIH).
- A- Preeclampsia and eclampsia.
- B- Gestational hypertension.
- C- Super-imposed preeclampsia and eclampsia.

II- Concurrent hypertension and pregnancy (CHP).
- A- Acute hypertension of whatever aeteology not pregnancy associated.
- B- Primary hypertension in pregnancy.
- C- Secondary hypertension in pregnancy.

III- Hypertensive diathesis.

The term pregnancy induced hypertensive diseases refers to specific conditions that develop as a direct result of the gravid state. Preeclampsia is characterized by hypertension plus oedema or proteinuria or both. Eclampsia is the occurrence of seizure activity or coma unrelated to other cerebral conditions in a pre-eclamptic patient.

Gestational hypertension, is the development of hypertension without oedoma or proteinuria during pregnancy or in the first 10 days post partum. The blood pressure generally returns to normotensive levels in the immediate post partum period. This hypertensive effect of pregnancy may be a stress response analogous to the effect of pregnancy on glucose metabolism. Perinatal mortality is not significantly different from the normal in these patients. Additionally, these may be the same patients in whom hypertension develops in association with the use of oral contraceptives.

Superimposed preeclampsia and eclampsia consist of the development of these specific conditions in a patient with underlying hypertensive vascular or renal disease.

In concurrent hypertension and pregnancy two separate conditions, hypertensive disease and pregnancy, are present in the same patient at the same time but without the causality implied by pregnancy associated hypertension.

Hypertensive diathesis is a predisposition to hypertension when physiologic stresses are imposed. It may be due to hereditary factors, diet, body habitus or some other elements. Hypertension may first be manifest in pregnancy as preeclampsia, eclampsia, or gestational hypertension. patients will demonstrate overt hypertensive disease in long term follow up.

Pregnancy induced hypertension:

Definition:

Is the development of hypertension with porteinuria, oedema or both induced by pregnancy after the twentieth week of gestation or sometimes earlier when there is extensive hydatidiform changes in chorionic villi. The syndrome of preeclampsia and eclampsia is unique to pregnant or puerperal women and has not been identified in animals to occur spontaneously nor has it been experimentally reproduced. It is a common complication of gestation and forms one of the great triad (haemorrhage, hypertension and sepsis); responsible for the majority of maternal deaths (Pritchard and McDonald, 1976).

Incidence and epidemiology:

It is difficult to be precise about the incidence of pregnancy induced hypertension.

The epidemiology has been well reviewed by Davies (1971) who reported that the incidence has been variously given as (0.5-30%) of pregnancies because of differing criteria for diagnosis and proper antenatal care.

Pregnancy induced hypertension is much more frequent in primigravidae than in multiparae especially in very young primigravidae and in women over the age of 35 years (Duenhoelter and Co-worker, 1975).

When pregnancy induced hypertension affects multiparous patients, it is usually superimposed upon essential hypertension, or less often, is associated with twin pregnancies in which the incidence being increased by three times or more (Dewhurst, 1976). Diabetes mellitus carries a similar increased risk, and hydatidiform mole (up to 50%) may show evidence of pre-eclampsia (Peel, 1962).

There is some familial tendency as shown by Chesley et al. (1962) who found that the sisters and daughters of pregnancy induced hypertensive women showed higher incidence of pregnancy induced hypertension.

Pregnancy induced hypertension is more common and severe in winter and occurs more often along coast lines than in island areas (Studd, 1977).

The incidence of pre-eclampsia is high in developing countries. This disease is one of the major causes of high perinatal mortality and morbidity.

Since this condition is preventable if detected and treated at an early stage, it is essential to diagnose the disease in an early stage and to institute proper medical care in time. Development of simple and sensitive biochemical tests in therefore important to detect pregnant women who are at risk of developing pregnancy induced hypertension.

Aetiology:

The aetiology of pregnancy induced hypertension (P.I.H.) remains unknown. Many theories were proposed to the extent that P.I.H. is designated "the disease of unproven theories".

The following theories gained more popular acceptance:-

(1) **Uterine and placental ischaemia:**

It is claimed that there is a release into the maternal blood stream of metabolic toxins due to ischaemia and cellular anoxia of the uterus and placenta. In this way the occurrence of toxaemias in primigravidae, twins, hydramnios and concealed accidental haemorrhage can be explained on the assumption of an increased intra-abdominal pressure precipitating uterine ischaemia (Page and Beker, 1948).

Walker and Turnball in (1953) provided some evidence as they had found that the oxygen supply to the foetus fell gradually with the continuation of pregnancy after 32 weeks. In pre-eclampsia the oxygen saturation in the cord blood was less than