

Serum Leptin Level in Severe Preeclampsia

Maad M Shalal *MBChB FICOG*, Anwar N Al-Bassam *MBChB CABGO*, Isra T Hassan *MBChB*

Dept. of Obstetrics and Genecology, Baghdad Teaching Hospital, Medical City Complex, Baghdad, Iraq

Abstract

Background	Preeclampsia is a major cause of maternal morbidity and mortality with unknown aetiology. Placental hypoperfusion and diffuse endothelial cell injury are considered the central pathological process. Many adipocyte hormones like leptin play an important role in the inflammatory and atherosclerotic process and may be used as a marker for preeclampsia.
Objective	To find the role of serum leptin measurement in pregnant women as a marker of preeclampsia.
Methods	Seventy six primigravida women in their 3 rd trimester of pregnancy were studied; 44 of them with severe preeclampsia, while the other 32 women with normal blood pressure without any history of previous diseases. Blood samples were taken for serum leptin, uric acid and creatinine levels, urine samples were collected for albumin. Serum leptin level was measured by ELISA kits.
Result	Serum leptin and uric acid levels but not the creatinine was different in eclamptic group than control group. Mean age, height and weight were not different between the two groups. The systolic and diastolic blood pressures were also different between the two groups. 26 cases (59.1%) had proteinuria of 3+ albumin and 18 cases (40.9%) with 4+.
Conclusion	Elevated serum leptin level can be used as a marker in the assessment of preeclampsia.
Key words	Primigravida, preeclampsia, serum lipten.

Introduction

Preeclampsia is a systemic disease characterized by hypertension and proteinuria; and it continues to be an important cause of maternal morbidity and mortality. The cause is not yet clear; it includes immunological, genetic, environmental and placental abnormality. The final result of all of these is endothelial dysfunction, characteristic of preeclampsia ⁽¹⁾. Preeclampsia refers to the onset of hypertension and proteinuria after 20 weeks of gestation in a previously normotensive woman.

The clinical manifestations of preeclampsia can appear anytime from the second trimester to the first few weeks postpartum; however, the

initial pathological changes begin in the late first trimester and consist of abnormal remodeling of the spiral arteries ⁽²⁾. Because the only cure is delivery, preeclampsia is associated with a high maternal and neonatal morbidity and mortality, so preeclampsia is believed to account for 15% of premature delivery and 17.6% of maternal death worldwide ^(3,4). Preeclampsia is the 3rd leading cause of maternal mortality and can complicate 3-14% of all pregnancies ^(5,6). The disease is mild in 75% of cases and severe in 25% ⁽⁷⁻⁹⁾.

A good test for predicting women who will develop preeclampsia should be simple, rapid, noninvasive, inexpensive, and easy to perform and should not expose the patient to discomfort