

PREVALENCE OF HYPERTENSION IN DIABETIC PATIENTS IN LADY READING HOSPITAL PESHAWAR (N.W.F.P.) PAKISTAN

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ABSTRACT

Hypertension is a common medical problem. It has been estimated that nearly more than 38 million people worldwide suffered from hypertension. It is also known as silent killer. It is a multi system disorder leading to various organs failure and significant mortality and morbidity. During this study, the prevalence of hypertension in diabetic patients and the factors affecting the development of hypertension was carried out in Lady Reading Hospital(LRH) Peshawar, N.W.F.P.,Pakistan. For this, a total of 500 male patients admitted in LRH Peshawar were included and the data was collected on study designed proforma. Variables were selected to know the prevalence of hypertension in diabetic subjects e.g. serum raised cholesterol level, serum raised Na⁺ level, proteinuria and Electrocardiogram (ECG). It was found that the prevalence of hypertension was higher in diabetic patients. Those patients suffering from diabetes have high prevalence of developing hypertension. Out of the 500 patients, 289 (57.7%) were found to be suffering from hypertension. Of the total 289 hypertension suffering patients, 167(57.8%) were found to have raised cholesterol level, 176(60.8%) were having raised Na⁺ level and 135 (46.78%) were found to suffering from proteinuria. Out of 289 patients, 140(48.5%) were found to have ECG abnormalities. This study shows that raised sodium level, raised cholesterol level and proteinuria were strongly associated with the development of hypertension and stroke was prevalent as a complication of hypertension. The ECG changes were also not statistically significant, as an indicator of hypertension in diabetic subjects. It can be concluded from this study that diabetes mellitus and hypertension frequently occur together. Possible factors in causing hypertension in diabetic patients were raised cholesterol level, raised sodium level and proteinuria. Diabetic patients were also at risk of developing complications like stroke. It can be suggested that development of hypertension as a complications diabetes can be prevented if certain modifications are added in the daily life routine of such patients, such as better control of diabetes, low sodium intake and low lipid intake, daily exercise and regular check up of blood pressure.

INTRODUCTION

Hypertension is an indicator that the force required for blood flow is greater than the normal. According to the new 6th report of the Joint National Committee (JNC VI) on detection, evaluation and treatment of high blood pressure, a blood pressure measurement of less than 130/85 is considered "normal" while 130-140/85-90 is defined as "high normal". The upper normal level of blood pressure is 140/90 mmHg and above this value, the blood pressure constitutes hypertension. Hypertension puts the heart and arteries under greater strain than normal. The heart becomes enlarged and the arteries can become scarred and less elastic, increasing the risk of heart attack or stroke. The treatment of hypertension is long

life, in order to avoid complications like narrowing of blood vessels (Boon and Fox, 1995; Ferrario, 2002). When either one or both pressures rise, the heart and blood vessels work harder to pump the blood through the system. Over time, this can cause major complications such as heart attack, atherosclerosis of the arteries, stroke, kidney failure and congestive heart failure. The higher the blood pressure, the sooner the complications will develop unless hypertension is treated. Additional factors that may hasten complications caused by high blood pressure include smoking, diabetes and high cholesterol (Ferrario, 2002; Kumar and Clark, 1999; Basir *et al.*, 2001).

There are two types of hypertension;