

ANTICARDIOLIPIN ANTIBODIES IN
PREECLAMPSIA

THESIS

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MASTER DEGREE OF OBSTETRICS AND
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BY

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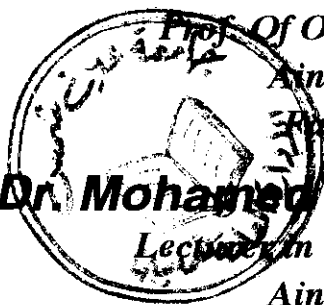
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INTRODUCTION

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Anticardiolipin antibodies (ACAs) are circulating auto-antibodies directed against negatively charged phospholipid component of cell membrane . So ACAs are especially important antiphospholipid antibodies (**Peaceman et al., 1992**). ACAs have been reported in habitual abortions of unknown etiology and unexplained intrauterine fetal deaths (**Triplett, 1989**).

It has been proposed that the functions of ACAs are to decrease the production of prostacyclin and fibrinolysis , to prevent protein C activation and to enhance platelet aggregation which might cause abnormal coagulation and platelet agglutination (**Triplett,1989**). By histological examination of the placentas obtained from preeclampsia, infarction and fibrinoid necrosis have been detected (**Robertson et al., 1986**). These changes seem to be similar to findings concerning placentas taken from ACAs positive pregnancies (**De Wolf et al., 1982 and Branch et al., 1990**).

ACAs have the ability to bind to villous trophoblasts and might cause placental dysfunction . In preeclampsia , the high incidence of placental dysfunctions and intrauterine growth retardation have been reported (**Sibai et al., 1984**).

The possible involvement of the immune system in the pathophysiology of at least some hypertensive disorders of pregnancy has attracted increasing attention (**Redman ,1980**) as abnormal levels of autoantibodies have recently been demonstrated with hypertensive disorders of pregnancy (**El Roey et al., 1991**).

Antiphospholipid antibodies are the most frequently recorded abnormalities in pregnancies complicated by

preeclampsia and intrauterine growth retardation (**Branch et al., 1989**).

Lyden et al., (1992) demonstrated that monoclonal antiphospholipid antibody binds to the human placental trophoblasts using an immunohistological technique . Those antibodies reacted with the syncytiotrophoblastic layer , Cytotrophoblastic cells and subtrophoblastic stromal region.

Using the placenta eluates taken from ACAs positive patients, **Chamley et al., (1993b)**, also reported that ACAs were bound to antigenic sites within the placenta . Also it has been suggested by **Yamamoto et al., (1996)** , the possibility that ACAs may decrease the placental functions in preeclampsia . The functional changes induced by ACAs has also been reported . **Gleicher et al., (1992)** demonstrated that HCG production by placental culture with ACAs containing sera was inhibited under phospholipase A₂ and phospholipase -C stimulation .

AIM OF WORK

AIM OF THE WORK

- I. To estimate the incidence of anticardiolipin antibodies (ACAs) in preeclampsia .
- II. The relationship between the presence of ACAs in the serum of preeclamptic women and the development of intrauterine growth retardation (**IUGR**) in their offsprings .