Original Article

Evaluation of Serum Lipid Profile in Male Hypertensive Population

Lipid Profile in Male Hypertensive

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ABSTRACT

Objective: The objective of this study to evaluate serum lipid profile in Male hypertensive population as compare to control.

Study Design: Cross-sectional study

Place and Duration of Study: This study was conducted at the community of medicine of Muhammad College of Medicine, Peshawar and Department of Biochemistry, Northwest school of medicine, Peshawar from January 2018 to September 2019.

Materials and Methods: Total 200 Male patients were selected male and 100 control health people are selected for the study. Lipid profile (Total cholesterol, HDL, VLDL and triglycerides) was estimated in both groups in male patient and control healthy people. Blood samples were collected from both groups' male hypertensive patient and health people. Samples were analyzed by Micro lab 300 for lipid profile for both groups male hypertensive patient and control .Merck kits were used for analysis of lipid profile in both groups.

Results: In male hypertensive patients the serum lipid profile is higher as compare to control health male except c\HDL which is decreased in hypertensive patients and high in male control which have vasoprotective effect. The mean of total cholesterol (256.5 ± 12.9) is higher in male hypertensive patients as compare to healthy control. The mean of total LDL (mg\dl) (130.8 ± 21.5) is higher in male hypertensive patients as compare to healthy control. The mean of total Triglycerides (mg\dl) (190.2 ± 32.6) is higher in male hypertensive patients as compare to healthy control. The mean of total HDL (mg\dl) (30.6± 8.7) is lower in male hypertensive patients as compare to healthy control.

Conclusion: Male hypertensive patient found high level of serum lipid profile, so at high risk of cardiovascular diseases. It is may be their life style or metabolic system.

Key Words: Serum Lipid profile, male hypertensive population

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INTRODUCTION

Hypertension major risk factors for cardiovascular disease (CVD) are dyslipidemia and Hypertension .Rate of death is high in low- and middle income countries at least 80%.[1, 2]In the developing countries, prevalence of hypertension is increasing globally it in developed countries the rate of death from hypertension is higher as compare to developed countries.[2]High blood levels of low-density lipoprotein (LDL), total cholesterol (TC), and triglycerides (TG) are attached with hypertension and CVD.

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In contrast, a risk factor for mortality from CVD is low level of high density lipoprotein (HDL).[3](Hypertension and coronary artery disease) has established association as Epidemiological studies.[4] 34% is prevalence of hypertension among adult worldwide.[5,6] Major risk factors for CVD are decreased HDL and increased TC, TG, LDL. [7]Reasons of Coronary heart disease in man population isHyperlipidemia.[8,] On the surface of the heart ,there is four primary coronary arteries .[9,10] CHD is high ratio in man as compare women CHD is high in male population.[11,12] Reasons of cardiovascular disease are total cholesterol, triglyceride, HDL, LDL.[13] Vasoprotective effects is increased by HDL, with high levels of cholesterol in blood circulation is associated with progression of heart disease.[14,15] Risk factors of CHD are modifiable.[16] High level of lipid is mostly occurring factor of Hypertension.[17] The objective of this study to evaluate serum lipid profile in Male hypertensive population as compare to control.

MATERIALS AND METHODS

This study is conducted in the department of community medicine of Muhammad College of Medicine, Peshawar and Department of Biochemistry, Northwest school of medicine, Peshawar. It was cross

section–control study. Total 200Male patients were selected male and 100 control health people are selected for the study. Lipid profile (Total cholesterol, HDL, VLDL and triglycerides) was estimated in both groups in male patient and control healthy people. Blood samples were collected from both groups' male hypertensive patient and health people. Samples were analyzed by Micro lab 300 for lipid profile for both groups male hypertensive patient and control. Merck kits were used for analysis of lipid profile in both groups.

Statistical Analysis: SPSS for Windows version 20 (SPSS, Inc., Chicago, IL, USA) was employed for all statistical analyses.

RESULTS

In male hypertensive patients the serum lipid profile is higher as compare to control health male except HDL which is decreased in hypertensive patients and high in male control which have vasoprotective effect. The mean of total cholesterol (256.5 ± 12.9) is higher in male hypertensive patients as compare to healthy control. The mean of total LDL (mg\dl) (130.8 ± 21.5) is higher in male hypertensive patients as compare to healthy control. The mean of total Triglycerides (mg\dl) (190.2 ± 32.6) is higher in male hypertensive patients as compare to healthy control. The mean of total HDL (mg\dl) (30.6± 8.7) is lower in male hypertensive patients as compare to healthy control.

