MATERIAL AND METHODS
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Present study was carried out in the departments of Obstetrics & Gynaecology and Medicine, M.L.B. Medical College, Hospital, Jhansi in a period of twelve months.

SELECTION OF CASES

Case material for the present study comprised of 75 female patients of age from 30 to 60 years. In which 30 cases were selected from study of previous year carried out in same departments. These had been gone under hysterectomy with or without oopherectomy. Follow up upto three months after operation was taken in this study. Present study comprised 6th month follow up of these cases.

Rest 45 cases comprised of female patients admitted in the department of Obstetrics and Gynaecology who were undergoing hysterectomy with or without oopherectomy.

Original study of previous year had a large list of volunteers from which only 30 cases could be selected. It was largely because most of the cases could not turn up due to their uneventful postoperative period or distant residence or were ignorant. All the subjects were completely investigated with detailed history and physical examination.

STUDY GROUP

All the subjects were divided into two major groups:
Group A

Cases of previous study who had gone under hysterectomy with or without oopherectomy were kept in this group.

Group B

New cases who were undergoing hysterectomy with or without oopherectomy were kept in group B.

Group A was further divided into two subgroups according to their menstrual status at the time of operation.

A-I : Premenopausal women.
A-II : Postmenopausal women.

Subjects of A-I group were further subdivided into following groups:

Group A-Ia : Women underwent hysterectomy only.
Group A-Ib : Women underwent hysterectomy with unilateral oopherectomy.
Group A-Ic : Women who underwent hysterectomy with bilateral oopherectomy.
Group A-II : Women who underwent hysterectomy only.

FOR GROUP B (NEW CASES)

Charts were made for individual subjects and the pattern of changes of lipid lipoprotein profile was noted. Remarks were specifically given for any marked change in
any factor viz. smoking, use of oral contraceptives, hormonal therapy prior to surgery and finally conclusion was drawn regarding the change in lipid levels.

**METHOD**

Informed consent was taken from each subject. All chosen subjects were examined in detail as regards their name, age, address, socioeconomic status, detailed history of present illness, past history, dietary history, family history and history of intake of any hormonal preparation prior to surgery. A detail general and systemic examination with special reference to height, weight, blood pressure, was done. Gynaecological examination per speculum and per vaginal were done to assess the indication of hysterectomy. The aid of various investigation like vaginal cytology, biopsy, ultrasound was utilized to confirm the diagnosis. Relevant investigations viz. blood sugar and urea, TLC, DLC, Hb%, ESR and urinalysis, E.C.G. and X-ray were done in each case.

All the samples were collected after 12-14 hours fasting. Five ml of blood was withdrawn from antecubital vein of the patient in recumbent posture without producing venous stasis (Koerselman et al, 1961). Blood was allowed to settle down for half an hour and then centrifuged and serum was preserved with standard precautions.
PERIOD OF COLLECTION OF BLOOD SAMPLE

For group A : Fasting sample after 6 month of operation.

Group B : 1. Pre-operative.
           2. On 3rd post operative day.
           3. On 10th post operative day.
           4. After 1 month of operation.

METHOD OF ESTIMATION OF VARIOUS LIPID FACTORS

Collected serum was put to following tests

1. **Serum Total Cholesterol (STC)**

   This estimation was done by commercial kit supplied by Ethnor. Basic principle is that cholesterol reacts with its solution of ferric perchlorate, ethyl acetate and sulphuric acid and gives levender coloured complex which is measured colorimetrically at the optical density (OD) of 560-600 nm.

2. **Serum Triglyceride (STG)**

   Serum triglyceride was estimated by acetyl acetone method. Principle behind this is that triglyceride are determined by measuring glycerol after its liberation from fatty acids by saponification glycerol is oxidised by sodium metaperiodate to form aldehyde which is directly proportional to the amount of triglycerides.

3. **Serum High Density Lipoprotein (HDL)**

   HDL were estimated by utilizing commercial kit supplied by Ethnor. Basic principle is that HDL cholesterol fraction is separated by using a precipitating
reagent. The precipitants contain cnylomicrons, VLDL, LDL which are removed by centrifugation. The supernatants contain HDL cholesterol which is estimated by HDL-c colour reagent which gives purple coloured complex which is measured by colorimetrically at optical density of 560 nm. The intensity of colours developed is proportional to the concentration of HDL cholesterol in the specimen under test.

4. **Serum Very Low Density Lipoprotein (VLDL)**

   It was calculated by using formula given by Friedwald et al (1972). It is valid upto STG values to less than 400 mg%.

   \[ \text{VLDL (mg\%)} = \text{STG}/5. \]

5. **Serum Low Density Lipoproteins (LDL)**

   It was calculated by the formula given by Fredrickson DS (1972):

   \[
   \begin{align*}
   \text{LDL (mg\%)} &= \text{STC} - (\text{STG}/5 + \text{HDL}) \\
                   &= \text{STC} - (\text{VLDL} + \text{HDL})
   \end{align*}
   \]

**Statistical Method used**

Student 'T' test was used in the statistical analysis to compared the mean values of different groups in group A.