Original Article

Evaluation of Serum Lipid Profile in Patients of Coronary Artery Disease

Lipid Profile in Coronary Patients

Muhammad Shoaib[1], RanaTauqir Ullah Khan[2] and Fouzia Qadir[3]

ABSTRACT

Objective: The objective of this study to evaluate Serum Lipid Profile in Patients of Coronary Artery Disease in Mirpur, AJK.

Study Design: Cross-sectional study

Place and Duration of Study: This study was conducted at the Department of Biochemistry and Community Medicine, Mohtarma Benazir Bhutto Shaheed Medical College, Mirpur, and AJK from January 2019 to July 2019.

Materials and Methods: In this study we select 70 diabetic patients and 30 controls from AJK and Peshawar. We collected blood samples from both groups test and control. We analyzed blood sample for Glucose, High density lipoprotein, low density lipoprotein IDL, Triglyceride and Total cholesterol. We analyzed the sample of both groups' diabetic patients and control by Micro lab 300. We use Merck kit for analysis the sample.

Results: We observed in our study that glucose level in serum is high in Coronary Artery Disease patients as compare to Control. We found that fasting glucose mg/dl level is (96.8 ± 4.2) in Coronary Artery Disease patients while in Control fasting glucose level mg/dl is (98.4 ± 4.9). Lipid profile is also high in Coronary Artery Disease patients as compare to Control. Total cholesterol level in Coronary Artery Disease patients is higher compare to Control. Total cholesterol in Coronary Artery Disease patients is (255.5 ± 12.8) mg/dl and in Control is (193.6 ± 30.5) mg/dl. LDL value Coronary Artery Disease patients is (129.8 ± 22.5) mg/dl and in Control is (116.5± 18.5) mg/dl. HDL value in Coronary Artery Disease patients (56.7± 8.5) mg/dl and in Control is () mg/dl. Total glyceride value inCoronary Artery Disease patients is (189.2 ± 32.5) mg/dl and in Control is (143.3 ± 31.2) mg/dl

Conclusion: We found and conclude that high lipid profile found in in coronary heart disease patients as compare to control. Reduction of lipid profile is reduction of CHD risk.

Key Words: Coronary Artery Disease, Lipid profile, Control

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INTRODUCTION

Morbidity and mortality is caused by Coronary heart disease (CHD) Hyperlipidemia is one of the most important reasons of Coronary heart disease (CHDtransition.[1] Thereare four primary coronary arteries are present on the surface of the heart[2,3] CHD is high ratio in man as compare women.[4,5] Total cholesterol, triglyceride, HDL, LDL are the factors and reasons of cardiovascular disease.[6]

1. Department of Community Medicine, Mohtarma Benazir Bhutto Shaheed Medical College, Mirpur, AJK.
2. Department of Community Medicine, Muhammad College of Medicine, Peshawar.
3. Department of Biochemistry, Northwest School of Medicine, Peshawar.

Correspondence: Dr. Muhammad Shoaib, Senior Lecturer of Community Medicine, Mohtarma Benazir Bhutto Shaheed Medical College, Mirpur, AJK.
Contact No: 0300-9532002
Email: shoaib_ajk@hotmail.com

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Coronary heart disease strongly and inversely, correlated with TG.HDL increase vasoprotective effects. The progression of heart disease are strongly associated with high levels of cholesterol in blood circulation.[7,8] Risk factors of CHD are modifiable and modifiable[9] Lipids and lipoproteins have, their association with CHD, high level of lipid is mostly occurring factor.[10] The objective of this study to evaluate lipid profile in CHD patient Mirpur AJK.

MATERIALS AND METHODS

In this study we select 70 diabetic patients and 30 controls. The study was conducted in the department of Biochemistry and Community Medicine of Mohtarma Benazir Bhutto Shaheed Medical College Mirpur AJK. We collected blood samples from both groups test and control. We analyzed blood sample for Glucose, High density lipoprotein, low density lipoprotein IDL, Triglyceride and Total cholesterol. We analyzed the sample of both groups' diabetic patients and control by Micro lab 300. We use Merck kit for analysis the sample.

