

Study of Clinical Profile in Hypertensive Patients



Medical Science

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ABSTRACT

Background: Hypertension is recognized as the most common cardiovascular disorder and a leading cause of morbidity and mortality in both developed and developing countries.

Objectives: We carried out an observational study in 100 of hypertensive geriatric patients (age >60 years) at our medical college to assess clinical profile of hypertensive patients.

Materials and Methods: The present study was carried out on a total of 100 hypertensive patients attending our tertiary care Hospital and 100 age and sex matched healthy controls.

Results: Maximum incidence of hypertension was noticed in the age group 42-49 years. Male to female ratio was 2.3:1. The hypertensive subjects were significantly heavier than the normotensive subjects. All three factors (education, labour market status and income) also influence a patient's lifestyle and health behaviour. Studies of hospital populations have shown associations between low SES and higher prevalence of hypertension, poorer BP control and higher mortality rate.

Conclusions: A correlation was attempted with various clinical parameters like age, gender and lipid fractions and socioeconomic status

INTRODUCTION

Hypertension which is defined as blood pressure of equal to or greater than 140/90mmHg has been recognized as the most common cardiovascular disorder and a leading cause of morbidity and mortality in both developed and developing countries. Hypertension has been recognized as one of ten leading reported causes of death with about 4% of such deaths due to hypertensive complications.

Stage 1 hypertension: Clinic blood pressure is 140/90 mmHg or higher and subsequent ambulatory blood pressure monitoring (ABPM) daytime average or home blood pressure monitoring (HBPM) average blood pressure is 135/85 mmHg or higher. **Stage 2 hypertension:** Clinic blood pressure is 160/100 mmHg or higher and subsequent ABPM daytime average or HBPM average blood pressure is 150/95 mmHg or higher. **Severe hypertension:** Clinic systolic blood pressure is 180 mmHg or higher or clinic diastolic blood pressure is 110 mmHg or higher.

Essential hypertension has been appropriately called the silent killer because it is usually asymptomatic and undetected. Uncontrolled hypertension can cause damage to all organs of body. Recent reports show that borderline hypertension (systolic BP 130-139 and/or diastolic BP 85-89 mmHg) and Stage I hypertension carry a significant cardiovascular risk and there is a need to reduce this blood pressure. The reported prevalence of hypertension varies around the world, with the lowest prevalence in rural India (3.4% in men and 6.8% in women) and highest in Poland (68.9% in men and 72.5% in women). It has been found that men have a higher prevalence of hypertension than women although this changes later in life with substantial increase in the number of females with hypertension after the age of 50 years. Hypertensive subjects frequently have higher cholesterol levels than normotensive subjects.

BP depends on cardiac output and the total peripheral vascular resistance. If the peripheral vascular resistance is high, the heart has to work harder to pump blood through the arteries, which consequently raises BP. If BP in the arteries is chronically elevated the condition is called hypertension. 35, 36 In 95% of all cases of hypertension the underlying cause of increased peripheral vascular resistance cannot be determined, although genetics, birth weight and lifestyle factors could play a role in essential hypertension. The remaining 5% of hypertension cases, known as secondary hypertension, are caused by renal, renal-vascular or adrenal diseases.

METHODS AND MATERIAL

This prospective study carried out at our hospital of the our city. Clearance from the ethical

committee and written consent from all the participants of the study were obtained. A total number of 100 human subjects of age ranging from 42-50 years were included in this study. Newly diagnosed subjects with confirmed hypertension by taking at least two readings of blood pressure first at the time of examinations, and second 15 minutes apart after taking the first reading were included in our study. History of any systemic illness, History of diabetes mellitus, History of any diseases or symptoms or signs having cardiac, vascular or neurological involvement were taken for study. Measurement of height, weight and calculation of body mass index. Funduscopic examination for hypertensive retinopathy. While the reproducibility of office funduscopic findings is poor, there are clinical findings that guide important clinical decisions. Examination of the neck for distended veins or an enlarged thyroid gland. Examination of the heart for abnormalities in rate and rhythm, increased size, precordial heave, clicks, murmurs, and third and fourth heart sounds. Examination of the lungs for rales and evidence of bronchospasm. Examination of the abdomen for renal or abdominal aortic bruits, enlarged kidneys, masses and abnormal aortic pulsation. Examination of the extremities for diminished or absent peripheral arterial pulsations, bruits and edema. Neurological assessment was done in all the patients.

RESULTS

There were 62 male patients and 38 female patients. The average age of study groups was 47.21 years. Maximum incidence of hypertension was noticed in the age group 40-49 years. Male to female ratio was 2.3:1.

1 Demographic Data n=100

Age	40-49 years
Male	62
Female	38
Weight	High BMI

2 Duration of Hypertension

	Male	Female
Duration	2-3 years	2-4 years
Intake of sodium	high	high
Physical activity	positive	Less active

Psychosocial stress	present	present
Family history	positive	Positive
Diabetes	Not specific	Not specific
smoking	present	Absent
Dyslipidemia	Not Specific	Not Specific
Cerebrovascular disease	Not specific	Not specific
Treatment	Taken	Taken

DISCUSSIONS

This study has shown that the prevalence of Hypertension is highest in age group 40-49 years of Males and Females. Several studies in both developed and developing countries have consistently shown a positive relationship between age and blood pressure.

