

# Efficacy of Homoeopathic Remedies in Essential Hypertension

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Hypertension, referred to as high blood pressure, HTN or HPN, is a medical condition in which the blood pressure is chronically elevated. Hypertension is defined as systolic blood pressure (SBP) of 140 mm Hg or greater, diastolic blood pressure (DBP) of 90mmHg or greater or taking antihypertensive medication. As a matter of fact hypertension itself is not a disease in itself but it is one of the indicators alarming a person to take care of probable emergency.<sup>13</sup>

Essential hypertension remains a major modifiable risk factor for cardiovascular disease despite important advances in our understanding of its pathophysiology and the availability of effective treatment strategies. High blood pressure (BP) increases the risk of CVD for millions of people worldwide, and there is evidence that the problem is only getting worse. In the past decade, age-adjusted rates of stroke incidence have risen, and the slope of the age-adjusted rate of decline in coronary disease has leveled off. The incidence of end-stage renal disease and the prevalence of heart failure have also increased. A major contributor to these trends is inadequate control of BP in the hypertensive population.<sup>3</sup>

Homoeopathy has a lot of potential to help in reducing the proportion of the hypertensive population in the community, and thereby make a contribution in reducing overall cardiovascular mortality levels. The holistic nature of homoeopathy is ideally suited for this, as even the practitioners of allopathic medicine are realizing the fallacy in treating the blood pressure or other risk factors in isolation. The cheaper cost of treatment also makes it a more attractive option at the community level.<sup>6</sup>

## Interpretation and conclusion:

The above study has shown that:

Homoeopathic medicines have a positive effect on the hypertensive status of the patients.

The prevalence of Hypertension in the age group below 50 years is not uncommon.

Hypertension can be treated best before becoming chronic and it should be patient oriented rather than disease oriented.

Hypertension can best be treated at "prehypertensive stage"

Patients respond well to the constitutional remedy than to a specific remedy like *Rawulfia*, *viscum alb* or *strophanthus*.

The following study was undertaken to see the effects of Homoeopathic remedies in Essential Hypertension at clinical research unit, at A.M.Shaikh Homoeopathic Medical College and research centre Belgaum. The patients of Secondary Hypertension and the age group above 60years are excluded from the study.

## INTRODUCTION

The development of the circulatory tree in superior animals brought about problems of "flow direction" (from arteries to veins) and of pressure regulation within, in the light of the different possible kinds of damage it is exposed to.

To this end vessels have been provided with sensors able to perceive pressure changes, baroreceptors, chemoceptors, renal renin/angiotensin/aldosterone system, in order to interpret them, to forward them to bulbar regulation nervous centres and from these to the heart and vessels through the parasympathetic and sympathetic pathways. Indeed, since arterial pressure results from the heart output multiplied by vascular resistance, its maintenance at physiological values under normal conditions results from a compensation of both parameters.

#### DEFINITION:

The term arterial hypertension defines a clinical condition in which pressure values at rest are higher compared to values that are conventionally accepted as normal: 120 mmHg for systolic pressure and 80 mmHg for diastolic pressure.<sup>33</sup>

The WHO and the International society of Hypertension has defined hypertension as "a systolic blood pressure of 140 mm Hg. or greater, or a diastolic blood pressure of 90 mm Hg. or greater in subjects who are not taking anti-hypertensive medication". This traditional level of hypertension is a pragmatic one, based on evidence of treatment benefit, balanced against side effects and cost of treatment. Indeed hypertension can be defined as blood pressure levels above which treatment does more good than harm. Various organizations have classified blood pressure into different levels of severity.<sup>6</sup>

#### AIMS AND OBJECTIVES OF STUDY:

The main objective of the above study was:

To know the incidences of Essential Hypertension at the age group below 50 years age.

To know the efficacy of Homoeopathic remedies in Essential hypertension,

To treat the patients of essential hypertension below the age group of 50 years with well selected constitutional homoeopathic remedies,

To help the patients at prehypertensive stage and

To prevent complications of essential hypertension.

In brief, to treat a patient who exhibits a totality of various characteristic symptoms supplying the basis for the prescription with indicated Homoeopathic remedies.

