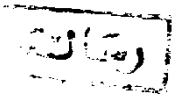
AIN SHAMS UNIVERSITY
FACULTY OF MEDICINE
DEPARTMENT OF GYNECOLOGY AND OBSTERTICS

THE USE OF BOMOERGOCRYPTINE IN THE THERAPY OF PREGNANCY INDUCED HYPERTENSION

A THESIS SUBMITTED FOR
THE PARTIAL FULFILMENT OF MASTERSHIP DEGREE

IN
GYNECOLOGY AND OBSTETRICS



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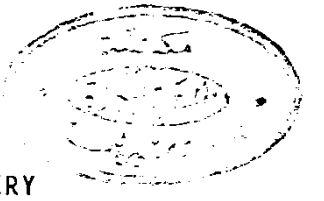

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1985

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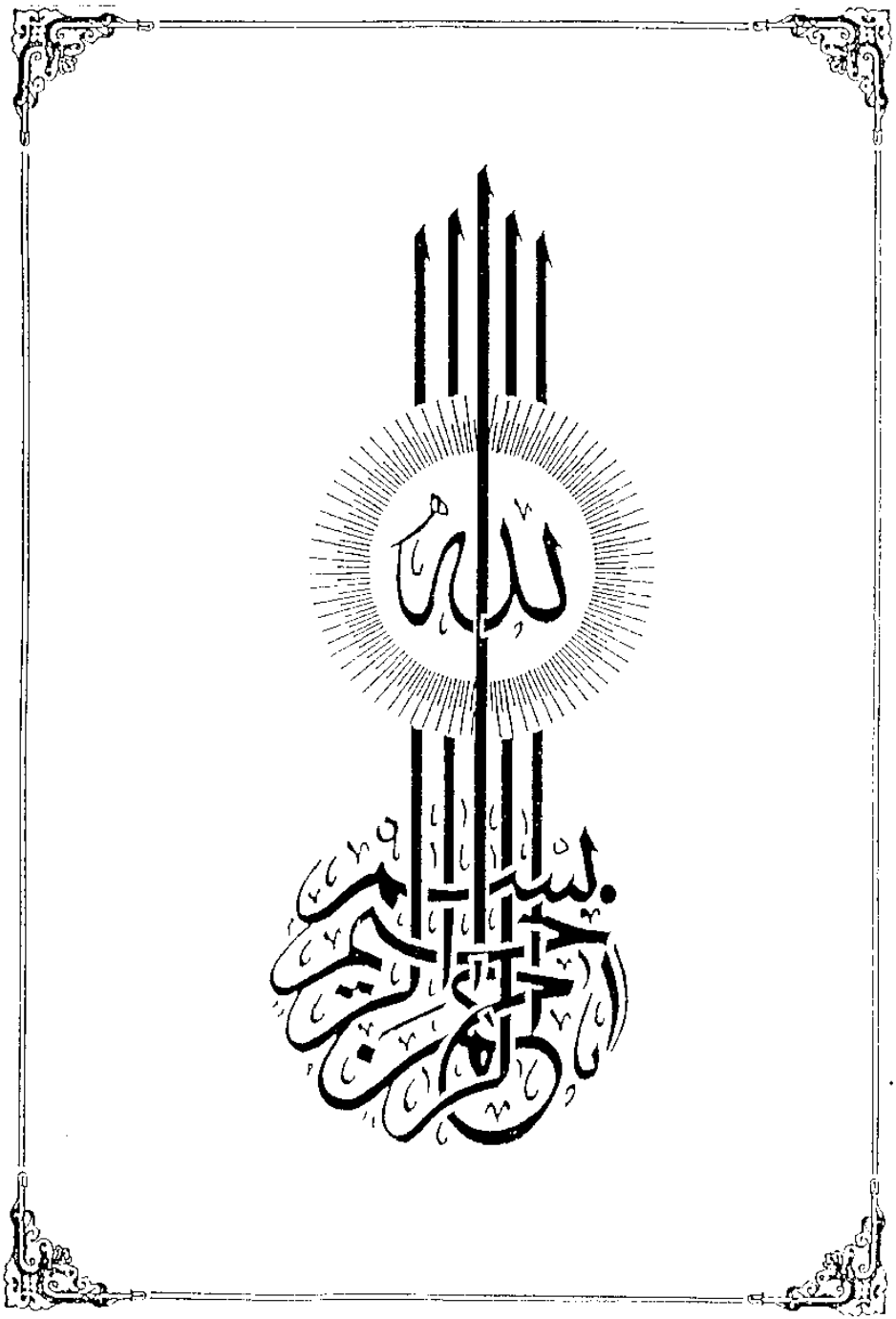

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A C K N O W L E D G E M E N T

ACKNOWLEDGEMENT

I would like to express my deepest gratitude to Professor Dr.Mohamed Farouk Fikry, Department of Gynecology and Obstetrics, Faculty of Medicine, Ain Shams University, for his honest guidance, creative thoughts, continuous encouragement, and keen supervision.

