

Review Article on Hypertension

Omkar Pathak¹, Gaurav Mahajan² and Nandkishor Bankar³

¹*1st year MBBS at Datta Meghe Medical College Nagpur, India*

²*Department of General Medicine Datta Meghe Medical College, Nagpur, India*

³*Department of Microbiology Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Sciences Sawangi (Meghe), Wardha, India*

Corresponding author email: drbankarnj28@gmail.com

ABSTRACT

Hypertension is increase in the systolic blood pressure which occurs mainly due to high sodium uptake, stress, high cholesterol, hormonal imbalance, smoking, drinking, overweight and sometimes genetics also become a reason. Chronic Hypertension can cause heart attack, kidney diseases, blindness (reversible, irreversible), diabetes and short temperedness. Hypertension was shown to be more common as people got older, rising from 7.5 percent among those aged 18–39 to 33.2 percent among those aged 40–59, and 63.1 percent among those aged 60.

KEY WORDS: HYPERTENSION, HYPERTENSION CAUSES, HYPERTENSION LONG TERM EFFECTS, AFFECTED AGES.

INTRODUCTION

For any cardiologist, internist, or nephrologist interested in hypertension, this is the most comprehensive resource available today. Using expertise in cardiology, metabolism, and nephrology from around the world. Hypertension builds up over time, like a ticking time bomb, putting undue pressure on the body until it explodes—in heart attacks, strokes, kidney failure, arterial disease, and even death. However, the disease does not have to develop in this manner. Hypertension is a common, chronic, age-related condition that frequently results in devastating cardiovascular and renal consequences. Hypertension is linked to the development of ischemic heart disease, heart failure, stroke, and chronic renal disease; hypertension is thought to be responsible for 57 percent and 24 percent of stroke and coronary artery disease-related deaths, respectively (Chaturvedi S et al., 2007).

Causes :

- high sodium uptake
- Stress,
- high cholesterol,
- hormonal imbalance,
- smoking,
- drinking,
- overweight
- sometimes genetics also become a reason.

Many studies in India have reported the prevalence of hypertension across various geographic, vocational, and linguistic groups since the early 1950s. A national survey was carried out across 24 Indian states and union territories, with fixed one-day blood pressure measuring camps. A systolic blood pressure (BP) of 140 mmHg or a diastolic BP of 90 mmHg was defined as hypertension, as was being on hypertension medication. The prevalence was age- and gender-standardized, according to the 2011 India population census (Patel S et al., 2020). This article, which covers the many stages of inquiry and definitive management and assists clinical decision-making by gathering all pertinent facts and recommendations in one conveniently accessible spot, is a vital tool for everyday use in hypertension management.

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DISCUSSION

The patient is a 62-year-old woman with prediabetes who comes in for her annual physical. She doesn't have any complaints. Her right arm's average BP is 143/88, based on two readings. Except for her weight, her physical examination is uneventful. She's never had a heart attack, a stroke, kidney illness, or heart failure. She takes her blood pressure at home after the visit and returns a month later. Multiple clinic and home tests yielded an average blood pressure of 138/86. Her total cholesterol is 260 milligrammes per deciliter, HDL is 42 milligrammes per deciliter, and LDL is 165 milligrammes per deciliter. She does not smoke cigarettes (Riddle MC et al., 2013).

The woman has type 1 hypertension, which is the cause of her hypertension. If the 10-year risk of ASCVD is 10% or greater, the new advice supports treating persons with stage 1 HTN who have no documented atherosclerotic cardiovascular disease (ASCVD) with blood pressure-lowering medications. Based on her age, gender, race, lipid profile, and other risk factors, the ACC/AHA Pooled Cohort Equations tool predicts her 10-year risk to be 10.5 percent. She would benefit from a blood pressure medication. Because they reduce the risk of clinical events, thiazide diuretics, angiotensin converting enzyme (ACE) inhibitors, angiotensin II receptor blockers (ARBs), and calcium channel blockers are the first-line therapies for HTN. We can infer from the above case, age can be a major factor causing higher blood pressure apart from stress levels. In industrialised countries, an increase in blood pressure (BP) has long been assumed to be an unavoidable consequence of ageing, leading to hypertension in a large proportion of old people. The patient was not obese nor had any history of cardiac issues. The patient has stage 1 hypertension. A systolic pressure of 130 to 139 mm Hg or a diastolic pressure of 80 to 89 mm Hg is considered stage first hypertension. (Elisabete Pinto et al., 2007).

Does blood pressure inevitably increase with age?? Generally it is observed that hypertension occurs in aged people living in urbanised society. In villages such cases of hypertension are found to be rare. This is mainly because of the diet and the physical work levels. Also it is noticed that the people who migrated to urban areas had increase in the blood pressure, no matter young or old. Cause identified is salt rich diet (Lima R et al., 2012).

Is there a relation of increased BP with gender?? Premenopausal women's blood pressure is usually lower than men's. Women, on the other hand, have a higher incidence of hypertension after menopause than men. After Menarche there is secretion of hormone estrogen in women which prevents heavy blood pressure levels and heart diseases. Hypertension is a major risk factor for aged men. (Petrie JR et al., 2018)

Hypertension and diabetes: Hypertension is twice as common in diabetic people as it is in non-diabetic ones. Furthermore, persons with hypertension are more

likely to develop insulin resistance and diabetes than persons with normal blood pressure. Cardiovascular disease, which is aggravated by hypertension, is the primary cause of morbidity and mortality in diabetics. Endothelial dysfunction, vascular inflammation, arterial remodelling, atherosclerosis, dyslipidemia, and obesity are all risk factors for both diabetes and hypertension (Petrie JR et al., 2018).

Prevention: Hypertension prevention steps include engaging in physical activities, controlled sodium intake, cutting down alcohol intake, reducing smoking, meditations, losing weight.

Treatment

- The way hypertension is treated differs greatly from one doctor to the next. This pocketbook provides a concise and evidence-based summary of current knowledge and practice in hypertension therapy, including the most recent national guidelines and recommendations.
- Beta blocking medicines lower blood pressure by slowing heart rate and blood output. Diuretics assist the body excrete excess water and sodium.
- Vasodilators, ACE inhibitors, angiotensin-converting enzyme inhibitors, and calcium-channel blockers all work by relaxing constricted blood vessels (Loh YC et al., 2016).

A number of studies have been published on hypertension and related health complications (Dixit 2020 & Badwaik, R. G 2008). Gaikwad et. al. reported a study of nitrosative stress in 'pregnancy induced hypertension. Papalkar et. al. reported on heterotaxy syndrome presenting as severe pulmonary artery hypertension. Related studies on diagnosis and management of hypertension were reviewed.

CONCLUSION

Hypertension should not only be considered due to stress, It is basically the condition which is resulted by increased blood pressure in which numerous factors are involved. More aged are more susceptible to hypertension. Hypertension is more prevalent in males and females after their menopause also Hypertension is strongly associated with diabetic patients too. A good diet is recommended.

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