Material and Methods

The case material for the present study consisted of male and female patients suffering from (a) Endocrine and/or metabolic disease, (b) chronic liver disease, (c) Chronic renal insufficiency and (d) Chronic obstructive pulmonary disease, attending the OPDs or admitted in the wards of M.L.B. Medical College, Hospital, Jhansi.

An informed consent was taken from all the subjects who were to be included in the study. In each case a detailed history was elicited and a meticulous clinical examination and investigations were carried out, and all basic clinical and biochemical parameters recorded. The subjects were then grouped into the following categories:

GROUP A

Group A consisted of male and female patients of diabetes mellitus, ranging in age from 18 to 67 years. The number of patients included in this group was 13; seven cases were of juvenile onset diabetes and six were of maturity onset diabetes.

GROUP B

The second group consisted of 8 male and female patients of hepatic cirrhosis, ranging in age from 11 to 67 years.
GROUP C

The third group consisted of 9 patients of both sexes suffering from chronic renal insufficiency (nephrotic syndrome, Chronic renal failure etc.). The age range of this group was 16 to 56 years.

GROUP D

This group consisted of ten patients of chronic obstructive pulmonary disease, ranging in age from 53 to 80 years. Incidentally, all patients included in this group happened to be males.

A detailed dietary history was elicited to assess the amount of fat consumed daily and weekly by these subjects in their usual routine diet. Specific consideration was given to record the weekly amount of ghee and its type (saturated/unsaturated), oil and its type, milk and milk products, eggs, and food additives. Any recent change in diet, oral or parenteral medication before and during the study were noted. Hospitalized patients were given the diet from the hospital for one week prior to the test.

Fifty one patients had entered the study, out of which eight could not complete the test because of vomiting of the test diet, and in three cases, because of insufficient quantity or haemolysis of one or more of the blood samples, the complete battery of tests could not be carried out. Therefore, complete data from the remaining
40 subjects were included in the final analysis.

DESIGN OF TEST

All subjects were asked to have their dinner at 6.00 PM on the previous night and not to take anything except water till the next morning. Fasting blood samples were taken at 8.00 AM the following morning in the recumbent posture without producing venous stasis. After this, they were given a test meal consisting of 2 boiled eggs and 250 ml of sweetened whole fat buffalo milk. This supplied 500-550 mg of egg yolk cholesterol.

Postprandial blood samples were taken 1, 2 and 3 hours after the meal. During the test, the subjects were not allowed to take anything except water. Smoking was prohibited during the test period. Serum was separated within four hours by centrifugation and the following tests were performed.

I. **SERUM TOTAL CHOLESTEROL (STC)**

STC estimation was done by commercial kits supplied by Ortho Diagnostics.

II. **SERUM TRIGLYCERIDES (STG)**

Estimation of serum triglycerides was done by commercial kits supplied by Ortho Diagnostics.

III. **SERUM HIGH DENSITY LIPOPROTEINS (HDL)**

This test was done by using commercial kits supplied by Ortho Diagnostics.
IV. **VLDL CHOLESTEROL**

VLDL cholesterol was calculated by using the formula derived by Friedwald et al. (1972):

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

V. **LDL CHOLESTEROL**

LDL cholesterol was estimated by using the following formula given by Fredrickson DS (1972):

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

Statistical analysis of the data was done by using paired 't' test and student 't' test.