I'm also so thankful to Dr. Mohsen Maged Abdel Hamid, Assistant Professor of Gynecology and Obstetrics, Faculty of Medicine, Ain Shams University, for his valuable advices, good assistance, and real care of this work.

Once again, I'm indebted to Dr. M.A. Gadalla, lecturer of Medical Statistics and Community Medicnie, Faculty of Medicine, Ain Shams University, who kindly made the statistical analysis of this study.

INTRODUCTION

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The treatment of pregnancy induced hypertension (PIH) has always been the source of lively debate. Since the cause and pathogenesis of the condition are defined incompletely, no single term of treatment exists for women with this one of the commonest complications of pregnancy.

Moreover, the higher serum prolactin levels in cases of PIH (Redman et al., 1975, and Jenkins and Perry, 1978) than in normal pregnancies together with the previously reported blood pressure lowering effect of bromocriptine (Stumpe et al., 1977, and Hamilton et al., 1981) have suggested the use of prolactin inhibiting drugs in these cases.

Hence, we carried out this study to evaluate the use of bromocriptine (Parlodel) in the treatment of pregnancy induced hypertension.

AIM OF THE WORK

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This work aims at finding the possible theraputic effect of prolactin inhibiting drugs as Bromoergocriptine in cases of pregnancy induced hypertension (PIH), which were found to be associated with significantly higher maternal serum prolactin levels than normotensive pregnancies.

REVIEW OF LITERATURE

HORMONAL CHANGES DURING NORMAL AND PREGNANCY INDUCED HYPERTENSION

Estradiol:

Estradiol is produced in progressively increasing amounts during normal pregnancy from the luteal phase of the conceptual cycle through to term so that by 38 weeks of gestation, the concentrations of estradiol (E_2) were about 13.0 times greater than its levels at week 4 (Aspillaga, et al., 1983).

Lenton et al., (1982) also reported that the initial increase in mean estradiol levels in normal preganancy was first detected around day 9 from the luteal surge, levels then rose rapidly and exponentially with doubling time of 13 days with small individual variations.

Allen and Lachelin (1978) noted that plasma estradiol levels in patients with mild or moderate pre-eclampsia who were delivered of normal birth weight infants, were not significantly different from normal pregnant women, whereas, the hormone levels were significatly lower than normal in patients with

mild or moderate pre-eclampsia in association with fetal growth retardation.

Free and Conjugated Estriol:

Free estriol (E3) levels were very low up to the 8th week of normal pregnancy. A steep increase was observed of to the 12th week, which continued till the 32 nd week. In the last 8 weeks of pregnancy, the levels increased more than 2-fold (De Hertogh et al., 1975).

Boroditsky et al., (1978) also reported that estriol levels show a consistent rise over the 2 - 4 weeks preceding labour in normal pregnancy.

In patients with pre-eclampsia, estriol levels, whether they are measured in plasma or urine, are generally lower than normal. And the worse the pre-eclampsia, the lower were the estriol levels (Josimovich and Archer, 1977).

But, Allen and Lachelin (1978) related the changes in plasma estroil levels to the severity of pre-eclampsia and the fetal outcome. They found that patients with mild or moderate pre-eclampsia, who had delivered normal birth

weight infants, had plasma levels of free and total estriol not significantly different from normal, but patients with mild or moderate pre-eclampsia in association with fetal growth retardation, had significantly lower plasma free estriol levels than normal.

Moreover, patients with severe pre-eclampsia had significantly lower free and total estriol plasma levels than normal.

Porgesterone:

Manganiello et al., (1980) found that individual progesterone values exhibited considerable variation. In all of the patients studied, progesterone values were higher than 11 ng/ml one week after conception, and by the 3rd week, progesterone values were significantly greater than values observed in the 1st week reaching a mean of 23 ng/ml with no further increase between weeks 3 and 9 after conception.

Aspillaga et al., (1983) also noted an initial rise in progesterone plasma concentration during the luteal phase of the conceptual cycle and thereafter, then the values maintained a steady

plateau from weeks 4 - 8, increasing progressively thereafter so that by 38 weeks of normal pregnancy, the concentrations were about seven times greater than the first trimester plateau value.

Allen and Lachelin (1978), reported that in 22 patients with mild or moderate pre-eclampsia, who were delivered of normal birth weight infants plasma levels of progesterone were not significantly different from normal pregnant women.

Moreover, Sammour, et al., (1975) reported that progesterone treatment of pre-eclamptic women had normalised the elevated blood pressure and produced an increase of the twenty-four hour urinary output concomitant with a fall of serum uric acid, improvement of urea clearance and a decline of serum sodium.

Human Chorionic Gonadotropins (HCG)

In normal pregnancy, the first detectable amount of circulating HCG occured 6 - 8 days