



CO-RELATION OF PLGF (PLACENTAL GROWTH FACTOR) WITH SEVERITY OF PREECLAMPSIA AND ADVERSE MATERNAL OUTCOMES.

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OBJECTIVES

- 1) To estimate PIGF levels and correlate them with severity of preeclampsia.
- 2) To correlate PIGF levels with adverse maternal outcomes.

METHODS

75 antenatal women diagnosed with preeclampsia as per ACOG guidelines at gestational age of 30-32 weeks were recruited. Detailed history, examination, investigations like CBC with platelet count, LFT, KFT, ECG, fundus examination, 24-hour urine protein examination were done and PIGF levels were measured using ELISA kit. Maternal and fetal monitoring included evaluation of signs and symptoms of severe pre-eclampsia like headache, visual symptoms, epigastric pain and reduced urinary output, vitals including blood pressure and fetal heart rate monitoring, daily fetal movement count monitoring, NST and obstetric ultrasonography.

Management included oral iron, folic acid and calcium supplementation, corticosteroids for fetal lung maturity, routine antenatal care and care for preeclampsia including administration of anti-hypertensive drugs.

PATIENT(S)

Women with chronic hypertension, superimposed preeclampsia and other pregnancy related disorders like multifetal pregnancy were excluded.

INTERVENTION

Out of routine baseline investigations, 1 ml of serum sample was centrifuged and stored to estimate PIGF levels using ELISA kit.

MAIN OUTCOME

The median PIGF level in severe preeclampsia (22.32pg/ml) was significantly low as compared to women with mild preeclampsia (39.80pg/ml, $p < 0.01$).

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The median PIGF levels in women with adverse maternal outcomes (23.26pg/ml) was significantly low as compared to those without adverse maternal outcomes (61.02pg/ml, $p < 0.004$)

RESULT(s)

100%, 67.2% and 25% women with very low (<12 pg/ml), low (12pg/ml-5th centile) and normal PIGF levels (>5th centile) had severe preeclampsia and this was statistically significant. ($p < 0.005$)

40%, 36.1% and 0% women with very low (<12 pg/ml), low (12pg/ml-5th centile) and normal PIGF levels (>5th centile) had adverse maternal outcomes but this was not statistically significant. ($p < 0.276$)

PIGF levels showed negative correlation with systolic and diastolic blood pressure.

CONCLUSION

In preeclampsia there is an inherent risk of disease progression and development of adverse outcomes. PIGF levels may help to stratify the disease severity more precisely and in time for early interventions than clinical parameters alone thus preventing adverse maternal outcomes.