INTRODUCTION

Preeclampsia is a complication of pregnancy constituting a major cause of maternal and fetal morbidity ***(Ustun et al., 2005)***.

It is a pregnancy specific syndrome that usually occurs after 20 weeks of gestation its clinical features includes hypertension, proteinuria and varing degree of ischemic end organ damage ***(Van et al., 2000)***. That also may be associated with other signs and symptoms such as edema, visual disturbances, headache, and epigastric pain. Laboratory abnormalities may include hemolysis, elevated liver enzymes, and low platelet counts (HELLP syndrome) ***(ACOG, 2002)***. Clinical and biochemical evidence suggests that disturbance in normal endothelial cell dysfunction might be a primary cause of preeclampsia ***(Wang et al., 2004)***.

Endothelial cell dysfunction and inflammation are considered to have a crucial role in the Pathophysiological mechanism of preeclampsia ***(Ustun et al., 2005)***. Although the etiology of endothelial dysfunction in preeclampsia is unknown it has been postulated to be a part of an exaggerated maternal inflammatory response to pregnancy ***(Qiu et al., 2004)***. This inflammatory response involves also both the immune system, the clotting and fibrinolytic systems ***(Rangel and Fruesto et al., 1995)***.

Endothelial dysfunction is a companied by elevated level of inflammatory markers, such as C-reactive protein (CRP) ***(Teran et al., 2001)***. Which is a positive acute phase protein, increase in presence of infection or inflammation ***(Belol, et al., 2005)***. Inflammatory response which increase during pregnancy may be explained by different stimuli occurring at different phases of pregnancy such as implantation, and the monocytes/macrophage production ***(Sacks et al., 2004)***.

CRP is a protein measured by either antibodies labeled with an enzyme using an enzyme-linked immunosorbent assay, or by a fluorescent compound, or be polystyrene beads coated with antibodies or by Latax-agglutination test or automatic analyzer ***(Ridker et al.,2000)***.

Studies have been conducted to elucidate a relationship between preeclampsia and serum CRP levels. Because serum (CRP) can be used to predict the development of coronary heart disease, several attempts have been made to determine their predictive value in the development of PE. C-reactive protein (CRP) has been associated with several diseases, involving endothelial dysfunction and systemic inflammation, such as type 2 diabetes mellitus, metabolic syndrome, and cardiovascular disease ***(Festa et al., 2000)*** endothelial dysfunction and inflammation are involved in the pathogenesis of preeclampsia and other important complications of pregnancy, including gestational diabetes and fetal overgrowth ***(Retnakaran et al., 2003)***. Hence, its measurement has recently aroused considerable interest; several studies have analyzed serum CRP concentration at different stages of pregnancy in order to investigate its association with various pregnancy complications ***(Walf et al., 2003).***

CRP, being as sensitive markers of tissue damage and inflammation can be a potential marker and plays a role in eliciting the inflammatory response characteristic of preeclampsia.

It has previously been reported that CRP is a pro-inflammatory marker and correlates with blood pressure in general population, and urinary albumin excretion in patients with

type 2 diabetes mellitus ***(Saito et al., 2003)***. Recent data have indicated that endothelial damage as a result of oxidation reduction imbalance contributes to the development of PE ***(Kumru et al., 2004).***

In pregnancy CRP level are raised in women with ruptured memberan complicated by chorioamnionitis ***(Yoon et al., 1996)*** and in women who develop preterm labour ***(Huilsom et al., 2002).*** In the first trimester, raised CRP levels has been reported ***(Rebelo et al., 1995),*** and more recently it was shown that women with higher CRP levels at 9-13 weeks are more likely to develop gestational diabetes mellitus ***(Wolf et al., 2003)***and preeclamspia ***(Wolf et al., 2001 and Sack et al., 2004).***

The relationship between the levels of CRP and preeclampsia has been studied, higher concentration of CRP has been reported during preeclampsia ***(Teran et al., 2001).***

Given CRP functions and its higher levels in preeclampsia, there is a strong likelihood that CRP may be involved in the pathogenesis and clinical complications of this disorder. High CRP levels were associated with severe preeclapsia. CRP is correlated positively and significantly with the severity of disease in preeclampsia. Further studies are required to determine if increased levels of CRP can predict the severity of preeclampsia ***(Ustun et al., 2005).***