SUMMARY & CONCLUSION
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The present study was carried out to evaluate the changes in serum lipoproteins in high risk pregnancies (Preeclampsia, eclampsia & IUGR) during their Ante partum, Intra partum and Post partum period (upto 1 month) and also to know the changes in lipoprotein pattern in relation to parity, severity and also to know the incidence of other complications related to disease itself.

Total 37 cases were taken (10 preeclampsia, 17 eclampsia and 10 IUGR) and they were followed up during Ante partum, Intra partum and Post partum period. Lipoprotein levels (STC, STG, HDL, LDL & VLDL) were estimated during 2nd and 3rd trimester, intra partum 24 hrs., 7 day and 1 month post partum.

1. **Serum lipoproteins during Ante partum period**

   (a) **Serum Total Cholesterol (STC)**
   (i) In Preeclampsia rise from 2nd trimester to 3rd trimester was statistically significant \( (p < .05) \) while rise from IIIrd trimester to labour was statistically not significant \( (p > .05) \).
   (ii) In Eclampsia rise from 3rd trimester to labour was statistically highly significant \( (p < .001) \).
   (iii) In cases of IUGR rise in STC from 2nd to 3rd, 3rd to labour and from 2nd trimester to labour was statistically not significant \( (p > .05) \)
   (iv) Values were highest in cases of eclampsia.

   (b) **Low density Lipoproteins (LDL)**
   (i) In pts. with preeclampsia rise from 2nd trimester to labour was statistically highly significant \( p < .001 \) and from 3rd trimester to labour it was statistically not significant \( (p > .05) \)
   (ii) In pts. with eclampsia rise from 3rd trimester to labour was statistically highly significant \( (p < .001) \)
   (iii) In pts. with IUGR rise from 2nd trimester to 3rd trimester & from 3rd to intrapartum and from 2nd to labour was statistically not significant \( (p > .05) \)
   (iv) Values were highest in pts with eclampsia.

c. **High Density Lipoproteins (HDL)**
   (i) In preeclamptic pts HDL values gradually declined from 2nd trimester to 3rd trimester & from 3rd to labour
   \[
   \begin{align*}
   \text{II}^{\text{nd}} & \text{ vs III}^{\text{rd}} & \text{p > .05} \\
   \text{III}^{\text{rd}} & \text{ vs I.P.} & \text{p > .05}
   \end{align*}
   \]
II\textsuperscript{nd} vs I.P. \hspace{1cm} p < .05

(i) In eclamptic pts HDL gradually declined from 3\textsuperscript{rd} trimester to labour
III\textsuperscript{rd} vs I.P. \hspace{1cm} p < .001

(ii) In pts with IUGR HDL declined from 2\textsuperscript{nd} trimester to 3\textsuperscript{rd} and from 3\textsuperscript{rd} trimester to labour.
    II\textsuperscript{nd} vs III\textsuperscript{rd} \hspace{1cm} p < .05
    II\textsuperscript{nd} vs I.P. \hspace{1cm} p < .001

(iv) Values were lowest among pts with eclampsia while fall from 2\textsuperscript{nd}
term to labour was higher in pts with IUGR in comparison to preeclampsia.

(d) Serum triglycerides (STG) & Very low density lipoprotein (VLDL) -

(i) In pts. with preeclampsia rise in STG and VLDL from 2\textsuperscript{nd} trimester
to labour was significant
    II\textsuperscript{nd} vs I.P. \hspace{1cm} p < .05
    II\textsuperscript{nd} vs III\textsuperscript{rd} \hspace{1cm} p > .05
    III\textsuperscript{rd} vs I.P. \hspace{1cm} p > .05

(ii) In eclamptic pts STG and VLDL raised minimally \hspace{1cm} p > .05

(iii) In pts with IUGR STG and VLDL raised from II\textsuperscript{nd} to III\textsuperscript{rd} and from
     III\textsuperscript{rd} to labour but it was statistically not significant
         \hspace{1cm} p > .05

(iv) Values were highest among pts with eclampsia

2. Serum lipoproteins during labour

(a) STC, LDL, STG and VLDL attained their peak during labour in
all the three groups.

(b) HDL declined from their initial value gradually in all the three
    group and was lowest during labour.

(c) STC, LDL, STG and VLDL values were highest in pts with
    eclampsia while HDL values were lowest in eclampsia.

