CHOLINESTERASE ACTIVITY IN PREGNANCY INDUCED HYPERTENSION

AThesis

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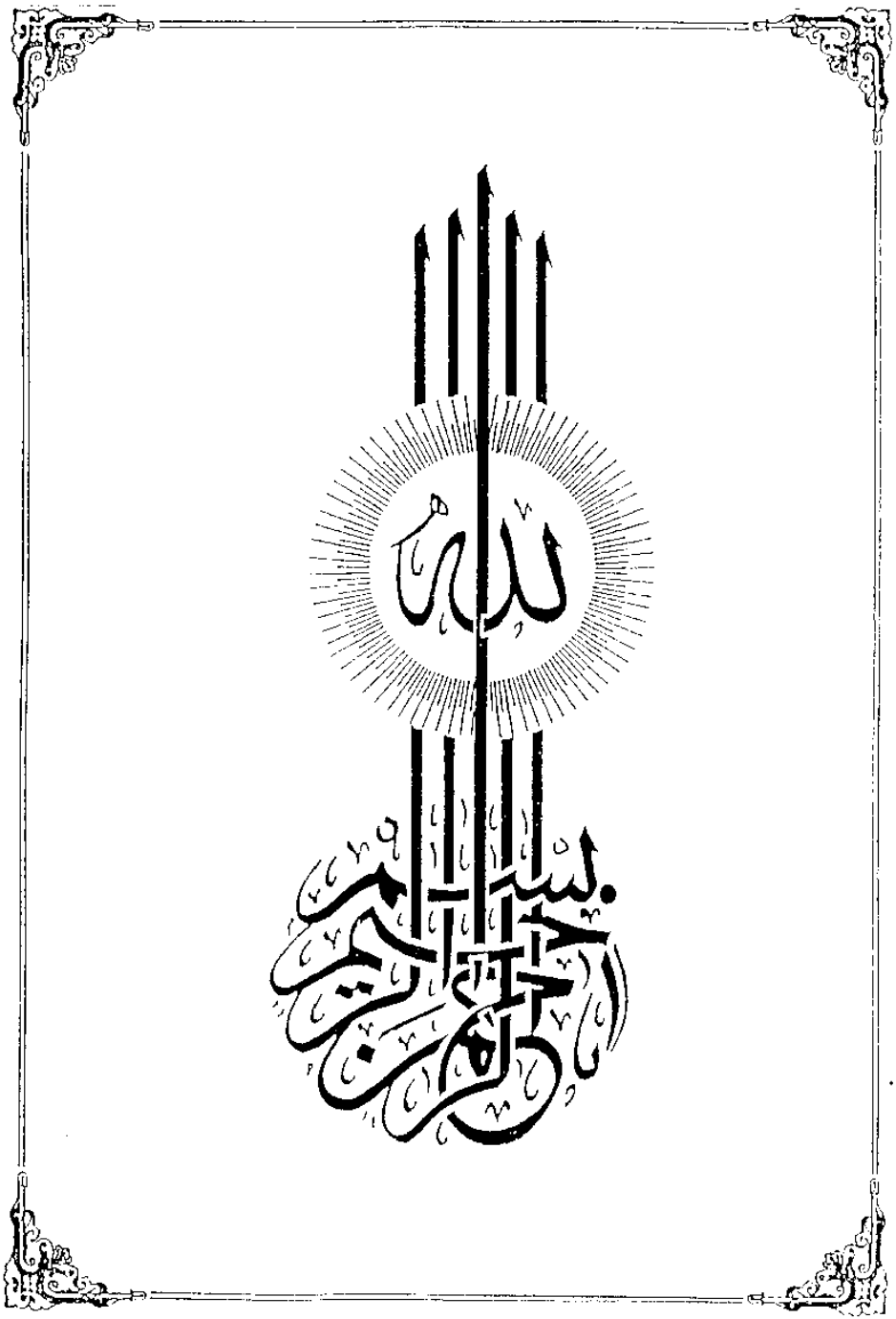

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Pre-eclampsia/eclampsia are one of the great triad of complications (hemorrhage, sepsis and pre-eclampsia/ eclampsia) responsible for the majority of maternal deaths and themselves account for about one third of the maternal fatalities (Pritchard et al., 1985).

Despite the uniquity of the disease and its public health impact, no comprehensive theory about the etiology and the mechanism has been established.

Hypotheses from worms to prostaglandins have been advanced but none has led to advances in therapy beyond bed rest and early delivery (Easterling and Benedetti, 1989).

Although probably more researches have been devoted to etiology of toxemia than any other subject in obstetrics, theories which have been given, have failed to stand up further investigations. Others have shown conflicting results by different workers and none has yet explained all the changes in this condition (Weir et al., 1975).

AIM OF THE WORK

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There is general agreement that decrease in action of cholinesterase enzyme occur during pregnancy and the reason is unclear (Whittaker, 1980).

The associated reduction in enzymatic activity is of no significance to maternal well being under most circumstances (Whittaker et al., 1988).

However, in toxemia of pregnancy, the role of cholinesterase activity is claimed to share in etio-pathogenesis of toxemia, but this is not fully studied.

We aim, in this study, to investigate cholinesterase activity in toxemia of pregnancy compared to normal pregnant women.

PRE-ECLAMPSIA

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HISTORICAL REVIEW, NOMENCLATURE AND DIAGNOSIS

Eclampsia was mentioned in ancient Egyptian, Indian and Greek literatures. One of the oldest sources was the Kahun (Petrie) Papyrus dating from about 2200 B.C. Description No. 33 on the third page of the Papyrus was "to prevent the uterus of a women from itching... the day of birth". Another translation was "to prevent a woman from biting her tongue... the day of birth". The pre-Hippocratic coan prognosis alluded to eclampsia "in pregnancy drowsiness and headache accompanied by heaviness and convulsions, is generally bad". The ancient Greek also recognized pre-eclampsia. In pregnancy, the onset of drowsy headache with heaviness is bad, such cases are perhaps liable to some sort of fits at the same time (Chesley, 1984).

There were four known kinds of epilepsy, they arose in: the head, the stomach, in chilled extremities and the pregnant uterus respectively. Eclampsia was not differentiated from epilepsy until 1739, when DeSauvages wrote that epilepsy was chronic, with recurrences of convulsions through the years and all convulsions of acute causation was called "eclampsia". Twenty

years later, De Sauvage defined several species of the genus eclampsia, in relation to various acute causes that Hippocrates had described such as marked haemorrhage, severe pain, vermicular infestation and the like. But the correlation between eclamptic convulsion and the development of edema, proteinuria and hypertension was not made clear until the nineteenth century. In 1797, the Belgian doctor, Demanet, was the first to relate convulsion with edema (Chesley, 1984).

DEFINITION:

Huges (1972) stated that the Committee of Terminology of the American Obstetricians and Gynecologists suggested the following definition:

a) *Pre-eclampsia*: is the development of hypertension with proteinuria, edema or both induced by pregnancy after 20th week of gestation or sometimes, earlier when there is extensive hydatiform changes in the chorionic villi.

b) *Eclampsia*: Is the occurrence of convulsions, not caused by any coincidental neurologic disease such as epilepsy, in a woman whose condition also fulfills the criteria for pre-eclampsia.