DISCUSSION
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The present work was carried out to study serum lipoprotein profile in umbilical cord blood of newborn babies and venous blood of different groups of children. The study was conducted at M.L.B. Medical College, Jhansi in the Department of Medicine, with active collaboration with Department of Obstetrics & Gynaecology, from May 1997 to April 1998.

The primary aim of study was carried out to know the lipoprotein profile in children of different age group and umbilical cord blood of newborn. The study was also aimed to know the prevalence of hypercholesterolemia or hypertriglycerideremia in above mentioned age group and the study also noted the effect of gender and socio-economic status in the lipoprotein profile.

The mean serum total cholesterol of 16 newborn was found to be 81.28 mg% with ± 4.40 (S.D.). Lower value of serum total cholesterol (below 75 mg%) were observed by many observer (Rafstedt Brown, Russ et al) in their study. Sandowsky, Kaplan & Lee et al in their study noted serum total cholesterol more than 90 mg%. Similar finding to this were observed by Gordon and Cohn, Dharmandy Desai et al.
In our study the serum triglyceride of umbilical cord blood of newborn were 32.30 ± 5.04 (S.D.) and HDL-C was 15.53 ± 0.69 (S.D.). LDL-C & VLDL values were 59.15 ± 4.46 (S.D.) and 6.6 ± 1.03 (S.D.) respectively. Thus it is obvious that all the lipoprotein fractions in the cord blood of newborn are far lesser than corresponding figures in children and adults.

We divided the subjects of various age group with respect to serum total cholesterol by NCEP guideline as shown in Table No. XVIII.

There were 16 cases in group A included all newborn have low cholesterol level. Therefore they were not included in this comparison.

In group B (0–1 year of age), out of 10 children, 6 (male) had STC below 170 mg% (i.e. 60%) and 4 (female) had between 170 to 199 mg% (i.e. 40%) and none had above 200 mg%.

In group C (2–5 years of age), out of 20 children, 3 (male) had STC below 170 mg% (i.e. 14.28%) and 18 (female) had between 170–199 mg% (i.e. 85.79%) & none had above 200 mg%.

In group D (6–8 years of age) out of 23 children, 5 (male) had STC below 170 mg% (i.e. 21.73%) and 18 (female) had between 170–199 mg% (i.e. 78.26%) and none had above 200 mg%.

In Group E (9–12 years of age) out of 33 children, 5 (male) had STC below 170 mg% (i.e. 15.15%) and 28 (females) had between 170–199 mg% (i.e. 84.84%) and none had above 200 mg%.
In group $F$ (13-16 years of age) out of 27 children, 6 (male) had STC below 170 mg% (i.e. 22.22%) and 21 (female) had between 170-199 mg% (i.e. 77.77%) and none had above 200 mg%.

Previous study of our department by Arora and Kavita et al (1989) in their study of the change of lipid lipoprotein profile of normal pregnancy and toxemia of pregnancy during antepartum and post-partum period and in umbilical cord blood of their newborns found that STC, STG, HDL-C, VLDL & LDL-C levels in umbilical cord blood were to be very low in comparison to intrapartum values of mother.

Lipid lipoprotein profile in age group B (0-1 year) in our study were $175.22 \pm 3.23$ (STC), $81.72 \pm 1.76$ (STG), $31.77 \pm 0.74$ (HDL-C), $16.47 \pm 0.51$ (VLDL) and $126.98 \pm 3.8$ (LDL-C) as shown in Table III. These figures are much higher than the corresponding figure in the cord blood ($P \leq 0.001$).

In group $C$ (2-5 year of age) lipoprotein profile were $181.52 \pm 11.36$ (STC), $79.19 \pm 10.28$ (STG), $32.42 \pm 1.56$ (HDL-C), $15.83 \pm 2.09$ (VLDL) and $124.68 \pm 12.50$ (LDL-C).

While comparing these figures with the corresponding values of Group B (0-1 year of age), it was found that the differences between two groups were statistically insignificant ($P \geq 0.05$).

Similarly group D, E and $F$ (6-8 year of age, 9-12 year of age and 13-16 year) respectively also showed a lipoprotein pattern which was not much different from that of Group C (2-5 year of age) - i.e., the inter-group difference
was statistically insignificant ($P > 0.05$). Thus it may be inferred that the lipoprotein lipid profile remains more or less stationary throughout the childhood (0–16 year).

In our study the LDL/HDL ratio were $3.81 \pm 0.37$ (Group A - umbilical cord blood of newborn), $3.99 \pm 0.16$ (Group B - 0–1 year of age), $4.10 \pm 0.33$ (Group C - 2-5 year of age), $3.99 \pm 0.19$ (Group D - 6-8 year of age), $3.87 \pm 0.43$ (Group E - 9-12 year of age) and $3.83 \pm 0.19$ (Group F - 13-16 year of age) as shown in Table III.

On statistical analysis, it was found that the inter-group difference was statistically insignificant ($P > 0.05$). Thus it may be inferred that socio-economic status have no significant bearing on lipoprotein profile. This is in sharp to the observation by A. Khalil, S. Gupta et al (1994) in their study on lipid profile norms in Indian children where they noted lipid profile varying widely with socio-economic status.