INTRODUCTION
Atherosclerosis remains one of the leading cause of morbidity and mortality due to cardiovascular diseases. Several factors are known to be associated with premature atherosclerosis. Among them the most important factors are hypertension, elevated serum cholesterol, smoking, obesity, diabetes mellitus, stress and strain, sedentary life style and prolonged family history. Abnormal lipid levels may be common to several of risk factors.

Researchers are unsure about the exact cause of atherosclerosis and also about the most effective methods of intervention. Diseases such as diabetes and hypertension require medication for control but most of other risk factors can be modified by dietary changes and an increase in physical activity.

Atherosclerosis, leading to C.V.D. begins early in life. It has been argued that the physicians cannot adequately detect and manage the children at risk of CVD. Data from multiple epidemiological studies of risk factors of CVD suggest that the risk factors can be identified in children and that they demonstrate a "Tracking Phenomenon" into adult life. Many of risk factors are largely determined or influenced by life style or environmental factors. There are no prospective studies that show a
relationship between the presence of risk factors of C.V.D. in children and premature cardiovascular disease in later life.

The age of patient and the life situation in which treatment is initiated are of obvious importance. The coronary artery disease (CAD) has familial association, both because of genetic predisposition and nutritional imbalance which develops in a family setting. So, children should be included in this consideration of possible preventive treatment for two reasons, first, atherosclerosis has its beginning in childhood and is continuously progressive throughout the life. Second, the patterns of food consumption are largely developed early in life.

In five studies, between 18-25 percent of the progeny of parents who sustained myocardial infarction before the age of 55 years showed significant hypercholesterolemia and/or hypertriglyceridemia in (Glueck, 1983), while in control group the incidence of hyperlipidemia stands 6 percent. Few other studies reported that sons (14-25 years) of fathers with ischemia had lower levels of HDL (Nupuf and Sutherland, 1979), a protective factor for CHD, than controls.

It seems that there may be a subset even within the genetically predisposed group, who are more likely to develop CHD prematurely by virtue of their unfavourable
lipid profile. This identification can possibly be done by estimating their basal lipid profile or by a provocative test comprising, a high fat diet, high cholesterol load, for short duration.

Several studies have shown that a significant number of patients of CAD have abnormal fasting and/or lipid lipoprotein profile but the exact co-ordination has never been worked out. In the proposed study we have tried to show this relationship, we have evaluated whether patients of CAD (Documented by Positive Exercise Test) possess abnormality in their lipid-lipoprotein profile. For labelling a case as CAD we adopted the time honoured method exercise ECG, if resting ECG was normal. The widespread use of exercise testing during routine annual examinations has defined a hereto fore unrecognized group of patients with asymptomatic CAD. In addition, patients who are asymptomatic after an infarct are none the less at greater risk for a second CAD event than the general population. Although medical therapy (elimination of smoking, anti-hypertensive medications) aimed at preventing progression of the disease is indicated, recent surgical data suggesting that by pass surgery in prove mortality in coronary patients. While such an approach cannot be condemned as the basis of available data, a number of factors should be considered:

1. The degree of positivity of the exercise test and duration or stage of exercise at which it appears,
(2) The ECG leads in which the test is positive (changes in the anterior precordial leads appears to indicate less favourable prognosis than the changes in the inferior leads).

(3) The age of the patients.

(4) The occupation of patients where as most would agree that the asymptomatic, 45 years old, commercial air like-pilot with 4 mm ST segment depression in leads V₁ - V₄ during mild exercise should have arteriogram and the asymptomatic sedentary, 75 years old retired with 1 mm ST segment depression in leads II and III during maximal exercise should not, there is no consensus about the appropriate procedure in less extreme situations.

At present time ECG stress testing is the best approximation of this ideal because electrocardiographic ST segment displacement is a characteristic response of to ischemia and occurs during and immediately following an exercise test. Similarly, the false negative responses are known to occur and may be due to the complex geometry of the heart, these limitations notwithstanding, the realization that ST segment depression is a clinically useful, readily available index of ischemia has prompted the development of standardized exercise tests which are ST segment depression as the end point to define ischemia.
The ischemic ST segment response is generally defined as a flat depression of ST segment 0.1 mV below the base line, i.e. PR segment lasting more than 0.08 seconds. If 0.1 mV or more ST segment depression is required before the test is considered to be positive, the percentage of false positive results will be less than 10 percent and only about 15 percent of patients with severe coronary atherosclerosis will have negative test results.

The duration of exercise, presence of anginal symptoms, heart rate and blood pressure response are also important in evaluating the results of a stress electrocardiogram. Thus, false positive results are least likely in those patients who demonstrate ST segment depression early in the test, in whom the changes persist for relatively long period (5 minutes) following cessation of exercise, who experience typical angina during the test.

Approximately 10 percent of patients with a positive test will have ST segment changes only during exercise. Exercise testing is safer within exercise monitoring because ST segment changes or arrhythmias may develop before pain or other symptoms occur. Three formats of stress testing are commonly used; tests with standardized external work loads, test which are standardized by heart rate response, and tests designed to reach the
maximal possible exercise load. The two step system of exercise developed by Master is an example of the first variety. The second and third varieties employ a bicycle exercise test. In the target heart rate test, exercise is continued until the patient attains 80-90 percent of his predicted maximum heart rate. In the maximal exercise test is progressively increased until maximal work load is obtained.