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ANALYSIS OF RELATIONSHIP OF BLOOD PRESSURE AND HYPERTENSION IN THE RISK ASSESSMENT OF CORONARY HEART DISEASES

Dr Hafiz Muhammad Fahad Nasarullah[1], Dr Sameen Mubashar[2], Dr Jawad ur Rahman[3]
[1]Shalamar hospital, Lahore, [2]Combined Military hospital Tarbela, Swabi,
[3]District Head Quarter hospital, Jhelum

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Abstract:
Introduction: *High blood pressure (BP) is one of the most important risk factors for cardiovascular disease (CVD), which is the leading cause of mortality.*
Aims and objectives: *The main objective of the relationship of blood pressure and hypertension in the risk assessment of coronary heart diseases.*
Methodology of the study: *This study was conducted at Jinnah Hospital Lahore During March 2018 till September 2018. The data was collected from 100 patients which was suffering from high blood pressure and any kind of heart issue. We collect the data in two sections, as first of all we collect some demographic information regarding age, sex, socio-economic status and history of blood pressure.* ***Results:*** *The data was collected from 100 patients. The data shows that there is a significant relationship between hypertension and CVD. There is also some positive relationship between socio-economic status and hypertension with respect to CVD.*
Conclusion: *In conclusion, the current hypertension paradigm does not account for the continuous risk associated with elevated BP or the multifactorial nature of CVD, the primary consequence of elevated BP.*

Corresponding author:
Dr. Hafiz Muhammad Fahad Nasarullah,
Shalamar hospital, Lahore.

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INTRODUCTION:

High blood pressure (BP) is one of the most important risk factors for cardiovascular disease (CVD), which is the leading cause of mortality. Approximately 54% of strokes and 47% of coronary heart diseases, worldwide, are attributable to high BP. Hypertension is a common medical condition; its prevalence increases with age and is estimated to affect 65% of those ≥60-years-old [1]. The global population is aging. By 2030, an estimated 20% of the global population will be ≥65-years-old.[7] Therefore, the impact of high BP on mortality among older adults is expected to grow over the coming decades. Hypertension is a modifiable and major risk factor for coronary artery disease, heart failure, cerebrovascular disease and chronic renal failure. It is also recognized as a global chronic, non-communicable disease and a "silent killer" due to its high mortality rates and lack of early symptoms [2]. One-quarter of the world's adult population is hypertensive, and it is estimated that by 2025 this figure is likely to increase to 29%. These relations are steady in the two people, in youthful, moderately aged, and more seasoned subjects, among different racial and ethnic gatherings, and inside and between nations. In spite of the fact that there is a continuum of cardiovascular hazard crosswise over levels of circulatory strain, the characterization of grown-ups as indicated by pulse gives a system to differentiating levels of hazard related with different circulatory strain classes and for characterizing treatment edges and helpful objectives [3].

As per the grouping approaches created by the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC VI) and the World Health Organization and the International Society of Hypertension (WHO-ISH), non-hypertensive subjects with a systolic weight of 130 to 139 mm Hg or a diastolic weight of 85 to 89 mm Hg are sorted as having high-ordinary pulse [4]. Despite the fact that subjects with high-ordinary circulatory strain are probably going to have a hoisted danger of cardiovascular infection (given the continuum of hazard), there is a scarcity of data in regard to the supreme and relative dangers of cardiovascular ailment in these people [5].

AIMS AND OBJECTIVES:

The main objective of the relationship of blood pressure and hypertension in the risk assessment of coronary heart diseases.

METHODOLOGY OF THE STUDY:

This study was conducted at Jinnah Hospital Lahore During March 2018 till September 2018. The data was collected from 100 patients which was suffering from high blood pressure and any kind of heart issue. We collect the data in two sections, as first of all we collect some demographic information regarding age, sex, socio-economic status and history of blood pressure. Then in second part we collect data regarding high blood pressure and heart issues. For this purpose, we prepare a questionnaire and fill that from patients.

STATISTICAL ANALYSIS:

Two-way ANOVA was performed to study the contributions. A chi-square test was used to examine the difference in the distribution of the fracture modes (SPSS 19.0 for Windows, SPSS Inc., USA).

RESULTS:

The data was collected from 100 patients. The data shows that there is a significant relationship between hypertension and CVD. There is also some positive relationship between socio-economic status and hypertension with respect to CVD. Table 01 shows the value of LDL, HDL, Cholesterol and demographic values of patients.

Table 01: Statistical analysis values of Control group and diseased group

Variable	Diseases Group	Control Group	t Value	*p* Value
Age（Year）	56.56±8.46	53.64±8.36	1.716	0.081
BMI（kg/m2）	24.31±2.26	23.37±2.09	2.195	0.031
SBP（mmHg）	140.36±15.70	116.53±13.46	8.248	0.000
DBP（mmHg）	87.94±10.69	75.81±9.94	5.967	0.000
PP（mmHg）	52.42±12.87	40.72±8.74	5.426	0.000
FBG（mmol/）	5.12±0.65	5.06±0.49	1.764	0.081
TG（mmol/L）	1.74±0.75	1.69±0.86	1.838	0.071
TC（mmol/L）	4.95±0.76	4.88±0.82	1.712	0.090
HDL-	1.30±0.43	1.31±0.56	1.717	0.089
LDL-C	3.46±0.58	3.38±0.66	1.139	0.266

DISCUSSION:

Many studies have investigated the different effects of BP on mortality in the oldest old group; however, the optimal BP for individuals aged≥80 years remains uncertain. The randomized clinical trial HYVET demonstrated the benefits of antihypertensive treatment for individuals aged≥80 years with SBP≥160mm Hg [6]. However, a lower BP may be partially related to poor general health in the oldest old group and may be associated with an increased risk of death. Some studies have observed that a higher BP was not associated with increased mortality in the oldest old, and some have even found that a higher BP was associated with better survival [7]. The National Health Survey of Pakistan estimated that hypertension affects 18% of adults and 33% of adults above 45 years old. In another report, it was shown that 18% of people in Pakistan suffer from hypertension with every third person over the age of 40 becoming increasingly vulnerable to a wide range of diseases [8].

Our approach to understand disease development in early life, identify key pathways of interest in predisposition to hypertension and develop specific preventive approaches has been to use multi-modality imaging to capture information on cardiovascular structure and function 'from heart to capillary'. With this approach it becomes possible to model the interrelationship between features of the cardiovascular system and, with longitudinal data, study the progression of disease across vessel and heart. By extending the data collection to other organs such as brain and liver, a holistic view of disease development can be captured [9].

High blood pressure was the leading risk factor for the overall global burden of disease in 2010. The recent decrease in cardiovascular mortality in high-income countries has been associated with a rise in the numbers of patients living with cardiovascular disease, and the wider use of preventive drugs [10]. Thus, an up-to-date understanding of the associations of blood pressure with different non-fatal and fatal cardiovascular disease outcomes would help to refine strategies for primary prevention and inform the design of future clinical trials [11].

CONCLUSION:

In conclusion, the current hypertension paradigm does not account for the continuous risk associated with elevated BP or the multifactorial nature of CVD, the primary consequence of elevated BP.

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