



INTRODUCTION

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Developing countries, especially countries like India are on the verge of twin epidemics of communicable and non-communicable diseases namely hypertension and coronary artery disease (CAD).

The prevalence of coronary artery disease is high amongst Indians:-
2.2 to 5 times for myocardial infarction, 1.5 to 3.0 times for coronary heart disease mortality. Myocardial infarction also occurs at a younger age in Indians (50.2 years versus 55.5 years in whites).¹

Age specific death rates (30-39) for Myocardial infarction in Indians were almost 10 times the rate observed for the white population. Autopsies also revealed more severe and extensive atherosclerosis and larger infarct size and increased frequency of triple vessel disease among Indians.²

In CAD, 1st reported from Singapore in 1959 reveal that people hailing from Indian sub-continent had a higher probability of dying due to CAD.

The overall age standardized mortality ratio of CAD in Asian males compared to whites was 37.3% higher in age group of 20-29 yrs, compared to 36% higher at all ages in the U.K.

Asian Indians belonging to different geographical culture and religious groups have the same high mortality. Further the prevalence of CAD is threefold higher in south India in comparison to north India.

An important cluster of metabolic risk factors seems to be responsible for the occurrence of extensive and early CAD in Indians. These include the greater occurrence of glucose intolerance, hyperinsulinaemia, hypertriglyceridemia, low HDL-C level, abnormal type of obesity and novel risk factor like high serum of lipoprotein-(a).

Lipoprotein (a) constitutes an important inherited risk factor for atherosclerosis and is also regarded as biological marker for familial CAD.

Lipoprotein (a) is homologous with the fibrin binding domain of plasminogen, a plasma protein that dissolves blood clots when activated.

Lp(a) levels are also reduced by treatment with N-acetyl cysteine, danazol and ally sterol. Nicotinic acid and Neomycin also decrease levels of Lp (a), and are used for therapeutic purpose. LDL aphaeresis is useful modality of treatment of patients of homozygous familial hypercholesterolemia and ordinary hypercholesterolemia.

This case control study was designed to explore the role of Lp (a) levels in young patients with myocardial infarction. Young patients in the study were defined as patients with age ≤ 40 years.