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Preeclampsia remains a global health problem owning to its significant contribution to morbidity and mortality in pregnant women. And it is characterized by hypertension and proteinuria occur after the 20 week of gestation in a previously normotensive woman, it is a severe complication in pregnancy.

This case-control study was arranged to investigate the possible role of selected genetic parameters in a random sample of 60 pregnant women diagnosed as preeclampsia by gynecologist in the outpatient and inpatient departments of Maternity and Childhood Teaching Hospital in Al Diwanyia province. In addition, a random sample of 60 normotensive pregnant women was group matched to the cases group on maternal age and gestational age. Results showed no statistically significant differences in mean age between the 3 study groups, in late onset preeclampsia, 60% of cases among the (16-26) years old pregnant women, while the early onset preeclampsia 40% of cases among the (27-37) years old pregnant women. Most preeclamptic cases have multiparous pregnancy with statistically non-significant P value (0.42). Most cases of preeclampsia have positive family history (53.3%) in early onset preeclampsia and (80%) in late onset preeclampsia. While in the case of clinical signs and symptoms most of cases have reduce urine output less than 500 ml, (56.7%) in early onset preeclampsia, (53.3%) in the late onset preeclampsia, but in the severe headaches (70%) in the early onset preeclampsia and (60%) in the late onset preeclampsia. While small percentage of cases do have visual disturbances (30%) in the early onset and (20%) in the late onset , while the fit (10%) present in the early onset and Summary.....

(3.4%) in the late onset, all these signs and symptoms have statistical significant differences between early and late onset of preeclampsia.

The blood pressure measurement, protein urea and blood urea results all showed that early onset PE have significantly higher records than late onset with statistical significant. The frequency of patients that have preeclampsia specific signs and symptoms were higher among the early onset PE than late onset with statistical significant P value (0.001). In the case of serum glutamic oxaloacetic transaminase (GOT), glutamic-pyruvate transaminase (GPT), Alkaline phosphatase (ALP) concentrations were significantly higher in preeclamptic pregnant women cases than normotensive pregnant women.

Among the studied three candidate susceptibility genes, *Interleukin-1β* - 511, *Interleukin-27* and *vascular endothelial growth factor* (*VEGF*) genotypes, T ,A and G alleles respectively had the strongest association P=0.001, P=0.005 and P=0.002 respectively and significantly increases the risk of having preeclampsia by 2.4 ,2.5 and 2.2 times respectively when compared to normotensive pregnant women. In the other hand C, G and C allele for the above studied genes respectively had a protective effect and significantly reduces the risk of having preeclampsia as the Protective fraction was 0.589, 0.595 and 0.189 respectively.

All the study parameters of the present study were significantly increase among the etiological genotypes of the interleukin- 1beta (wild type TT genotype) and the vascular endothelial growth factor (mutant homozygous GG genotype), while there is some parameters including blood pressure measurement and protein urea have no statistical significant differences among interleukin-27 genotype but the rest parameters show statistically significant increase among wild type AA genotype (the

Summary.....

etiological genotype). In the case of allele correlation all the selected parameter statistically increase in the etiological allele positive cases (T allele, A allele and G allele) of the interleukin-1beta, interleukin-27 and vascular endothelial growth factor, respectively.