

ABSTRACT

MEASUREMENT OF SERUM CHOLESTEROL LEVELS AS A PREDICTOR OF PRETERM DELIVERY

AUTHOR: DR. C. SRILAKSHMI, POST GRADUATE, M.S OG

PROF. DR. SHOBA KUMAR DEPARTMENT OF OBESTETRICS AND
GYNECOLOGY, IOG, CHENNAI

AIM & OBJECTIVES:

To evaluate the association of elevated cholesterol levels at 14 to 24 weeks gestation in uncomplicated pregnancy and preterm delivery. To associate the elevated levels of cholesterol as predictor of preterm delivery.

To determine the association between elevated Serum Cholesterol in Pregnancy & Pre-term Births.

METHODOLOGY

STUDY CENTRE : DEPARTMENT OF OBSTETRICS AND
GYNECOLOGY,MMC CHENNAI.

STUDY DESIGN : Prospective cohort study

PERIOD OF STUDY: ONE YEAR (Aug 2016 – July 2017)

SAMPLE SIZE: 300 patients

INCLUSION CRITERIA:All cases of singleton gestation (confirmed by early second trimester ultrasound), gestational age between 14-20 weeks (by LMP and confirmed by ultrasound), intact amniotic membranes, history of

Pre-term labor/pre-term delivery in prior pregnancy.

EXCLUSION CRITERIA: Multiple gestation, H/O Diabetes or Hyper Tension, Pre-eclampsia, GDM, Heart Diseases, previous abnormal pregnancy history, Cervical incompetence, Renal disorders, Congenital malformations, Smoking, Alcohol consumption.

MATERIALS & METHODS: All generally, healthy pregnant women attending the antenatal clinic are to be enrolled and the serum cholesterol levels to be measured at GA of 14 to 20 weeks' pregnancy and followed up to delivery and then they will be allocated to preterm and non-preterm groups based on the GA at delivery.

SAMPLE COLLECTION:

Venous blood samples were obtained from fasting patient in the morning to measure total serum cholesterol concentrations between 14 and 20 weeks' gestation.

RESULT:

47% of this study population were in the age group of 22 – 24 years. (mean – 22.3). 46.7% were primis ,53.3% were second gravidas. In this study, we have not seen much influence of age and parity to the outcome of delivery. 93.7% mothers had normal cholesterol values ,6.3% had elevated cholesterol values. The study group with normal cholesterol values had good outcome were as 63.2% study group with elevated cholesterol values had preterm delivery is statistically significant ($p = 0.0001$). The mean fetal weight delivered at term

are significantly higher than those of preterm. Among the preterm deliveries, 78.3% babies were admitted in NICU, which is statistically significant ($p < 0.0001$). In the current study cholesterol levels were found to be a simple marker for preterm delivery.

CONCLUSION:

Serum cholesterol levels increase during pregnancy & is necessary for uteroplacental vascularisation, placental transport functions. Hyperlipidaemia is also regarded as an instigator of inflammation and stress, which is a significant factor in preterm birth. The findings of the present study showed that serum cholesterol levels were found to be elevated in patients who have gone in for preterm labour than those gone for term pregnancy. Hence, Serum cholesterol levels has been found to be useful simple marker for preterm delivery. This observation helps us to describe a generic framework for combining this screening information for designing a prophylactic intervention in future.

KEY WORDS:

Antenatal, Cholesterol, Hyperlipidemia, Preterm labour