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 12 months.

SELECTION OF CASES

313 women of reproductive age group were studied initially. Out of them 125 women were selected for trial. Out of these 125 women, 100 were put in study group and remaining 25 were taken as control group. From study group 20 women dropped out due to their personal reasons.

Inclusion Criteria

1. Volunteers were having normal menstrual cycle.
2. Post abortion cases were enrolled after at least one normal cycle.

Exclusion Criteria

1. Females with liver disease, ischaemic heart disease, hypertension, hyperlipidemia, diabetes, renal disease, acute or recurrent vascular thrombosis were not included in the study.
2. Females who were taking hormones prior to commencement of oral contraceptives, were also excluded from the study.
3. Females, whose basal endometrial histology showed evidence of endometrial hyperplasia and adenocarcinomas, were excluded from the study.

4. Females on drugs that are liable to interfere with lipid metabolism and thereby influencing lipoprotein levels in blood, were not considered for the study.

All the subjects received verbal and written information about the trial and gave their consent in writing. Detailed history of present, past illness, family history, obstetric and menstrual history, dietary history, history of intake of any hormonal preparation prior to commencement of therapy.

A complete general and systemic examination including pelvic examination with special reference to height, weight and blood pressure were done in each case.

All the subjects were of average built. They were divided into 3 groups depending upon type of oral contraceptive pills they used.

Group A: Women using Mala-N (combined pills).
Group B: Women using Orthonovum 7.7.7 (sequential pills).
Group C: Women using Centchroman (nonsteroidal pills).

Following investigations were performed in all the cases.

**ROUTINE**

Haemoglobin, blood urea, blood sugar, urine albumin and sugar were done in each case.
SPECIAL

Serum total cholesterol, serum triglycerides, serum low density lipoproteins (LDL), very low density lipoproteins (VLDL), high density lipoproteins (HDL), liver function test, platelet function test were done.

METHOD OF COLLECTION OF BLOOD SAMPLES

5 ml of blood after 12-14 hour fasting was withdrawn after 10 minutes of rest and without producing venous stasis.

After withdrawal blood was allowed to settle down for 1/2 hour and then centrifuged and serum was preserved. Blood samples were collected at (1) first visit to hospital. (2) one month after hormone therapy/Centchroman therapy, (3) two months after hormone/centchroman therapy, (4) Three months after hormone/centchroman therapy, (5) Six months after hormone/centchroman therapy, (6) Eight months after hormone/centchroman therapy, (7) Twelve months after hormone/centchroman therapy.

Dosage Schedule

Combined pills: Mala-N supplied by Govt of India containing Ethynyl oestradiol - 0.03 mg and Norethisterone acetate - 1 mg.

Sequential pills: Orthonovum-7.7.7

7 tabs. - 0.05 mg norethisterone acetate+35 microgram EE.
7 yabs. - 0.75 mg " + " = "
7 tabs. - 1.00 mg " + " = "

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**Centchroman** : 30 mg tab oral twice a week for first 3 months and then once a week schedule. Treatment was started from 1st day of menses. From 4th month onwards females were instructed to take one tablet on every Sunday irrespective of menses day.

**ESTIMATION OF LIPID FRACTIONS**

Various lipid fractions: serum total cholesterol (STC), serum triglycerides (STG), high density lipoproteins (HDL), were estimated by diagnostic chemical kits while low density lipoproteins (LDL) and very low density lipoproteins (VLDL) and LDL/HDL ratio were derived from above mentioned values by standard formulae.

1. **STC**

   STC was estimated by commercial kits supplied by Ethnor. The basic principles is that cholesterol reacts with list solution of ferric perchlorate, ethyl acetate and sulphuric acid and gives a lavender coloured complex which is measured colorimetrically.

2. **STG**

   Serum triglycerides was estimated by acetyl acetone method. Principle behind is that triglycerides are determined by measuring glycerol after its liberation from fatty acid by saponification. Glycerol is oxidised or by sodium metaperiodate to formaldehyde which is directly proportional to the amount of triglycerides.
3. **HDL**

HDL was estimated by utilizing commercial kits supplied by Ethnor. Basic principle is that the HDL cholesterol fraction is separated by using a precipitating reagent. The precipitate contains chylomicrons, VLDL, LDL, which are removed by centrifugation. The supernatant contains HDL cholesterol which is estimated by HDL-c colour reagent which gives purple coloured complex which is measured colorimetrically at 560 nm. The intensity of colour developed is proportional to the concentration of HDL-c in the specimen under test.

4. **VLDL**

VLDL is estimated by formula given by Friedwald et al (1972). This formula is valid upto STG values to less than 400 mg/dl.

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\text{VLDL (mg/dl)} = \frac{\text{STG}}{5}.
\]

5. **LDL**

LDL was calculated by the following formula given by Fredrickson DA (1972):

\[
\text{LDL (mg/dl)} = \text{STC} - \left( \frac{\text{STG}}{5} + \text{HDL} \right) \quad \text{OR}
\]

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

6. **LDL:HDL Ratio**

Statistical method used: Student 't' test was applied in the statistical analysis to compare the mean values of different groups.