To avoid the side effects of conventional medicines for Hypertension and prevent complications of Hypertension by giving a well selected constitutional drug. To treat "Prehypertensive symptoms" in patients.

#### REVIEW OF LITERATURE:

Essential, primary, or idiopathic hypertension is defined as high BP in which secondary causes such as Reno vascular disease, renal failure, pheochromocytoma, aldosteronism, or other causes of secondary hypertension or mendelian forms (monogenic) are not present. Essential hypertension accounts for 95% of all cases of hypertension. Essential hypertension is a heterogeneous disorder, with different patients having different causal factors that lead to high BP. Essential hypertension needs to be separated into various syndromes because the causes of high BP in most patients presently classified as having essential hypertension can be recognized.<sup>3</sup>

#### ANATOMY:

The Human Circulatory System: How It Works

All the functions of the circulatory system occur in the capillary beds. The rest of the system consists of two pumps (in the heart) and associated plumbing:

- **arteries**
- their terminal branches, the **arterioles**
- **veins**
- and their tributaries, the **venules**.

Blood moves through the arteries, arterioles, and capillaries because of the force created by the contraction of the ventricles.

The surge of blood that occurs at each contraction is transmitted through the elastic walls of the entire arterial system where it can be detected as the **pulse**. Even during the brief interval when the heart is

relaxed — called **diastole** — there is still pressure in the arteries. When the heart contracts — called **systole** — the pressure increases.

The pressure of arterial blood is largely dissipated when the blood enters the capillaries. Although the diameter of a single capillary is quite small, the number of capillaries supplied by a single arteriole is so great that the total cross-sectional area available for the flow of blood is increased. Therefore, the pressure of the blood as it enters the capillaries decreases.

### **Local Control in the Capillary Beds**

- **Nitric oxide (NO)** is a potent dilator of arteries and arterioles.
  - When the endothelial cells that line these vessels are stimulated, they synthesize nitric oxide. It quickly diffuses into the muscular walls of the vessels causing them to relax.
  - In addition, as the hemoglobin in red blood cells releases its O<sub>2</sub> in actively-respiring tissues, the lowered pH causes it to also release NO which helps dilate the vessels to meet the increased need of the tissue.

Nitroglycerine, which is often prescribed to reduce the pain of angina, does so by generating nitric oxide, which relaxes the walls of the arteries and arterioles. Cells where infection or other damage is occurring release substances like **histamine** that dilate the arterioles and thus increase blood flow in the area.

- In most of the body, the flow of blood through a capillary is controlled by the arteriole supplying it. In the brain, however, another mechanism participates. Regulation of Blood Pressure by Hormones

### **The Kidney**

One of the functions of the kidney is to monitor blood pressure and take corrective action if it should drop. The kidney does this by secreting the proteolytic enzyme **renin**.

- Renin acts on **angiotensinogen**, a plasma peptide, splitting off a fragment containing 10 amino acids called
- **Angiotensin I**.
- angiotensin I is cleaved by a peptidase secreted by blood vessels called **angiotensin converting enzyme (ACE)** — producing
- **Angiotensin II**, which contains 8 amino acids.
- angiotensin II
  - constricts the walls of arterioles closing down capillary beds;
  - stimulates the proximal tubules in the kidney to reabsorb sodium ions;
  - Stimulates the adrenal cortex to release **aldosterone**. Aldosterone causes the kidneys to reclaim still more sodium and thus water.
  - increases the strength of the heartbeat;
  - Stimulates the pituitary to release the **vasopressin**.

All of these actions, which are mediated by its binding to G-protein-coupled receptors on the target cells, lead to an **increase in blood pressure**.

### **The Heart**

A rise in blood pressure stretches the atria of the heart. This triggers the release of **atrial natriuretic peptide (ANP)**. ANP is a peptide of 28 amino acids. ANP lowers blood pressure by:

- relaxing arterioles
- inhibiting the secretion of **renin** and **aldosterone**
- inhibiting the reabsorption of sodium ions in the collecting ducts of the kidneys.

