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Coronary risk, lipid and lipoprotein profile of staff members of Jimma University, Jimma, Ethiopia, East Africa

Kalkidan Hassen
Jimma University, Ethiopia

The incidence of Atherosclerosis has been increasing lately in developing countries where the health system heavily burdened by the conventional infectious diseases. Extensive clinical and statistical studies have identified several factors that increase the risk of coronary heart disease and heart attack, of which dyslipoprotenemia, tobacco smoking, having high blood pressure and obesity are the most important and yet modifiable . The WHO Step wise approach to Surveillance (STEPS) instrument was employed among three hundred and seventeen staff members of Jimma University. Data was collected using structured questionnaire, physical examination and Laboratory tests and analysed by using SPSS version 16 and risk was appraised by using Framingham risk scoring method. Prevalence of current cigarette smoking status was 15(6.9%), binge drinking of alcohol 23(12.63 %), 3(8.57%) for male and female, respectively, physical inactivity 13.82% and personal history of hypertension 9.2%. The mean (sd) SBP (mmHg) was 118.3(11.15) in males and 113.83 (12.59) in females. Systolic BP shows a significant correlation with level of LDL and TC both in males ($p<0.01$) and females ($p<0.05$). BMI was found as the most significant determinants of mean SBP and DBP. Obesity was 10 (4.6%) and 5(14.28) among male and females, respectively. Majority of the study subject (70.5%) has HDL level of above 40mg/dl. Bivariate correlation between HDL and BMI shows a negative correlation coefficient ($r= -0.164$, $p<0.05$). The Mean (sd) LDL level was 98.94(2.29) for males and 94.95(3.35) among females. Bivariate correlation between LDL and BMI, Income, Blood glucose and age shows a positive correlation ($P<0.05$) while recreational hours involving exercise shows a negative correlation coefficient ($r= -0.234$, $p<0.05$). The mean (sd) ofTCL level was 161.35(39.69) for males and 149.45(45.44) among females. Hypercholesterolemia was found to be 15 (6.2%). Bivariate correlation between TCL and BMI, income, blood glucose, age and heavy recreational hours shows a positive correlation ($P<0.05$) while heavy recreational hours shows a negative correlation coefficient with level of LDL($r= -0.213$, $p<0.05$). Among the subjects 16.2% and 8.29% has borderline high to high TG level for male and female, respectively. The prevalence of current daily smoking among men in our study was nearly similar with studies done in Addis Ababa, Butajira and Northwest of Ethiopia as well as WHO survey (2003) of the country. Heavy alcohol consumption was comparable with adults in Addis Ababa. The mean SBP of our study was higher than adults in Butajira, but lower than their counterparts in Addis Ababa. Similar finding was seen in DBP. Our prevalence of obesity was higher than the data provided by the WHO Global InfoBase and data presented by STEPS study done at three demographic surveillance sites in Ethiopia, Vietnam and Indonesia, but comparable with other study done in Addis Ababa. Our assessment of physical activity shows higher levels of physical inactivity compared to the Ethiopian National Health Survey Report 2003. Prevalence of hypercholesterolemia and hypertriglyceridemia in our study is lower compared to study done in Addis Ababa and Gondar. The prevalence of dyslipidemia was lower than studies done in Africa, Asia and the developed nation. The overall study showed the need for effective strategies to promote primary and secondary levels of prevention of coronary atherosclerosis and demands further investigation at a larger scale across the country.

Biography

Kalkidan Hassen has completed his MSc in Medical Physiology at the age of 33 years from Addis Ababa University, BSN from Jimma University and Clinical Nursing from Jimma institute of health science. Currently, he is working as a lecturer of Physiology in Biomedical Sciences, Collage of Public Health and Medical Sciences ofJimmaUniversity,and he has published two books in Human Physiology. He is undertaking five researches with the university and a systematic review with JBI.

kalkidan.hassen@ju.edu.et