ORIGINAL ARTICLE

A Comparative Evaluation of Dyslipidemia in Hypertensive and Non-Hypertensive Individuals

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ABSTRACT

The findings of present study showed alogistic regression in the form of significant results of Serum Cholesterol (260±36, 130±16), triglyceride (198±20, 128±10), low density lipoproteins (200±14, 110±11) and High density lipoproteins (29±04, 40±19) levels of hypertensive and non-hypertensive individuals due to difference of systolic and diastolic blood pressure.

Keywords: Dyslipidemia, hypertensive

INTRODUCTION

WHO published that Global Health Observatory (GHO) data shows that high blood pressure causes about 7.5 million deaths annually.Researchers proved through their researches that hypertension is a leading factor for hemorrhagic stroke and cardiovascular diseases (Leone,2011).While different studies have evaluated that number of genetic and environmental risk factors are involved in the raising of blood pressure of an individual (Ruixing et al, 2008). It has concluded by comparing number of researches that age, dyslipidemia, alcohol consumption, high Body Mass Index (BMI), and sodium intake are related with hypertension (Feldstein,2010).

Several previous studies showed the relation between hyperlipidemia and hypertension. An excessive daily intake of saturated fats, cholesterol, and other sources of calories and subsequent disturbance of lipid profile leading to hypertriglyceridemia and hypercholesterolemia are associated with obesity and consequently hypertension (Hall et al, 1999).

Imbalanced mode of action of insulin, increased peripheral resistance; cardiac output, sympathetic tone, and salt congestion are the causes of hypertension. It has proved in many studies directly proportional relationship between hyperlipidemia and hypertension in hypertensive and non-hypertensive cases (Kotsis et al,2010).

MATERIALS AND METHODS

In this study our task was to compare the serum triglyceride, cholesterol, HDL, and LDL levels in hypertensive and non-hypertensive individuals. Total 100 individuals were selected for this study from Jinnah Hospital Lahore. These individuals were divided into two different groups. In Group A, 50 individuals were healthyand non-hypertensive while in Group B, 50 individuals washypertensive.Lipid profile was measured by colorimetric methods in which different kits were used. Raw data was expressed bio- statistically by applying (SPSS).

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RESULTS

Group A: non-hypertensive individuals (Blood pressure range from 120/80 to 130/90) (n= 50)

Biomarkers	Units	Mean ± SD	P value
Cholesterol	mg/dl	130±16	0.00
Triglyceride	mg/dl	128±10	0.00
LDL	mg/dl	110±11	0.00
HDL	mg/dl	40±19	0.00

<0.005

Group B, n= 50, hypertensive individuals (Blood pressure range from 150/100 to 200/120)

Biomarkers	Units	Mean ± SD	P value
Cholesterol	**mg/dl**	**260±36**	**0.00**
Triglyceride	mg/dl	198±20	0.00
LDL	mg/dl	200±14	0.00
HDL	mg/dl	29±04	0.00

<0.005

Serum Cholesterol (260±36, 130±16), triglyceride (198±20, 128±10) , low density lipoproteins (200±14, 110±11), High density lipoproteins (29±04, 40±19) levels of hypertensive and non-hypertensive individuals were showed a significant changes due to difference of systolic and diastolic blood pressure.

DISCUSSION

In different studies it has concluded that lipid profile is correlated with difference of systolic and diastolic blood pressure (Pastucha et al, 2010). The current study was conducted in Jinnah Hospital Lahore comparatively between hypertensive and non-hypertensive individuals. Serum triglyceride, cholesterol, HDL, and LDL levels were seen which has a significant<0.005 changes. Serum Cholesterol levels (260±36,130±16), triglyceride (198±20,128±10), low density lipoproteins (200±14,110±11), High density lipoproteins (29±04,40±19) of hypertensive and non-hypertensive individualswere showed a significant results. In 2008, Lee in their study stated that triglyceride levels in hypertensive patients was high. While the current study showed high levels of LDL as similar to the results of Assmann's and Schulte's study. Therefore this study has similar statistically significant results found in Feldstein, 2010.

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