The effects on the kidney reduce the reabsorption of water by them thus increasing the flow of urine and the amount of sodium excreted in it (These actions give ANP its name: *natrium* = sodium; *uresis* = urinate). The

net effect of these actions is to reduce blood pressure by reducing the volume of blood volume in the system.<sup>20</sup>

### **PHYSIOLOGY :**

There are many physical factors that influence arterial pressure. Each of these may in turn be influenced by physiological factors, such as diet, exercise, disease, drugs or alcohol, stress, obesity, and so-forth.

Some physical factors are:

- Rate of pumping. In the circulatory system, this rate is called heart rate, the rate at which blood is pumped by the heart. The volume of blood flow from the heart is called the cardiac output which is the heart rate multiplied by the stroke volume (the amount of blood pumped out from the heart with each contraction). The higher the heart rate, the higher the arterial pressure, assuming no reduction in stroke volume.
- Volume of fluid or blood volume, the amount of blood that is present in the body. The more blood present in the body, the higher the rate of blood return to the heart and the resulting cardiac output. There is some relationship between dietary salt intake and increased blood volume, potentially resulting in higher arterial pressure, though this varies with the individual and is highly dependent on autonomic nervous system response and the renin-angiotensin system.
- Resistance. In the circulatory system, this is the resistance of the blood vessels. The higher the resistance, the higher the arterial pressure upstream from the resistance to blood flow.
- Viscosity, or thickness of the fluid. If the blood gets thicker, the result is an increase in arterial pressure.
- In practice, each individual's autonomic nervous system responds to and regulates all these interacting factors so that, although the above issues are important, the actual arterial pressure response of a given individual varies widely because of both split-second and slow-moving responses of the nervous system and end organs. These responses are very effective in changing the variables and resulting BP from moment to moment.

Moreover, blood pressure is the result of cardiac output increased by peripheral resistance:  $\text{blood pressure} = \text{cardiac output} \times \text{peripheral resistance}$ . As a result, an abnormal change in blood pressure is often an indication of a problem affecting the heart's output, the blood vessels' resistance, or both. Thus, knowing the patient's blood pressure is critical to assess any pathology related to output and resistance.

### **Regulation**

The endogenous regulation of arterial pressure is not completely understood. Currently, three mechanisms of regulating arterial pressure have been well-characterized:

- Baroreceptor reflex: Baroreceptors detect changes in arterial pressure and send signals ultimately to the medulla of the brain stem. The medulla, by way of the autonomic nervous system, adjusts the mean arterial pressure by altering both the force and speed of the heart's contractions, as well as the total peripheral resistance. The most important arterial baroreceptors are located in the left and right carotid sinuses and in the aortic arch.
- Renin-angiotensin system (RAS): This system is generally known for its long-term adjustment of arterial pressure. This system allows the kidney to compensate for loss in blood volume or drops in arterial pressure by activating an endogenous vasoconstrictor known as angiotensin II.
- Aldosterone release: This steroid hormone is released from the adrenal cortex in response to angiotensin II or high serum potassium levels. Aldosterone stimulates sodium retention and potassium excretion by the kidneys. Since sodium is the main ion that determines the amount of fluid in the blood vessels by osmosis, aldosterone will increase fluid retention, and indirectly, arterial pressure.

These different mechanisms are not necessarily independent of each other, as indicated by the link between the RAS and aldosterone release.

PATHOPHYSIOLOGY:

### **High arterial pressure**

Arterial hypertension can be an indicator of other problems and may have long-term adverse effects. Sometimes it can be an acute problem, for example hypertensive emergency.

All levels of arterial pressure put mechanical stress on the arterial walls. Higher pressures increase heart workload and progression of unhealthy tissue growth (atheroma) that develops within the walls of arteries. The higher the pressure, the more stress that is present and the more atheroma tend to progress and the heart muscle tends to thicken, enlarge and become weaker over time.

### **ETIOLOGY AND PATHOGENESIS OF ESSENTIAL HYPERTENSION:**

Essential hypertension indicates that no specific medical cause can be found to explain a patient's condition. Secondary hypertension indicates that the high blood pressure is a result of (*i.e.*, secondary to) another condition, such as kidney disease or tumors (pheochromocytoma and paraganglioma).

