

Introduction

Preeclampsia (PE) develops in 4-5% of human pregnancies. It is characterized by an elevated blood pressure, proteinuria and develops after 20 weeks of gestation (*Kumru S 2006*).

Preeclampsia may be associated with other signs and symptoms such as edema, visual disturbance, headache and epigastric pain. Laboratory abnormalities may include hemolysis, elevated liver enzymes and low platelet counts (HELLP syndrome) (*ACOG 2002*).

PE is a complication of pregnancy constituting a major cause of maternal and fetal morbidity and mortality. Several etiologies have been implicated in the development of preeclampsia including abnormal trophoblast invasion of uterine blood vessels and immunological intolerance between fetoplacental and maternal tissues (*Ustun y 2005*).

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 PE (*Creasy RK 2004*)(*James DK 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 the immune system, the clotting and fibrinolytic systems (*Rangel and Fruesto et al., 1995*).

A generalized activation of circulating leukocytes, characteristic of inflammation, has been found during PE. Moreover, increased concentrations of CRP and inflammatory cytokines have been reported in PE women (*Garc.a RG 2007*).

CRP is produced by the liver. Its production is stimulated by the inflammatory cytokines interleukin-6 and TNF- α . CRP is a sensitive marker of inflammatory activity in the body. CRP level increases during inflammatory response to tissue injury or infection (*Braekke K 2005*).

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

Recently 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 preeclampsia (*Hwang, et al., 2007*).