Table No.1: Participant Characteristics

	Male Hypertensive Patients (n=200)	Control (n=100)
Age (years)	51.4 ± 10.2	49.7 ± 10.3
Male	100	100
Body weight (Kg)	68.9 ± 10.8	69.3 ± 11.2
BMI (kg/m2)	24.7 ± 2.6	24.5 ± 2.5

Table No.2: Serum lipid profile in Male hypertensive male patients Control

Male hypertensive Patients (n=200)	Control (n=100)
Fasting Blood Glucose(mg/dl)	
96.8 ± 4.2	98.4 ± 4.9
Total Cholesterol (mg/dl)	
256.5 ± 12.9	192.6 ± 31.5
LDL (mg\dl)	
130.8 ± 21.5	117.5± 18.6
HDL (mg\dl)	
30.6± 8.7	41.5 ± 9.1
Triglycerides (mg\dl)	
190.2 ± 32.6	142.3 ± 31.7

DISCUSSION

In male population Coronary heart disease is caused by high cholesterol. [18] another study showed that high prevalence CHD in male population with hypertension and high serum lipid profile there is association of high cholesterol with Coronary heart disease.[19,20] Hypertension major risk factors for cardiovascular disease (CVD) are dyslipidemia and Hypertension . Rate of death is high in low- and middle income countries at least 80%.In the developing countries, prevalence of hypertension is increasing globally it in developed countries the rate of death from hypertension is higher as compare to developed countries. High blood levels of low-density lipoprotein (LDL), total cholesterol (TC), and triglycerides (TG) are attached with hypertension and CVD. In contrast, a risk factor for mortality from CVD is low level of high density lipoprotein (HDL). (Hypertension and coronary artery disease) has established association as Epidemiological studies. 34% is prevalence of hypertension among adult worldwide. Major risk factors for CVD are decreased HDL and increased TC, TG, LDL. [7]Reasons of Coronary heart disease in man population is Hyperlipidemia. On the surface of the heart, there is four primary coronary arteries. CHD is high ratio in man as compare women CHD is high in male population. Reasons of cardiovascular disease are Total cholesterol, triglyceride, HDL, LDL.

This study is conducted in the department of community medicine of Muhammad College of Medicine, Peshawar and Department of Biochemistry, Northwest school of medicine, Peshawar. It was cross section –control study. Total 200 Male patients were selected male and 100 control health people are selected for the study. Lipid profile (Total cholesterol, HDL, VLDL and triglycerides) was estimated in both groups in male patient and control healthy people. Blood samples were collected from both groups' male hypertensive patient and health people. Samples were analyzed by Micro lab 300 for lipid profile for both groups male hypertensive patient and control .Merck kits were used for analysis of lipid profile in both groups. With high levels of cholesterol in blood circulation is associated with progression of heart disease. Risk factors of CHD are modifiable, high level of lipid is mostly occurring factor of Hypertension. By restriction of saturated fat and cholesterol, high blood cholesterol levels is decreased, with diet. [14]HDL increase vasoprotective effects.[21,22,] In the present study, in male hypertensive patients we found high level of cholesterol as compare to control.[23, 24] In male hypertensive patients the serum lipid profile is higher as compare to control health male except HDL which is decreased in hypertensive patients and high in male control which have vasoprotective effect. The mean of total cholesterol (256.5±12.9) is higher in male hypertensive patients as compare to healthy control. The mean of total LDL (mg\dl) (130.8 ± 21.5) is higher in male hypertensive patients as compare to healthy control. The mean of total Triglycerides (mg\dl) (190.2±32.6) is higher in male hypertensive patients as compare to healthy control. The mean of total HDL (mg\dl) (30.6±8.7) is lower in male hypertensive

patients as compare to healthy control. Moderate LDL-C reduction is best method to reduce hypertension.[25] The ratio of LDL-C/HDL-C help us to CVD risk determine in male population.[26]

CONCLUSION

Male hypertensive patient found high level of serum lipid profile, so at high risk of cardiovascular diseases. It is may be their life style or metabolic system.

Author's Contribution:

Concept & Design of Study:	Rana Tauqir Ullah Khan
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Data Analysis:	Muhammad Irfan Shereen
Revisiting Critically:	Rana Tauqir Ullah Khan, Fouzia Qadir
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Conflict of Interest: The study has no conflict of interest to declare by any author.

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