### **Aetiological Factors for Essential Hypertension are: -**

Although it has frequently been indicated that the causes of essential hypertension are not known, this is only partially true because we have little information on genetic variations or genes that are over expressed or under expressed as well as the intermediary phenotypes that they regulate to cause high BP. <sup>3</sup>

1. Hereditary factor: Commonly seen in the children of hypertensive patients, twins. This is due to abnormality in trans-cellular sodium transport, which is one of the genetic defect.
2. Mental Stress: Stress in everyday life is one of the most common aetiological factors found in now a day's life style.
3. Dietary factor: Excessive intake of Salt and Fats in rich diet through pickles, papads, fast foods etc. and over use of salt in daily diet.
4. Low Potassium diet:
5. Alcohol: Alcoholics often suffer from hypertension. Although alcohol does not have any direct effect on hypertension, yet it effects indirectly and is seen during the withdrawal stage which is mediated by sympathetic nervous system.
6. Obesity: Caused due to more salt, fat and carbohydrate intake and sedentary habits.
7. Smoking.<sup>14</sup>

The genetic alterations responsible for inherited "essential" hypertension remain largely unknown. Results from family studies suggest several possible intermediary phenotypes (genetic traits) that may be related to inherited high BP, such as high sodium-lithium countertransport, low urinary kallikrein excretion, high fasting plasma insulin concentrations, high-density LDL subfractions, fat pattern index, and body mass index (BMI). Many studies have been published on various racial groups with regard to the association between allelic variations in angiotensinogen and hypertension. However, these variations explain only a small part of the BP variation (6%). Furthermore, plasma angiotensinogen concentrations, though higher in patients with the polymorphism, clearly overlap with normotensive patients. <sup>15</sup>

### **Hypertensinogenic Factors**

There is evidence that obesity, insulin resistance, high alcohol intake, high salt intake, a sedentary lifestyle, stress, dyslipidemia, and low potassium or calcium intake increase BP in susceptible subjects. <sup>15</sup>

## Obesity and Insulin Resistance

Obesity, and especially abdominal obesity, is the main hypertensinogenic factor. Each 10% weight gain is associated with a 6.5 mm Hg increase in systolic BP. The relationship between BP and body fat is not restricted to the morbidly obese but is continuous throughout the entire range of body weight. A direct association between hypertension and BMI (weight in kilograms divided by the square height in meters) has been observed in cross-sectional and longitudinal population studies from early childhood to old age. A BMI of <25 is considered normal or healthy, whereas a BMI of 26 to 28 (as compared with BMI <23) increases the risk of high BP by 180% and the risk of insulin resistance by >1000%. Thus insulin resistance is present in many patients with obesity and hypertension.<sup>15</sup>

The mechanism by which obesity raises BP is not fully understood, but increased BMI is associated with an increase in plasma volume and cardiac output; both these alterations and BP can be decreased by weight loss in both normotensive and hypertensive subjects,<sup>2</sup>. More recently, insulin-like growth factor I and leptin, a neuropeptide that regulates appetite, have also been implicated in the pathogenesis of obesity-induced hypertension. Thus, although the mechanisms by which obesity and insulin resistance increase BP remain undefined, it is clear that these increases in BP are overlain on the inherited BP.<sup>15</sup>

## Classification of Blood Pressure for Adults Age 18 and Older

Category	Systolic (mm Hg)		Diastolic (mm Hg)
Optimal <sup>†</sup>	<120	and	<80
Normal	<130	and	<85
High-normal	130–139	or	85–89
Hypertension <sup>‡</sup>			
Stage 1	140–159	or	90–99
Stage 2	160–179	or	100–109
Stage 3	≥180	or	≥110

Not taking antihypertensive drugs and not acutely ill. When systolic and diastolic blood pressures fall into different categories, the higher category should be selected to classify the individual's blood pressure status. For example, 160/92 mm Hg should be classified as stage 2 hypertension, and 174/120 mm Hg should be classified as stage 3 hypertension. Isolated systolic hypertension is defined as SBP of 140 mm Hg or greater and DBP below 90 mm Hg and staged appropriately (e.g., 170/82 mm Hg is defined as stage 2 isolated systolic hypertension). In addition to classifying stages of hypertension on the basis of average blood pressure levels, clinicians should specify presence or absence of target organ disease and additional risk factors. This specificity is important for risk classification and treatment<sup>3</sup>

Optimal blood pressure with respect to cardiovascular risk is below 120/80 mm Hg. However, unusually low readings should be evaluated for clinical significance.

