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Research Article

Impact of blood pressure and hypertension in the risk assessment of heart diseases among young people

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ABSTRACT

Introduction: Hypertension is a significant public health problem, with a worldwide prevalence of 40.8% and a control rate of 32.3. Hypertension is a noteworthy hazard factor for various genuine health conditions, including cardiovascular ailment, cerebrovascular malady, and constant kidney illness. **Objectives of the study:** The main objective of the study is to find the effect of blood pressure and hypertension in the risk assessment of heart diseases among young people.**Methodology of the study:** This study was conducted at Islam teaching hospital and Victoria hospital Bahawalpur, Pakistan. This study was conducted according to the rules and regulations of ethical committee of hospital. This research will help towards next findings of effect of blood pressure in hypertension and cardiovascular diseases.**Results:** 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.

Key words: Hypertension, CVD, Disease, Blood Pressure

INTRODUCTION

Hypertension is a significant public health problem, with a worldwide prevalence of 40.8% and a control rate of 32.3. Hypertension is a noteworthy hazard factor for various genuine health conditions, including cardiovascular ailment, cerebrovascular malady, and constant kidney illness[1]. Worldwide, 9.4 million passing are credited to difficulties from hypertension, including 45% of all passing because of coronary vein illness and 51% of all passing because of stroke[2]. 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)[4], 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[5].

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 regards to the supreme and relative dangers of cardiovascular ailment in these people[6]. In spite of the fact that information on deadly coronary occasions and strokes in people with high-typical circulatory strain are accessible, data on the danger of nonfatal cardiovascular occasions among individuals in this pulse class is restricted. We attempted a planned examination of the danger of cardiovascular sickness in people with high-typical pulse[7].

Background of the study

Elevated blood pressure (BP) is a causal risk factor for cardiovascular disease (CVD). In addition, randomized clinical trials among people with hypertension have illustrated, in total, a decrease in CVD occasions by 20%, coronary illness (CHD) by 17%, stroke by 27%, and heart disappointment by 28% for each 10 mm□Hg systolic BP (SBP) bringing down with medicinal treatment. In this manner, counteractive action, location, treatment, and control of lifted BP, and its clinical connect hypertension, is a critical general health need and an essential focus for CVD aversion[8].

Objectives of the study

The main objective of the study is to find the effect of blood pressure and hypertension in the risk assessment of heart diseases among young people.

Methodology of the study

This study was conducted at Islam teaching hospital and Victoria hospital Bahawalpur, Pakistan. This study was conducted according to the rules and regulations of ethical committee of hospital. This research will help towards next findings of effect of blood pressure in hypertension and cardiovascular diseases.

Data collection

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

Student's t-test was performed to evaluate the differences in roughness between group P and S. 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 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

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’[9]. 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[10].

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.

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].

The Prospective Studies Collaboration meta-analysis of 61 cohorts recruited between 1950 and 1990 reported log-linear associations of systolic and diastolic blood pressure with death from ischaemic heart disease and stroke, with no apparent threshold below which no further reduction in risk is observed, down to a blood pressure of 115/75 mm Hg, in participants aged 40–89 years[12].These findings predated several public health initiatives, including efforts to reduce salt consumption and tobacco use, and the more widespread use of blood pressure-lowering treatments for primary prevention, and did not provide information about major chronic and non-fatal diseases, including heart failure, peripheral arterial disease, abdominal aortic aneurysm, and stable angina[13]. Importantly, no current estimates are available for the lifetime incidence and years of life lost associated with hypertension attributable to specific cardiovascular diseases. Although in previous studies investigators have estimated the associations of cardiovascular disease risk factors with lifetime risks[3] or cardiovascular disease-free years of life lost, their focus was on total cardiovascular disease, with only one study so far to have analyzed the incidence of specific cardiovascular diseases in a competing risks context[14].

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. It was also mentioned that only 50% of the people with hypertension were diagnosed and that only half of those diagnosed were ever treated. Thus, only 12.5% of hypertension cases were adequately controlled.[6] Some remote areas like Balochistan, there is a paucity of data but the control rate is likely to get even worse[15].

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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