

In our study we found that serum β -hCG levels were significantly elevated in severe preeclampsia compared with the controls. This finding indicates that an abnormal secretory function exists in patients with severe preeclampsia. Many authors studied serum level of hCG in preeclampsia to define an abnormal placental secretory function or to predict development of preeclampsia before this disease is manifest.

Said et al.⁽²⁰⁾ found that serum β -hCG concentration were significantly higher in preeclamptic patient compared with normotensive women matched for age and gestation, and β -HCG level were found to rise before the clinical signs of preeclampsia appeared. Gurbu et al.⁽²¹⁾ found that the serum hCG level is especially significant in severe preeclampsia and superimposed preeclampsia.

Lee et al.⁽²²⁾ found that various molecular forms of hCG in serum and urine were significantly higher in preeclamptic than normotensive pregnancies. Similar results were obtained by Hsu CD et al.⁽¹¹⁾.

Jaiswar et al.⁽²³⁾ found that there is 100% correlation between high serum β -hCG level at early gestation and development of pregnancy induced hypertension later on during pregnancy. Similar results was obtained by Mullar F et al.⁽²⁴⁾.

An elevation in serum β -hCG levels in the second trimester has been linked with the development of later onset of preeclampsia⁽²⁵⁾.

Wenstorm et al.⁽²⁶⁾ found that an elevated hCG level is significantly associated with preterm delivery, fetal death, and fetal growth restriction.

Lieppman et al.⁽²⁷⁾ studied a cohort of 460 women and found a four fold increase in the risk of low birth weight

babies in women with high serum hCG levels. The risk of preterm delivery was 2.8 times more and risk of small for gestational age (IUGR) baby was 1.8 times more in these women.

In our study, low birth weight babies were significantly higher in hypertensive group (72.5%) than those in normotensive group (12.5%), also preterm delivery and fetal death appear to be higher in group A than in group B (50% versus 7.5%) and (7.5% versus 0%) respectively⁽²⁸⁾.

A higher incidence of preterm delivery was found among patients with severe preeclampsia in comparison to control group. This may be due to induction of labour or caesarean section because of maternal indications and complications of preeclampsia or due to fetal causes as severe intrauterine growth restriction and fetal distress. On the other hand preterm deliveries in the control group were mainly due to preterm premature rupture of membrane. This indicates that Serum β -hCG level was elevated in severe preeclamptic women and could be associated with adverse pregnancy outcome.

Conclusion

Serum β -hCG levels were found to be significantly elevated in severe preeclampsia compared with the controls and this may indicate an abnormal placental secretory function in patients with severe preeclampsia with subsequent adverse pregnancy outcome.

References

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