The diagnosis of hypertension is made when the average of 2 or more diastolic BP measurements on at least 2 subsequent visits is 90 mm Hg or when the average of multiple systolic BP readings on 2 or more subsequent visits is consistently 140 mm Hg. Isolated systolic hypertension is defined as systolic BP 140 mm Hg and diastolic BP <90 mm Hg. Individuals with high normal BP tend to maintain pressures that are above average for the general population and are at greater risk for development of definite hypertension and cardiovascular events than the general population.<sup>3</sup>

It is also known that hypertension is highly heritable and polygenic (caused by more than one gene) and a few candidate genes have been postulated in the etiology of this condition.

## WHAT HAPPENS TO THE BODY WHEN BLOOD PRESSURE INCREASES

Healthy arteries are made of muscle and a semi-flexible tissue that stretches like elastic when the heart pumps blood through them. The more forcefully that blood pumps, the more the arteries stretch to allow blood to easily flow. Over time, if the force of the blood flow is often high, the tissue that makes up the walls of arteries gets stretched beyond its healthy limit. This creates problems in several ways.<sup>4</sup>

### **Vascular weaknesses**

First, the overstretching creates weak places in the vessels, making them more prone to rupture. Problems such as strokes and aneurysms are caused by ruptures in the blood vessels.<sup>4</sup>

### **Vascular scarring**

Second, the overstretching can cause tiny tears in the blood vessels that leave scar tissue on the walls of arteries and veins. These tears and the scar tissue are like nets, and can catch debris such as cholesterol, plaque or blood cells traveling in the bloodstream.<sup>4</sup>

**Increased risk of blood clots**

Trapped blood can form clots that can narrow (and sometimes block) the arteries. These clots sometimes break off and block vessels and the blood supply to different parts of the body. When this happens, heart attacks or strokes are often the result.<sup>4</sup>

**Increased plaque build-up**

The same principle applies to our blood flow. Cholesterol and plaque build-up in the arteries and veins cause the blood flow to become limited or even cut off altogether. As this happens, pressure is increased on the rest of the system, forcing the heart to work harder to deliver blood to your body. Additionally, if pieces of plaque break off and travel to other parts of the body, or if the build-up completely blocks the vessel, then heart attacks and strokes occur.<sup>4</sup>

### **Tissue and organ damage from narrowed and blocked arteries**

Ultimately, the arteries and veins on the other side of the blockage do not receive enough freshly oxygenated blood, which results in tissue damage.<sup>4</sup>

When the arteries are not as elastic because of the build-up of cholesterol or plaque or because of scarring, the heart pumps harder to get blood into the arteries. Over time, this increased work can result in damage to the heart itself. The muscles and valves in the heart can become damaged and heart failure can result. Damage to the vessels that supply blood to your kidneys and brain may negatively affect these organs.<sup>4</sup>

You may not feel that anything is wrong, but high blood pressure can permanently damage your heart, brain, eyes and kidneys before you feel anything. High blood pressure can often lead to heart attack and heart failure, stroke, kidney failure, and other health consequences.

### **HOMOEOPATHIC REVIEW:**

**Essential hypertension** is a complex disorder that almost certainly has more than one cause. It may be initiated by environmental factors (e.g. stress, salt intake, estrogen), which affect the variables that control blood pressure in the genetically predisposed individual. Although the susceptibility genes for essential hypertension are currently unknown, they may include genes that govern responses to an increased renal sodium load, level of pressor substances, such as angiotensin II, reactivity of vascular smooth muscle to pressor agents, or smooth muscle cell growth.<sup>18</sup>

The homeopathic approach to hypertensive patients is therefore focused on the individual approach. The correctness of such approach, however, is supported by modern physiology and psychosomatic medicine, which have exhaustively confirmed the correspondence between physical and emotional levels: this correlation is also highlighted by EEG and biofeedback studies which, for example, demonstrated that deep mental concentration or meditation may result into an increased brain blood flow, at the same time causing

a relaxation of striated muscles and reduced arterial pressure values. Any physical, emotional, or mental stimulation therefore exerts a corresponding effect at all body levels, something, which occurs instantly and simultaneously.

