

Cardio-metabolic disease risk assessment in urban school going adolescent age group (10-19 years) using lipid biomarkers: A Cross-Sectional study: Reg No: 253

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ABSTRACT

Introduction: Dyslipidaemia is a major risk factor for Cardio-metabolic disease and its complications which is showing an increasing trends in adults worldwide. Lipid imbalance detection during adolescent period can forecast the development of cardio-metabolic disease in adulthood. The Primary Objective of the study was to assess the lipid profile parameters in the school going urban adolescents of the age group of 10-19 years. Secondary Objectives: To find out the prevalence of metabolic syndrome among the study population using NCEP-III criteria. **Methods:** It was an observational analytical cross-sectional study conducted for a period of two years in the school going urban adolescents of the age group of 10-19 years. Sample size was 679. **Results:** Out of 679 study population female were 554 (81.6%) and 125(18.4%) males. The mean age among male & female respondents were 13.8 ± 0.9 & 14.7 ± 1.8 years respectively. Majority of the respondents from both the gender belongs to the age group of 14-16 years [Male- 81(64.8%), Female-366(66.1%)]. The overall results revealed that prevalence of dyslipidaemia & Metabolic syndrome was found to be 496 (73%) & 47(6.9%). Majority of the participants had low HDL Value { females- 400(72.2%), Males- 96(76.8%)}. High triglyceride level was seen in {Female- 119(21.5%),Male- 18(14.4%)}. Borderline & high LDL value was observed in seven(1.3%) females only. Borderline cholesterol levels were seen in [Female- 21 (3.8%) and male- 2(1.6%)]. Seven(1.6%) female participants had very high cholesterol level. Total of 72(10.6%) adolescents had blood pressure $\geq 130/85$ mm of HG. **Conclusion:** Early risk assessment should begin in adolescence in order to design and implement lifestyle or pharmacological interventions that might be effective in preventing the mortality & morbidity caused by Cardiometabolic disease in adulthood.

KEYWORDS

Atherosclerosis, CVDDyslipidaemia, lipid markers, NCEP-III guidelines