

Correlation between anthropometric indices and dyslipidemia in T2DM: CHD risk assessment and identification of Metabolic Syndrome.

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Abstract:

Introduction: Anthropometric indices and dyslipidemia have been associated with Type 2 Diabetes Mellitus (T2DM). **Objective:** Present study aimed at examining these variables in the North Indian rural population of Sirmaur District of Himachal Pradesh, India. **Materials & Methods:** In a cross-sectional and case control study, age-sex matched controls for clinically established patients were enrolled. Data based upon demographic, anthropometric and biochemical variables were collected. Student's *t*-test and Pearson's correlation analyses were performed on the data with SPSS v16.0. Following the National Cholesterol Education Program (NCEP) Adult Treatment Panel (ATP) III guidelines, Coronary Heart Disease (CHD) risk evaluation and the identification of Metabolic Syndrome in the enrolled patients was conducted. **Results:** All the variables showed significantly ($p=0.000$) higher values in case of patients than the controls. On subjecting to correlation analysis, while the poor glycemic control, higher anthropometric indices and urea showed significant ($p=0.000$) correlation to elevated fasting blood sugar, it was unrelated to lipid profile but, dyslipidemia and higher anthropometric indices were strongly correlated. Men were at higher risk of CHD (10 year risk equivalent) as compared to women. Higher number of men (88%) had metabolic syndrome (MetS) than women (80%). **Conclusion:** The study helps draw conclusion that anthropometric indices are good predictors of T2DM and silent dyslipidemia is observed in such patients. More significantly, T2DM does influence the overall health of an individual with particular impact on the risk factors associated with CHD. Timely intervention with life style changes and drugs and constant monitoring can help alleviate the risk factors and reduce associated complications.

Keywords: Anthropometric indices, CHD risk assessment, Dyslipidemia, Metabolic syndrome, Type 2 Diabetes Mellitus.

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