SUMMARY

Atherosclerosis and CAD continue to be the major health problems. Although the manifestations usually do not appear until later adult life they appear to have their origins in childhood. To assess whether or not familial hyperlipoproteinemia was more frequent in children whose parents showed signs of coronary heart disease in early adult life this study was performed on 119 children of healthy and diseased parents they are divided into five groups :-

1- **Group 1 :-**

Consists of 33 children of healthy parents (21 boys and 12 girls). Their ages ranged from 3 to 14 years.

2- **Group 2 :-**

Consists of 22 children of parents with myocardial infarction (16 boys and girls), their ages ranged from 3 to 14 years.

3- **Group 3 :-**

Consists of 22 children of parents with diabetes mellitus (9 boys and 13 girls). Their ages ranged from 5 to 14 years.

4- Group 4 :-

Consists of 22 children of parents suffering both diabetes mellitus + myocardial infarction (20 boys and 2 girls) their ages ranged from 8 to 14 years.

5- Group 5 :-

Consists of 20 children of parents having both diabetes mellitus + angina pectoris (10 boys and 10 girls). Their ages ranged from 6 to 14 years.

All these children were subjected to

a) Careful history taking especially family history of any disease, drug intake and status of their diet.

b) Measurement of height, body weight determination, then calculation of surface area and body mass index of each subject.

c) Careful clinical examination

d) Fasting venous blood sample was taken and centrifuged, on the serum the following were done.

- Serum triglycerides level
- Serum total cholesterol
- Serum HDL cholesterol level
- Serum LDL cholesterol level
- Serum apolipoprotein A
- Serum apolipoprotein B
- Serum fructosamine level

The results of this work showed :-

1- Elevation in the mean level of serum triglyceride in sera of children of parents with myocardial infarction (MI), diabetes mellitus (DM), diabetes mellitus + myocardial infarction (DM + MI) and those of parents with diabetes mellitus + angina pectoris (DM + AP) in comparison to those of control group.

2- Elevation of total cholesterol level in sera of all children of parents with myocardial infarction, diabetes mellitus, diabetes mellitus + myocardial infarction and diabetes mellitus + angina pectoris in comparison to control group.

3- Level of serum HDL cholesterol is reduced significantly in sera of children of parents with myocardial infarction while it is elevated significantly only in sera of children of parents with diabetes mellitus, while in diabetes mellitus + myocardial infarction and of those having diabetes mellitus + angina pectors, the ellevation was insignificant.

4- The level of serum apoliprotien-A is reduced in all groups of children in comparison to that of control group.

5- Elevation of serum level of LDL cholesterol and apo B in sera of children of parents with myocardial infarction, diabetes mellitus, diabetes mellitus + myocardial infarction and in those with diabetes

mellitus + angina pectoris in comparison to that of control group.

6- No significant difference was detected in serum fructosamine level in sera of children of all group in comparison to that of control group..

7- The level of lipoproteins and apolipoproteins is not significantly affected by the type of food and pattern of milk feeding.