RESULTS

We observed in our study that glucose level in serum is high in Coronary Artery Disease patients as compare to

Control. We found that fasting glucose mg/dl level is (96.8 ± 4.2) in Coronary Artery Disease patients while in Control fasting glucose level mg/dl is (98.4 ± 4.9). Lipid profile is also high in Coronary Artery Disease patients as compare to Control. Total cholesterol level in Coronary Artery Disease patients is higher compare to Control. Total cholesterol in Coronary Artery Disease patients is (255.5 ± 12.8) mg/dl and in Control is (193.6 ± 30.5) mg/dl. LDL value Coronary Artery Disease patients is (129.8 ± 22.5) mg/dl and in Control is (116.5± 18.5) mg/dl. HDL value in Coronary Artery Disease patients (56.7± 8.5) mg/dl and in Control is () mg/dl. Total glyceride value in Coronary Artery Disease patients is (189.2 ± 32.5) mg/dl and in Control is (143.3 ± 31.2) mg/dl.

Table No.1: Participant characteristics

	(n=70) Coronary Artery Disease Patients	Control (n=30)
Age (years)	50.4 ± 10.2	50.7 ± 10.6
Male/Female (%)	35/35	15/15
Body weight (Kg)	68.1 ± 11.4	69.4 ± 11.5
BMI (kg/m2)	24.3 ± 2.6	24.4 ± 2.7

Table No.2: Biochemical profile of pregnant women and non-pregnant women

(n=70) Coronary Artery Disease Patients	Control (n=30)
Fasting Blood Glucose (mg/dl)	
96.8 ± 4.2	98.4 ± 4.9
Total Cholesterol (mg/dl)	
255.5 ± 12.8	193.6 ± 30.5
LDL (mg\dl)	
129.8 ± 22.5	116.5± 18.5
HDL (mg\dl)	
56.7± 8.5	42.5 ± 9.2
Triglycerides (mg\dl)	
189.2 ± 32.5	143.3 ± 31.2

DISCUSSION

Morbidity and mortality is caused by Coronary heart disease (CHD) Hyperlipidemia is one of the most important reasons of Coronary heart disease (CHD transition. There are four primary coronary arteries are present on the surface of the heart. In this study we select 70 diabetic patients and 30 controls. The study was conducted in the department of Biochemistry and Community Medicine of Mohtarma Benazir Bhutto Shaheed Medical College Mirpur AJK. We collected blood samples from both groups test and control. We analyzed blood sample for Glucose, High density lipoprotein, low density lipoprotein IDL, Triglyceride and Total cholesterol. We analyzed the sample of both groups' diabetic patients and control by Micro lab 300. We use Merck kit for analysis the sample. Result showed that high cholesterol caused Coronary heart disease.[11] The Framingham result showed, there is association of high cholesterol with Coronary heart disease.[12,13] We observed in our study that glucose level in serum is high in Coronary Artery Disease patients as compare to Control. We found that fasting glucose mg/dl level is (96.8 ± 4.2) in Coronary Artery Disease patients while in Control fasting glucose level mg/dl is (98.4 ± 4.9). Lipid profile is also high in Coronary Artery Disease patients as compare to Control. Total cholesterol level in Coronary Artery Disease patients is higher compare to Control. Total cholesterol in Coronary Artery Disease patients is (255.5 ± 12.8) mg/dl and in Control is (193.6 ± 30.5) mg/dl. LDL value Coronary Artery Disease patients is (129.8 ± 22.5) mg/dl and in Control is (116.5± 18.5) mg/dl. HDL value in Coronary Artery Disease patients (56.7± 8.5) mg/dl and in Control is () mg/dl. Total glyceride value in Coronary Artery Disease patients is (189.2 ± 32.5) mg/dl and in Control is (143.3 ± 31.2) mg/dl

The elevated blood cholesterol levels is decreased by restriction of saturated fat and cholesterol in diet.[14] Coronary heart disease strongly and inversely, correlated with TG.HDL increase vasoprotective effects[15,16,] In the present study, decrease level of cholesterol found in control as compare to CHD patients.[17,18] Moderate LDL-C reduction or conventional treatment.[19] It is important to determine the ratio of LDL-C/HDL-C with the help of this we can determine in populations CVD risk.[20]

CONCLUSION

We found and conclude that high lipid profile found in coronary heart disease patients as compare to control. Reduction of lipid profile is reduction of CHD risk.

Author's Contribution:

Concept & Design of Study:	Muhammad Shoaib
Drafting:	RanaTauqir Ullah Khan
Data Analysis:	Fouzia Qadir
Revisiting Critically:	Muhammad Shoaib, RanaTauqir Ullah Khan
Final Approval of version:	Muhammad Shoaib

Conflict of Interest: The study has no conflict of interest to declare by any author.

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