The holistic approach adopted by homeopathy, based on the "law of the alike" and on the use of low or infinitesimal doses, allows coming up, through a careful analytical process focusing on individual somatopsychic conditions, with a global diagnostic-therapeutic summary taking into account the very lasting unity of the ill individual, thus preventing the common mind-body dichotomy. Thus "the hypertensive patient is treated" rather than employing standard drugs against hypertension.

Arterial hypertension is a disease of modern civilization. This fact would, therefore, imply the importance of personality type and way of life in the genesis of high blood-pressure. The way of life has a great deal to do with arterial tension.<sup>7</sup>

There are two theories which try to explain the development of high blood-pressure, the neural and the humoral theories. According to the humoral theory, based on experiments, ischemia release a chemical agent, renin which converts a blood globulin to the active pressor substance which acts, constricting the smooth muscles of the blood vessels.

The neural theory assumes direct influence upon the blood vessels through an increase of tonus of the vasomotor centre and the sympathetic nerve. It is possible that neurogenic stimulation of the renal vessels may lead to vasoconstriction, subsequent ischemia, and may set the humoral mechanism in motion, thus producing a vicious circle. The neurogenic excitation in turn may be of humoral origin, brought about by stimulation of the adrenals.

It is found that the emotions of fear and rage produce and increase in blood pressure through stimulation of the adrenals. These experiments supply the fundament for the theory of the emotional origin of high blood-pressure. It is found that different personality types with high blood-pressure had all one common trait, their inability to express a basic hostility and aggressive feelings freely, thus inhibiting and suppressing the emotions of anger, fear, and rage. The excitatory influence of the emotion of rage turns inward and, if not released through action, it will lead (according to Cannons findings) to a chronic stimulation of the adrenal and sympathetic system, and, consequently, through neural or humoral pathways, or a combination of them, to an elevation of the blood-pressure levels. This rise will be in the beginning of the cycle of more passing nature, but will, later on, by producing, in this process lasting damage to the arterioles of the kidneys, develop into fixed high blood-pressure.

There are some contributing factors in the genesis of hypertension, such as obesity, heavy smoking, sedentary life habits, and possibly toxic substances which one meets in everyday life and to which certain persons may be particularly susceptible

Every remedy in our Materia Medica can become a remedy, relieving with the totality of the symptoms as also the symptom of an elevated blood pressure.

**Dr.Hahnemann** stressed the prime importance of the mental symptoms in all physical disorders, and this will apply quite naturally to those disturbances and essential high blood-pressure is suspected to be mainly of emotional origin. When the psychosomatics speaks of resentment and suppressed anger in the high blood-pressure patient, then Aurum, among other, has had this indication for the Homoeopathist for over a hundred years, and often has proved curative; so have Nux-vomica, Natrum-muriaticum, Cocculus and other with the same mental symptom but with a different personality type.<sup>7</sup>

There are a group of substances; some of them part of our Materia Medica, which are able to raise the blood, pressure through their physiological action. To give a list of these drugs, we mention the following-

*Nicotine (Tabacum), Strychnine (Nux vomica), veratrine (Veratrum viride), Ephedrine (Ephedrine), Ergotoxine (Secale), Picrotoxine (Cocculus), Digitoxin (Digitalis), Among among inorganic substances- Natrum muriaticum, Barium, Plumbum. Among endocrine products- Adrenalin, Pituitrin.*

On one or another occasion, but always on the basis of the totality of symptoms, one or another of these remedies will be indicated; however, since the basis of our prescription will be always the totality of the characteristic symptoms, with the mental symptoms in the lead, any remedy of the Materia Medica can prove to be curative in a patient with high blood-pressure.<sup>8</sup>

Although underestimated in Biology and Medicine, the idea of the mind controlling the body is the most important concept we have about life processes. Thus, issuing a long-term symptomatic treatment in patients with increased pressure values, especially if moderate and not clearly resulting from organic causes may often encourage the onset of a chronic pathological process. On the other hand, a functional disease may be specifically considered as the human body's inability to preserve or recover its homeostatic condition.

