MATERIAL AND METHODS
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The present study was carried out in the Department of Obstetrics and Gynaecology and the Department of Biochemistry, M.L.B. Medical College, Jhansi, over a period of one year, starting from May 1984 to April 1985.

Selection of cases

The study comprised of patients attending outdoor clinic of the Department of Obstetrics and Gynaecology for antenatal examination; antenatal wards and from labour room, directly. The patients studied were broadly divided into following groups.

Group I - Normal pregnancy,

Group II - Toxaemia of pregnancy

(i) Pre-eclampsia,

(ii) Eclampsia.

Pre-eclamptic patients were taken to be those who developed hypertension after the 20th week of gestation with the following associated conditions.
(a) Proteinuria,
(b) Oedema,
(c) Both a & b.

**Hypertension** - The American Obstetrical Committee has recommended a blood pressure of 130/80 mm Hg as being the limit of normal at any time during pregnancy, with a rise of 30 mm Hg systolic or 15 mm of Hg diastolic blood pressure being considered abnormal. The blood pressures cited must manifest on at least two occasions 6 hours or more apart.

**Proteinuria** is defined as more than 0.3 g per litre in 24 hour collection, or greater than 1 g per litre in at least two random urine specimens collected 6 hours or more apart.

**Eclamptic patients** were taken to be those who developed convulsions, not caused by any coincidental neurologic disease such as epilepsy and fulfilled all the conditions set forth for pre-eclamptic patients as taken above.

Total number of cases studied were 46, out of which 24 cases were of normal pregnancy, 14 of pre-eclamptic toxæmia and 8 of eclampsia.
Clinical Examination

A complete clinical history of the above cases regarding age, parity, socio-economic status, literacy level, history of present illness, past history, obstetrical history, menstrual history, family history, dietary history was taken as embedded in format. It was ensured that the patient did not suffer from any other disease which caused increased cholesterol level such as coronary heart disease, kidney disease, liver disease, diabetes mellitus.

The patients were examined and investigated in detail to detect toxaemia of pregnancy. The cases included in this study were in the last trimester of pregnancy nearing term.

General and systemic examination were done with special emphasis on general built of the patient, pallor, blood pressure, height and weight in kilograms.

The fundal height was assessed and the period of gestation was determined and it was ascertained if this corresponded to period of amenorrhea as told by the patient.

Per vaginal examination was done on the patient having labour pains to ascertain whether she
was in labour or not, so that blood sample could be taken at appropriate time.

Following investigations were performed.

(i) Blood - General blood picture to exclude anaemia,
- Serum cholesterol,
- Blood urea,
- Serum uric acid,
- Serum creatinine.

Blood urea, serum uric acid and serum creatinine done in cases of pre-eclampsia and eclampsia.

(ii) Urine:
- Volume,
- Specific gravity,
- Urine sugar,
- Urine Alb. (Quantitative estimation by Esbach's method)
- Microscopic examination.

(iii) Fundus examination

Period of collection of blood samples

Blood samples were withdrawn during following periods.
(1) Antenatal period.

(a) From 28 weeks to 36 weeks of pregnancy.

(b) After completion of 36 weeks to 40 weeks of pregnancy.

(2) During labour.

(3) Within 24 hours of parturition.

(4) After one week of delivery.

(5) After 6 weeks to 8 weeks of delivery.

Method of collection of blood samples

5 ml of blood were withdrawn from antecubital vein of the patient subject to the following conditions.

(i) She had fasted for 12-14 hours before such sample was taken,

(ii) She had taken light meals prior to the period envisaged in condition No. (i),

(iii) The blood was withdrawn without venous stasis.

- After withdrawing the sample, it was allowed to settle facilitating the serum to separate.

- Pulse and blood pressure was taken immediately after taking the blood sample.
Method of determination of total serum cholesterol.

The method employed in this study confirms to the one used by Henly (1957) for the determination of total serum cholesterol. The reagents and technique is embodied as under -

Reagents -

(1) Acetic acid - acetic acid A.R. (aldehyde free).

(2) Ferric chloride acetic acid reagent - 0.05 per cent.
   Solution of Fe Cl₂·6H₂O in purified acetic acid.

(3) Sulphuric acid. A.R.

(4) Cholesterol standard - 100 mg. in 100 ml. of
   Aldehyde free acetic acid.

(5) Cholesterol standard for use - The stock standard
   is diluted with the ferric chloride acetic acid
   reagent in 1 to 25 ratio.
   (4) and (5) are kept in cool and dark place.

Technique

- 0.1 ml. of serum was added to 10 ml. of the ferric chloride acetic acid reagent in a glass stoppered centrifuge tube.

- It was mixed well and kept for ten to fifteen minutes for protein to flocculate.
- This was centrifuged and 5 ml. of clear supernatant fluid was transfused to a glass stoppered centrifuge tube.

- For the standard, 0.1 ml. of physiological saline was mixed with 10 ml. of cholesterol standard for use and 5 ml. of this is transferred to a second stoppered centrifuge tube.

- 5 ml. of the ferric chloride acetic acid reagent was taken in third tube as blank.

- 3 ml. of sulphuric acid from a burette was added to all the three tubes, stoppered carefully and kept for twenty to thirty minutes.

- The unknown and standard was read against the blank using a yellow filter or at 560 millimicromes in Klett Summerson's Colorimeter and then calculation was made by following formula.

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\frac{\text{mg total cholesterol per 100 ml. serum}}{\text{Reading of unknown}} = \frac{\text{Reading of unknown}}{\text{Reading of standard}} \times 400
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