SUMMARY

Preeclampsia develops in 4-5% of human pregnancy after 20 weeks of gestation.

Determination of high sensitivity CRP has been suggested to be more sensitivity in establishing inflammation. Recently several studies have been conduct to elucidate a relationship between PE and serum hsCRP levels. Since serum high sensitivity CRP can be used to predict the development of coronary heart disease, several attempts have been made to determine this predictive value in the development of PE.

So this study tried to determine the levels of serum CRP in preeclampsia and its association with severity of the disease to prove that CRP may be used as a marker of severity of preeclampsia.

This study was carried in Benha University and Abo-Hammad hospital in order to establish a reference data representing the value of a single measurement of maternal serum highly sensitive c-reactive protein.

The study group was divided into three groups:

Group A (50 pregnant women): mild preeclamptic patient.

Group B (50 pregnant women): Severe preeclamptic patients.

Group C (50 normal pregnant women: Control group.

Blood sample was collected in tubes without anticoagulant after centrifugation, and assayed for high sensitivity CRP, serum high sensitivity CRP level were measured by enzyme. Linked immunosrobent assays (ELISA). The high sensitivity CRP ELISA is

based on the principle of a solid phase enzyme-linked immunosorbent assay.

Patient selected for this study fulfilled the following criteria:

- Primigravida.
- At gestational age ranging from 28-40 weeks.
- No premature rupture of membranes or clinical chorioamnionitis.
- No history of chronic hypertension
- No history of diabetes mellitus.
- No symptomatic infections disease
- No chronic renal disease.

For all patients:

- Full history taking to exclude the previous criteria in the selected cases.
- Complete general, abdominal and local examination.
- Mean arterial pressure (MAP) which is calculated using the following formula MAPs (2 x diastolic blood pressure + systolic blood pressure) /3.
- Ultasonography to determine the gestational age of the selected cases.
- Urine albumin by dipstick to determine the degree of albuminuria.
- Single measurement of maternal plasma C-reactive protein.
- Complete blood count (CBC).
- Prothrombine time (PT).
- Partial thromboblastein time (PTT).
- Liver function test.

All the data was statistically analyzed and tabulated.

- This data was tabulated and statistically analyzed and the result showed that:

  - As regard demographic data, there were no statistically significant difference regarding maternal age and gestational age.
  - Serum CRP level was significantly higher in preeclampsia than that of normotensive pregnant women.
    - Serum CRP level was significantly increased with severity of preeclampsia CRP (mean) (Control: 2.366±2.194; Mild preeclampsia: 19.492±4.047 and Severe preeclampsia: 26.536±4.820).
    - There was statistical positive significant correlation between CRP and systolic blood pressure among all preeclamptic group ($r = 5.77$; $p < 0.001$).
    - There was statistical positive significant correlation between CRP and diastolic blood pressure among all preeclamptic group ($r= 0.639$; $p<0.001$).
    - There was statistical positive significant correlation between CRP and mean arterial blood pressure among all preeclamptic group ($r = 0.647$; $p < 0.001$).