

misleading because apparently mild disease may progress rapidly to severe disease⁽⁶⁾.

Most current hypotheses regarding the pathophysiologic mechanisms of pregnancy induced hypertension point to early placental abnormalities. Human placenta synthesizes steroid, protein and glycoprotein hormones throughout gestation⁽⁷⁾.

Human chorionic gonadotrophin (hCG) is produced almost exclusively in the placenta but is synthesized in fetal kidney and a number of fetal tissues produce the β -subunit or intact hCG molecule⁽⁸⁾. It is secreted by trophoblast cells of the placenta and its production in early pregnancy is critical for implantation and maintenance of blastocyst⁽⁹⁾. HCG can be detected in the maternal blood as early as 6 days after ovulation and begins to decline a nadir being reached by about 20 weeks and is maintained at this lower level for the remainder of pregnancy⁽¹⁰⁾.

An association was reported between preeclampsia and elevated third trimester hCG levels⁽¹¹⁾. As preeclampsia is likely a trophoblastic disorder and hCG is secreted from the trophoblast⁽¹²⁾, we therefore investigated whether the level of serum hCG does correlate with the severity of preeclampsia and might reflect a different trophoblastic secretory response of this disease.

Patients and methods

A prospective study was conducted on 80 pregnant women attending the department of obstetrics and gynaecology in Al-Kadimyia Teaching

Hospital during the period from October through July 2005. Forty pregnant women with severe preeclampsia (group A) and forty healthy pregnant women as a control group (group B) with singleton pregnancies in the third trimester were matched for gestational age and maternal age. The patients were considered severe preeclamptic when systolic blood pressure ≥ 160 mm Hg or diastolic blood pressure ≥ 110 mm Hg, proteinuria > 5 gm in 24 hours, epigastric pain, cerebral or visual disturbance, pulmonary oedema, thrombocytopenia and abnormal liver function. All women were subjected to full physical and obstetrical examination and they were followed during their admission, delivery and postnatal period.

Venous blood samples were obtained from the subjects before delivery. The blood allowed to clot and sera were separated by centrifugation and stored frozen at -20°C until analysis. Serum levels of β -hCG levels were measured with enzymatic and immunometric assay Kits. Chi-square test and t-test were used for statistical analysis. P value < 0.05 was considered statistically significant.

Results

Table 1 shows no difference between group A and group B in terms of mean maternal age (30.57 ± 6.78 vs. 29.52 ± 6.59). Significant difference between the two groups was found regarding the gestational age (35.72 ± 1.93 vs. 37.11 ± 1.98) with P value < 0.05 .