INTRODUCTION
Pregnancy is a physiological state associated with tremendous changes in metabolism of carbohydrate, protein and fat. These changes are mediated by hormones mainly from placenta, anterior pituitary and adrenal cortex, though pancreas, thyroid and parathyroid hormones participate in adaptive changes that maintain the metabolic state in pregnancy. Of this, female sex hormones viz. oestrogen and progesterone have a key role in regulating the changes in lipid lipoprotein profile.

Sex hormones and lipid profile in female have received increasing attention because of the difference in the incidence of atherosclerosis between males and females i.e. in the reproductive age group females being comparatively protected than males.

Various studies have shown that in normal pregnancy there is an increase in serum total cholesterol and serum triglycerides, which progresses steadily till term and then abruptly falls after delivery (Boyd, 1934; Dieckman and Wegner, 1934; Watson, 1957).

At the same time, the deleterious effect of short term feeding of high cholesterol fat diet on the lipoprotein profile has been observed in several studies (Kannel et al, 1979). In the Indian context, it seems important because of the increased intake of total calories cholesterol and animal fat associated with pregnancy and
lactation. This feeding behaviour persists for several months. The high prevalence of multiparity in India makes it more interesting.

On the other hand in high risk pregnancies like pre-eclampsia, eclampsia and intrauterine growth retardation, studies have shown a different pattern in lipoprotein profile. Boyd and Rochester (1935) found that concentration of plasma lipids varied greatly in eclamptic patients. According to De Alvarez (1961) there was an increase of serum total cholesterol in pre-eclampsia as compared with values in normal pregnancy. Studies from our department (Arora and Garg et al, 1989) also have shown a marked rise in serum total cholesterol and LDL cholesterol and a fall in HDL cholesterol in eclampsia as compared to normal pregnancy.

Thus noting the difference in lipoprotein response in normal and high risk pregnancy we were eager to know the exact role of lipoprotein in normal and high risk pregnancy and how changes in lipid profile can affect the maternal and foetal outcome.

The abrupt fall in lipoprotein levels that occurs immediately after delivery also raises some queries. How does this raised lipoprotein disappear all of sudden? Where does this lipoprotein go? Is it shifted to foetal circulation during labour? Is it being utilised in uterine contraction during labour? or is it shifted from maternal circulation to extravascular/subendothelial compartment?
With this background a study "To study the lipoprotein changes during antenatal, natal and post natal period and cord blood of the new-borns in normal and high risk pregnancy and their effect on maternal and foetal outcome" was designed in our department. Towards this objective the present study was concentrated on normal pregnancy to evaluate lipoprotein changes and cord blood of their newborns. A parallel study concentrating on high risk pregnancy is in progress in our department.

The present study was aimed at the following objectives:

1. To know the trend of the changes in various lipoprotein fractions (STC, STG, HDL, LDL and VLDL) during antepartum, intrapartum and postpartum periods in normal pregnancy.

2. To know the lipoprotein pattern in the umbilical cord blood of newborns (from maternal and foetal end of the cord) and to compare these with that of maternal blood during intrapartum period.

3. To know the effect of parity over the lipoprotein changes in pregnancy and puerperium.

4. To know the effect of lactation on lipoprotein profile during puerperium.

5. To see the changes in lipoprotein pattern in relation to different mode of delivery i.e. vaginal delivery, elective or emergency caesarean section.
6. To see whether the outcome of pregnancy (live birth or still birth) have any relationship with maternal lipoprotein profile in an otherwise normal pregnancy.