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VEGF C936T polymorphism and serum *VEGF* levels in preeclampsia

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Background: Vascular endothelial growth factor (VEGF) C936T polymorphism is located at 3′-untranslated region (3′-UTR) of *VEGF* gene resulting alteration from C to T nucleotide. *VEGF* plays an important role in angiogenesis, vasculogenesis and endothelial cell migration. *VEGF* C936T polymorphism has been studied in relation with various gynecological and obstetric disorders including preeclampsia. Present study aimed to find out genotypes of *VEGF* C936T and serum levels of *VEGF* in preeclamptic women in comparison with normal pregnant women.

Methods: This case control study was carried out at Liaquat University of Medical and Health Sciences (LUMHS) Jamshoro. Forty preeclamptic women and 40 matched gestational age normal pregnant women were selected. *VEGF* C936T polymorphism genotyping was carried out by tetra-primer ARMS–PCR method whereas serum *VEGF* levels were determined by ELISA.

Results: The homozygous CC genotype was found in 82.5% of cases and 77.5% of control group. The heterozygous CT genotype distribution was 17.5% among cases and 22.5% among controls [p=0.57; odds ratio (OR) =1.36, range: 0.45–4.12]. Serum *VEGF* levels were significantly higher among cases as compared to controls ($p<0.05$).

Conclusion: This is the first study in Pakistan on association of *VEGF* C936T polymorphism and serum *VEGF* levels in preeclampsia. We did not find significant association of *VEGF* C936T polymorphism in development of preeclampsia in our population. However, raised serum *VEGF* levels in preeclampsia may suggest imbalance in angiogenic and anti- angiogenic factors in disorder and its potential as future biomarker in diagnosis and prediction of preeclampsia.

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