3. Serum Lipoprotein during post partum period

(a) Serum Total Cholesterol (STC)

(i) In pre eclamptic pts it declined abruptly within 24 hrs and then
    gradually upto 1 month
    IP vs 24 hrs PP \hspace{1cm} p < .001
    IP vs 7th day PP \hspace{1cm} p < .001

    It returned to its initial value on 7th PP day

(ii) In pts with eclampsia it declined abruptly with in 24 hrs and then
    gradually upto 1 month
    IP vs 24 hrs. PP \hspace{1cm} p < .001
    IP vs 7th day PP \hspace{1cm} p < .001

    Fall was too much on 30\textsuperscript{th} d PP in comparison to its initial value on
    III\textsuperscript{rd} trimester.
In pts. with IUGR it declined gradually and reached to its initial value on 7th PP day

\[
\begin{align*}
\text{IP vs 1st PP day} & \quad p > .05 \\
\text{IP vs 7th, 30th d PP} & \quad p > .05
\end{align*}
\]

(b). Low Density Lipoprotein (LDL)

(i) In pts with pre eclampsia it fall abruptly with in 24 hrs P P. and then gradually upto 30th d PP

\[
\begin{align*}
\text{IP vs 24 hrs PP} & \quad p < .05 \\
\text{IP vs 7md PP} & \quad p < .05
\end{align*}
\]

It returned to it’s initial value near about 7th day P.P.

(ii) In Eclampsia pts. it declined maximum within 24 hrs PP then gradually upto 1 month

\[
\begin{align*}
\text{IP vs 24 hrs. PP} & \quad p < .001 \\
\text{IP vs 7thd PP} & \quad p < .001 \\
\text{IP vs 30th md PP} & \quad p < .001
\end{align*}
\]

It returned to it’s initial value on 30th PP day

(c) High Density Lipoprotein (HDL)

(i) In pts with preeclampsia HDL raised within 24 hrs PP then upto 7thd PP but it was constant after that.

\[
\begin{align*}
\text{IP vs 24 hrs PP} & \quad p > .05 \\
\text{IP vs 7md PP} & \quad p < .05
\end{align*}
\]

(ii) In pts with eclampsia it increased within 24 hrs. P.P. after that it decreased then again increased.

\[
\begin{align*}
\text{IP vs 24 hrs PP} & \quad p > .05 \\
\text{IP vs 7md PP} & \quad p > .05 \\
\text{IP vs 30md PP} & \quad p > .05
\end{align*}
\]

(iii) In pts. with IUGR, it raised gradually upto 7th PP day then declined on 30th P.P. day

\[
\begin{align*}
\text{IP vs 24 hrs. PP} & \quad p > .05 \\
\text{IP vs 7thd PP} & \quad p > .05 \\
\text{IP vs 30thd PP} & \quad p > .05
\end{align*}
\]

(d) Serum Triglyceride & Very Low Density Lipoprotein (STG & VLDL)

(i) In pts with pre eclampsia it fall maximum within 24 hrs then gradually upto 30thd P.P.

\[
\begin{align*}
\text{IP vs 24 hrs PP} & \quad p > .05 \\
\text{IP vs 30 thd PP} & \quad p < .05
\end{align*}
\]

(ii) In pts. with eclampsia it decreased maximum within 24 hrs P.P. then gradually upto 30th d . P.P’

\[
\begin{align*}
\text{IP vs 24 hrs PP} & \quad p > .05 \\
\text{IP vs 30th d PP} & \quad p < .05
\end{align*}
\]
**Serum Lipoproteins in relation to severity**

(i) On comparing the serum lipoprotein in mild and severe pre eclampsia. Percentage increase in STC and LDL was more in pts with severe pre eclampsia, values of HDL were lower in severe Pre eclampsia

(ii) In Eclampsia group, pts delivering still birth child showed much higher STC, LDL values than other pts in the same group and also decrease in HDL was slightly more in those pts.

(iii) In pts with IUGR, though values of STC and LDL were lower in pts. with severe IUGR but this difference was statistically not significant. However HDL level was much less in pts with severe IUGR and this difference was significant during pregnancy and labour.

One pt. from pre eclampsia group and four pts from Eclampsia group developed renal failure, two eclamptic pts. showed abnormal LFT. But serum lipoproteins were not markedly deviated in these pts, in comparison to other pts. except pts. with renal failure in eclampsia group but changes were not significant.

**Serum Lipoprotein In relation to parity**

(i) In Pre eclamptic pts mean value of STC and LDL were little higher in Primigravida but it was statistically not significant, no constant difference in level of HDL.

(ii) In Eclamptic pts STC and LDL values were higher in Primigravida in comparison to multigravida but this was statistically not significant there was no constant difference in HDL level.

(iii) 60% of pts were Primigravida in both groups.

**Socio Economic status**

40% of pre eclamptic pts, 55% of Eclamptic and 50% of IUGR pts were belonging to lower socio-economic status.

**Conclusion**

At the end of our study we found that

*STC, LDL raised significantly in pts with Pre eclampsia, Eclampsia & attained maximum value during labour and decreased thereafter.

*STC, LDL raised minimally in pts with IUGR and attained their peak at labour and decreased thereafter

*HDL constantly decreased during pregnancy in all the three groups but this decrease was maximum in pts with IUGR