

Challenges to Modern Medicine to Treat the Hypertension Disease

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Abstract

To diagnose high blood pressure, your health care provider examines you and asks questions about your medical history and any symptoms. Your provider listens to your heart using a device called a stethoscope. Your blood pressure is checked using a cuff, usually placed around your arm. It's important that the cuff fits. If it's too big or too small, blood pressure readings can vary. The cuff is inflated using a small hand pump or a machine. The type of medicine used to treat hypertension depends on your overall health and how high your blood pressure is. Two or more blood pressure drugs often work better than one. It can take some time to find the medicine or combination of medicines that works best for you.

Keywords: Stethoscope • Blood pressure • Combinational medicine • Medication

Introduction

Cardiovascular disease is one of the primary causes of death in adults, as well as a major cause of morbidity. Hypertension is one of the most important modifiable risk factors for cardiovascular disease, and it is the most common non-communicable disease in India, accounting for about 10% of all fatalities. Adult hypertension has increased considerably in prevalence over the last three decades, from 5% to 20-40% in urban regions and 12-17% in rural areas.

Primary (essential) hypertension and secondary hypertension are the two types of hypertension; roughly 90-95 percent of cases are classified as "primary hypertension," which is high blood pressure without a clear underlying medical cause. Primary hypertension, also known as essential hypertension, is a genetic condition with susceptibility growing as one's environment changes. Other disorders that affect the kidneys, arteries, heart, or endocrine system produce the remaining 5-10% of cases (secondary hypertension). Secondary hypertension, on the other hand, arises when a patient has no family history of hypertension and there are no evident causes for a diagnosis.

Literature Review

Benign high blood pressure is essential hypertension that has been present for a long time and is asymptomatic. This type of high blood pressure is distinguished by the phrase benign from the more aggressive and rapidly developing accelerated hypertension, also known as malignant hypertension. If left untreated, malignant high blood pressure becomes increasingly acute and severe, eventually leading to stroke, heart attack, or heart failure. Pathologists coined the term "malignant hypertension" to describe patients who had acute target organ injury with fibroid necrosis of the arterial wall.

In contrast to rapid hypertension, benign elevated blood pressure is slow

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moving and less harmful. It can lay latent in people who aren't aware of it for years. In many populations, it is actually more common than malignant hypertension. The HLs form describes a patient who has been diagnosed with primary hypertension, which was previously controlled for a period of time, but whose blood pressure has now risen despite no changes in medicine or lifestyle. The patient's blood pressure gradually rises, eventually reaching exceptionally high levels of 240 mmHg/120 mmHg in a short period of time.

Even a moderate increase in arterial blood pressure is linked to a shorter lifespan. Although dietary and lifestyle adjustments can improve blood pressure regulation and reduce the risk of associated health issues, medication treatment may be required in persons who find lifestyle changes ineffective.

In the pathophysiology of essential hypertension, there appears to be a strong familial and genetic tendency, as well as a variety of modifiable predisposing variables. In connection studies with hypertension, more than 50 genes have been studied, and the number is constantly expanding. The angiotensinogen (AGT) gene is one of these genes. It was discovered that raising the amount of AGT raises blood pressure, which could lead to hypertension. In the previously published Genome Wide Association Study, SNPs were enriched for variants linked with obesity, type 2 diabetes, coronary heart disease, and kidney function in single variant testing, indicating that genetic loci related to blood pressure contribute to cardiovascular outcomes [1-5].

Discussion

If you think you may have high blood pressure, make an appointment with your health care provider for a blood pressure test. You might want to wear a short-sleeved shirt to your appointment so it's easier to place the blood pressure cuff around your arm. No special preparations are necessary for a blood pressure test. To get an accurate reading, avoid caffeine, exercise and tobacco for at least 30 minutes before the test. Because some medicines can raise blood pressure, bring a list of all medicines, vitamins and other supplements you take and their doses to your medical appointment. Don't stop taking any medicines without your provider's advice. Appointments can be brief. Because there's often a lot to discuss, it's a good idea to be prepared for your appointment. Here's some information to help you get ready.

Conclusion

The most important element in the management of high blood pressure is follow-up care; after starting high blood pressure drug therapy, you should see your doctor at least once a month until the blood pressure goal is reached. Once or twice a year, your doctor may check the level of potassium in your

blood (diuretics can lower this, and ACE inhibitors and ARBs may increase this) and other electrolytes and BUN/creatinine levels (to check the health of the kidneys). After the blood pressure goal is reached, you should continue to see your doctor every 3 to 6 months, depending on whether you have other diseases such as heart failure. If you have diabetes or have had a heart attack or stroke, you'll need to keep a closer watch on your blood pressure to prevent recurrent events. Check with your doctor about what blood pressure readings you should be aiming for. With aging and hardening of the arteries, your systolic blood pressure may creep up. A treatment that once worked well may no longer work. Your drug dosage may need to be changed, or you may be prescribed a new medication. Periodically, at your follow-up visits, you should be screened for damage to the heart, eyes, brain, kidney, and peripheral arteries that may be related to high blood pressure. Follow-up visits are a good time to let your doctor know about any side effects you're having from your medication. They will have suggestions for coping with side effects or may change your treatment.

Acknowledgement

None.

Conflict of Interest

None.

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