SUMMARY

The justification of attempts to prevent the disease is based on its prevalence, consequences for the individuals and the community.

The success of preventive approaches depends on the possibility of recognizing of early and latent stages of the disease by means of reliable and acceptable predictive tests and on the viability of effective methods of intervention.

Perfect discrimination at any early stage of pregnancy between who remain normotensive and those later on develop pregnancy induced hypertension is a goal to maximize the safety of the mother and baby from hypertensive disorder complications. Many clinical , biophysical and biochemical tests have been recommended for predicting the development of preeclampsia .The findings of numerous studies have been inconsistent and contradictory ,owing to the heterogeneity of the studied populations and variations in the definitions used for hypertensive disorders during pregnancy in methods used to express results .

The aim of this work is to study the value of measuring maternal microproteinuria, serum uric acid and plasma endothelin-1 as markers in predicting hypertensive disorders of pregnancy.

This study included 90 cases recruited from pregnant women attending the Outpatient Clinic and Obstetric Department of Kafr shokr hospitals.

The apparently healthy normotensive primigravida women were subjected to:

A- Initial visit at 20-24 weeks gestation:

1. Full History Taking.
2. Complete Physical Examination.
3. Abdominal and Obstetric Examinations.
4. Special lab. Investigations :

First morning midstream urine specimens were analyzed for albumenuria.

Blood tests: -Plasma Endothclin-1.

-Serum uric acid.

B- Another visit between 32-36 weeks gestation to repeat the special laboratory investigations.

The following results were found :

Endothelin-1 : Mean (ET-1) was significantly elevated in the study group compared to controls at 20-24 weeks (P=0.045) and at 32-36 weeks gestation (P=0.025).

Microproteinuria : Mean microprotein level was significantly elevated in the study group compared to controls at 20-24 weeks ($P<0.05$) and highly significant at 32-36 weeks gestation ($P<0.001$) .

Uric acid : Mean uric acid level was significantly elevated in the study group compared to controls at 20-24 weeks ($P<0.05$) and significant at 32-36 weeks gestation ($P<0.05$) .

When we compared the results of mean plasma ET-1 in the study group at 20-24 weeks and at 32-36 weeks, there was no significant differences ,this was also found in the control.

When we compared the results of mean microproteinuria in the study group at 20-24 weeks and at 32-36 weeks, there was a highly significant higher mean results ($P<0.001$). There was a significant higher mean results between controls ($P<0.05$).

When we compared the results of mean serum uric acid in the study group at 20-24 weeks and at 32-36 weeks, there was a significantly higher levels at 32-36 weeks, however there was no significant difference in the control group.

Predictive values of elevated values of biochemical data at 20-24 weeks period :

The positive and negative predictive values of **ET-1** for PE were 50% and 93.1% respectively, and the sensitivity and specificity were 12.5% and 98.7% respectively.

The positive and negative predictive values of **microproteinuria** for PE were 75% and 94.2% respectively, and the sensitivity and specificity were 37.5% and 98.7% respectively.

The positive and negative predictive values of **uric acid** for PE were 71.4% and 96.4% respectively, and the sensitivity and specificity were 62.5% and 97.5% respectively.

To obtain a universally acceptable and reliable screening test for prediction of preeclampsia, further prospective studies are needed after establishment of strict to diagnose and classify hypertension during pregnancy .

In addition, only healthy nulliparous pregnant women should be included. Also for methods based on blood pressure measurements to be effective , increased uniformity of recording measurement is necessary.