

# **C-786T (Promoter) ALLELIC VARIANTS OF NITRIC OXIDE SYNTHASE GENE AND ITS ASSOCIATION WITH NITRIC OXIDE IN PREECLAMPSIA**

## **ABSTRACT:**

### **Introduction:**

Pregnancy is a hyper coagulable state with increased tendency for thrombus formation. The etiology of preeclampsia is multifactorial and regulated by multiple genetic pathways. The association between endothelial nitric oxide synthase (eNOS) polymorphism and serum nitric oxide level were studied.

### **Objectives:**

- To find out the distribution of allelic variant in promoter T-786C of eNOS Gene and the association between gene polymorphism and preeclampsia.
- To assess nitric oxide level and correlate its level with eNOS gene polymorphism in our population.

### **Materials and methods:**

This study included 50 preeclampsia women and 50 healthy pregnant women in the age group of 20- 40 years with the gestational age of 24- 36 weeks of pregnancy. DNA was extracted from whole blood samples. The PCR products for promoter T-786C of eNOS gene of polymorphism were separated electrophoretically using 2 % agarose gel and the serum nitric oxide level was estimated by Griess method.

### **Results:**

The C allele carrier which is represented by CC + CT genotypes and the C allele of promoter T-786C of eNOS gene of polymorphism were significantly associated with increased risk of preeclampsia. The mean (SD) levels of serum nitric oxide among the cases was lower than the controls and this difference was found to be statistically significant

### **Conclusion:**

The C allelic carrier (CC+ CT) were found to have lower level of serum nitric oxide and eNOS C-786T(Promoter) polymorphism may exert an effect on serum nitric oxide level by altering the transcriptional efficiency. So this eNOS C-786T(Promoter) polymorphism and lower level of serum nitric oxide are the possible risk factor for preeclampsia.

**Key words:** Preeclampsia, Polymorphism of eNOS gene promoter C-786T, Nitric Oxide and Genotype (CC/CT/TT)