MATERIAL AND METHODS

Present study was carried out in the Departments of Medicine and Obstetrics & Gynaecology, M.L.B. Medical College, Hospital, Jhansi.

Women with normal pregnancy attending the antenatal clinic and admitted in wards of Obstetrics and Gynaecology were included in the study. Subjects suffering from diseases which are likely to have an altered lipoprotein levels such as coronary artery disease, renal disease, liver disease, diabetes mellitus were excluded from the study.

A total of 104 cases of normal pregnancy were enrolled in this study. Of which only 60 cases were taken for final assessment. The remaining being dropped at various stages of study due to lack of sufficient follow up. Cases who developed complications of pregnancy like pre-eclampsia, eclampsia or gestational diabetes during follow up were also excluded.

After getting the particulars of the subjects like age, address and occupation, details regarding following points were noted.

OBSTETRIC HISTORY

Obstetric history included following points:
- Date of last menstrual period.
- Gravidae and parity.
- Pregnancy induced hypertension, pre-eclampsia, eclampsia, IUGR, and prematurity during previous pregnancy.
MEDICAL HISTORY

Medical history included hypertension, renal disease, liver disease, diabetes mellitus, hypo/hyperthyroidism.

FAMILY HISTORY

This included hypertension, diabetes mellitus and coronary artery disease.

PERSONAL HISTORY

This included smoking, alcohol, tobacco chewing etc. and nature of contraceptive used, if any.

TREATMENT HISTORY

Therapy with corticosteroid, thiazides and betablockers.

LACTATIONAL STATUS

DIETARY HISTORY

Average daily intake of calories and fat was assessed during each visit. Type of diet (vegetarian/non-vegetarian) was also noted.

General, systemic and obstetric examinations with special reference to blood pressure, oedema and weight gain were done in each visit.

INVESTIGATIONS

Urine albumin, sugar, microscopy and blood haemoglobin, blood sugar (fasting and postprandial) were done in each visit.
<table>
<thead>
<tr>
<th>Investigations</th>
<th>Trimester</th>
<th>Intrapartum</th>
<th>Postpartum period</th>
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<td>I</td>
<td>II</td>
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Urine: Albumin
Sugar
M/E
Haemoglobin
Blood sugar:
Fasting
Postprandial

Lipoprotein estimation was done at the Lipid Research Laboratory attached to Department of Medicine. Estimations were done during 1st, 2nd and 3rd trimester, of pregnancy, during labour (Intrapartum - IP), within 24 hour postpartum (24h PP), 7th day postpartum (PP7d) and one month postpartum (PP1m). Cord blood lipoprotein profile (placental and foetal side) were also noted immediately after delivery.

Serum total cholesterol (STC), serum triglycerides (STG) and high density lipoproteins (HDL) were estimated by standard methods. Very low density lipoprotein (VLDL) and low density lipoprotein (LDL) were calculated by the following formulae:

\[
\text{VLDL (mg/dl)} = \frac{\text{STG}}{5} \quad \text{(This is valid upto the value of } \leq 300 \text{ mg/dl)}
\]

\[
\text{LDL (mg/dl)} = \text{STC} - (\text{STG}/5 + \text{HDL})
\]

\[
= \text{STC} - (\text{VLDL} + \text{HDL})
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<table>
<thead>
<tr>
<th>Period</th>
<th>STC</th>
<th>STG</th>
<th>HDL</th>
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<td>Intrapartum</td>
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<td>1 month &quot;&quot;</td>
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Umbilical cord blood:
- Placental side
- Fetetal side

To note the effect of lactation on lipoprotein profile during puerperium, the cases were divided into two groups (Lactating and non-lactating). Lipoprotein profile between these two groups were compared at postpartum, 7th day and postpartum 1 month.

To know the lipoprotein changes in relation to mode of delivery the subjects were divided into 3 groups:

Group I: Subjects who had vaginal delivery.

Group II: Subjects undergone emergency caesarean section.

Group III: Subjects undergone an elective caesarean section.

Lipoprotein profile between these three groups were compared during intrapartum, 24 hrs postpartum, 7 days postpartum and 1 month postpartum.
It was also tried to compare the lipoprotein changes in relation to pregnancy outcome (live birth vs still birth) in subjects having an otherwise normal pregnancy till term. 52 subjects who delivered live baby were denoted as group A and 7 patients who had still birth (Fresh still birth) were taken as group B.

To note the effect of parity on lipoprotein profile, the subjects were also divided according to parity i.e. primigravidae (22 cases) and multigravidae (38 cases).

The lipoprotein pattern in these two groups was compared at 1st, 2nd and 3rd trimester, intrapartum, and post partum 24 hours, 7 days and 1 month.