

Summary

Pre-eclampsia (PE) is a major complication of pregnancy associated with increased maternal morbidity and mortality, and with adverse outcomes, including perinatal death. It is characterized by the new onset of hypertension and proteinuria after 20 weeks of gestation. Clinically, PE is a heterogeneous disease, ranging from insidious clinical symptoms or mild hypertension to severe hypertension with proteinuria and an often life-threatening condition. The pathophysiological mechanism is characterized by a failure of the trophoblastic invasion of the spiral arteries, leading to maladaptation of maternal spiral arterioles, which may be associated with an increased vascular resistance of the uterine artery and a decreased perfusion of the placenta. However, the exact etiology of PE is still unknown. In the current study, we tried to establish the relationship between leptin and some steroid hormones in preeclamptic women and its effect in relation to clinical severity of the disease. After an overnight fasting, serum leptin, serum estradiol(E2), serum free testosterone(fT), were determined in the sera of 83 preeclamptic women and control. The three above hormones were determined by enzyme linked immunosorbent assay (ELISA). The pregnant women were divided into three groups according to gestational age and severity of the disease:-
A- Group (G1) involves 28 preeclamptic women in the third trimester with mild preeclampsia.

B- Group (G2) involves 25 preeclamptic women in the third trimester with severe preeclampsia.

C- Control group (G3) consists of 30 apparently healthy pregnant women. The results revealed:

1. A highly significant increment ($p < 0.01$) in the serum concentrations of leptin in preeclamptic women when compared with control group.
2. Estradiol (E2) concentrations showed highly significant increment ($p < 0.01$) in preeclamptic women compared with control group.
3. A highly significant increment ($p < 0.01$) in the serum concentrations of free testosterone (fT) in preeclamptic women when compared with control group. The above results might indicate the role of steroid hormones in the induction of leptin synthesis which may lead consequently to lipid profile disturbances in preeclamptic patient