Medical History The history should focus on modifiable lifestyle factors including weight change, dietary intake of sodium and cholesterol, level of physical activity, psychosocial stressors and patterns of alcohol, recreational drug and tobacco use. Determine all medications being used – including herbal supplements, over-the-counter, prescription and recreational drugs – as many agents may temporarily elevate blood pressure and/or adversely affect blood pressure control. Determine if there is a family history of hypertension, cardiovascular disease, cerebrovascular disease, diabetes mellitus and dyslipidemia in first- or second-degree relatives, and document if there is. Assess for symptoms and signs of target organ damage and secondary hypertension via a directed history and focused examination. Maximum of 100 meq/L day (2.4 g sodium or 6 gms sodium chloride) Weight loss Reduce to and/or maintain normal body weight (e.g. Body Mass Index, 18.5-24.9 5-20 mm Hg per 10-kg wt loss

Physical examination The initial physical examination should include the following in order to accurately stage hypertension, assess target organ damage and search for signs of secondary causes of hypertension: • Two or more blood pressure measurements separated by at least one minute with the patient seated with back supported, feet flat on the floor and upper arm supported at the level of the mid-sternum. The relationship between BP and risk of CVD events is continuous, consistent, and independent of other risk factors. The higher the BP, the greater is the chance of heart attack, heart failure, stroke, and kidney disease. For individuals 40 to 70 years of age, each increment of 20 mm Hg in systolic BP or 10 mm Hg in diastolic BP doubles the risk of CVD across the entire BP range from 115/75 to 185/115 mm Hg. Observational data show the risk of cardiovascular events and mortality doubling with 20 mm Hg increases in SBP and 10 mm Hg increases in DBP beginning with a BP of 115/75 mm Hg. The relative risk increases are similar but absolute risk is higher for persons with diabetes mellitus or chronic kidney disease. Where possible, recommend treatment with drugs taken only once a day. Prescribe non-proprietary drugs where these are appropriate and minimize cost. Offer people with isolated systolic hypertension (systolic blood pressure 160 mmHg or more) the same treatment as people with both raised systolic and diastolic blood pressure

Step 1 Treatment Offer people aged under 55 years step 1 antihypertensive treatment with an angiotensin-converting enzyme (ACE) inhibitor or a low-cost angiotensin-II receptor blocker (ARB). If an ACE inhibitor is prescribed and is not tolerated (for example, because of cough), offer a low-cost ARB. Do not combine an ACE inhibitor with an ARB to treat hypertension. Offer step 1 antihypertensive treatment with a calcium-channel blocker (CCB) to people aged

over 55 years and to black people of African or Caribbean family origin of any age. If a CCB is not suitable, for example because of oedema or intolerance, or if there is evidence of heart failure or a high risk of heart failure, offer a thiazide-like diuretic. If diuretic treatment is to be initiated or changed, offer a thiazide-like diuretic, such as chlortalidone (12.5–25.0 mg once daily) or indapamide (1.5 mg modified-release once daily or 2.5 mg once daily) in preference to a conventional thiazide diuretic such as bendroflumethiazide or hydrochlorothiazide. For people who are already having treatment with bendroflumethiazide or hydrochlorothiazide and whose blood pressure is stable and well controlled, continue treatment with the bendroflumethiazide or hydrochlorothiazide. Beta-blockers are not a preferred initial therapy for hypertension. However, beta-blockers may be considered in younger people, particularly those with an intolerance or contraindication to ACE inhibitors and angiotensin II receptor antagonists or Women of child-bearing potential or People with evidence of increased sympathetic drive. If therapy is initiated with a beta-blocker and a second drug is required, add a calcium-channel blocker rather than a thiazide-like diuretic to reduce the person's risk of developing diabetes.

Step 2 Treatment If blood pressure is not controlled by step 1 treatment, offer step 2 treatment with a CCB in combination with either an ACE inhibitor or an ARB. If a CCB is not suitable for step 2 treatment, for example because of oedema or intolerance, or if there is evidence of heart failure or a high risk of heart failure, offer a thiazide-like diuretic. For black people of African or Caribbean family origin, consider an ARB* in preference to an ACE inhibitor, in combination with a CCB. Choose a low-cost ARB.

Step 3 Treatment Before considering step 3 treatment, review medication to ensure step 2 treatment is at optimal or best tolerated doses. If treatment with three drugs is required, the combination of ACE inhibitor or angiotensin II receptor blocker, calcium-channel blocker and thiazide-like diuretic should be used.

Step 4 Treatment Regard clinic blood pressure that remains higher than 140/90 mmHg after treatment with the optimal or best tolerated doses of an ACE inhibitor or an ARB plus a CCB plus a diuretic as resistant hypertension, and consider adding a fourth antihypertensive drug and/or seeking expert advice for treatment of resistant hypertension.

Conclusion-

A correlation was attempted with various clinical parameters like age, gender and lipid fractions and socioeconomic status in hypertensive patients

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