Lipid parameters in young adults in Sri Lanka to identify high-risk persons for coronary heart disease

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ABSTRACT

Foundations of coronary heart diseases (CHD) are laid in infancy and in early childhood with strong associations between antimortem risk factors and post-mortem observation in young individuals. This study was designed to examine the relationship between lipoprotein abnormalities and risk factors in a group of young adults in Sri Lanka and to identify indicators for possible early intervention in childhood. A total of 503 subjects, 281 male and 222 female medical students (24+1.5 yrs.) were studied. They represented a sample from all district of Sri Lanka. A complete lipid profile consisting of total cholesterol (Chol), HDL-Chol, LDL-Chol and TG was done on all subject from venous blood obtained after a 14 hour fast. No Significant relationship between lipid parameters and risk factors (self, family histories) were observed.

LDL-Cholesterol greater than 110mg/dl was found in 50% of both 21-26 yrs old males and females indicating the increased incidence of borderline and high-risk subject in these young adults.

Higher total Chol and LDL-Chol were observed in females at all percentiles 5th-95th with significantly higher means ($P<0.05$).

TG, however were significantly higher in males with significantly higher means ($P<0.05$).

These values are higher than the values reported for an equivalent population of Western males and females.

Since increasingly higher incidence of CHD have been reported among Sri Lankans, these observations in young adults suggest the need for early intervention in childhood in the risk groups identified on the basis of total Chol, and LDL-Chol.

These results represent stage-1, and in stage -111 the same subjects are being examined into their final years, (5ᵗʰ year) to track changes due to variations in lifestyles.