Within this etiopathogenic approach, issuing a treatment means providing specific stimulation to encourage restoration of the body's normal physiology: this is the aim of homeopathic treatment.

A deep knowledge of both the patient and the events that could have contributed significantly to the onset of a specific disease is required to identify the appropriate homeopathic remedy. Therefore, after carefully assessing and ranking symptoms, acknowledging the priority of mental and behavioral ones, a nosographic diagnosis may be attempted while biopathologically and diathetically defining the patient considered. This allows to select the "simillimum" remedy, Thus administration of the Nux Vomica remedy in hot-tempered, nervous patients, intolerant to even any slight contradictions, abusing alcohol and/or smoking, suffering from insomnia, constipation, dyspepsia and headaches, will restore the body's balance even before the possible onset of arterial hypertension.

On the other hand, patients reporting recurrent hepatalgia especially after meals, with meteorism and flatulence, a weight loss with no clear cause combined with hair loss and prone to infections and diapysis especially in the respiratory tract, hypercholesteraemia, hyperuricaemia, along with authoritative behaviours especially at work, in spite of persistent asthenia, will draw clear benefits from the intake of Lycopodium. The diagnosis of the patient, rather than of his/her disease, allows preventing development of functional imbalance towards an overt and persisting organic disease; homeopathic medicine thus also plays a crucial role in prevention.

In the nutritional field too, the homeopathic approach prevents the need to issue severely pre-established diet schemes, and rather focuses on the patient's re-education so that he/she may finally learn how to eat correctly and, at the same time, according to his/her own taste and requirements, rather than according to regulatory principles that are alien from his/her feelings and wishes. Once again the aim is to restore the human body's self-regulation skills: in non-pathological conditions, the body is able to regulate and adjust,<sup>10</sup>.

However, paradoxically, even though the effectiveness of medical technology has improved dramatically, more patients than ever before have become dissatisfied with their medical care today. Modern medicine has failed miserably in the areas of disease prevention and the management of the myriad chronic illness (such as diabetes, hypertension and heart disease) to which modern human beings are prone to, because of their lifestyle.<sup>11</sup>

The combined knowledge of both old and new healing modalities is ultimately superior than a single-model approach to health and well-being. After all, no system of medicine can claim to have a monopoly on

knowledge! What is needed today is a clinically responsible balance between the science of modern medicine and the comfort of alternative medicine. We need to combine the best of both worlds, much like fusion music does, and physicians from both sides can learn from each other.<sup>12</sup>

### **MIASMATIC APPROACH:**

Chronic diseases are the class of disease that spring from the chronic miasms. The whole or central life is attacked and disturbed first by some morbid agent of miasmatic nature; this central disturbance leads to disturbance in the life of tissues, organs or cells. Chronic diseases thus follow a definite.<sup>9</sup>

From the pathophysiology we came to the conclusion that hypertension occurs in a predisposed individual as this miasm is inherited from parents. Hence first stage person is under the influence of psora, later the increased blood volume and increased peripheral resistance indicates its sycotic background, and finally vascular pathology and end organ damage occurs which indicate the syphilitic nature. Hence hypertension is trimiasmatic in nature.<sup>19</sup>

It can be easily perceived that hypertension is a constitutional disorder as constitutional defect (genetic factors) is at the base of it and the disorder itself has impact on entire constitution of an individual. While treating hypertension, the treatment needs to be planned to focus at a root level: to affect the genetic tendency. Homeopathic treatment does that precisely.

### **Detection and confirmation**

Patients should be seated in a chair with their backs supported and their arms bared and supported at heart level. Patients should refrain from smoking or ingesting caffeine during the 30 minutes preceding the measurement.

Under special circumstances, measuring blood pressure in the supine and standing positions may be indicated.

Measurement should begin after at least 5 minutes of rest.

The appropriate cuff size must be used to ensure accurate measurement. The bladder within the cuff should encircle at least 80 percent of the arm. Many adults will require a large adult cuff.

Measurements should be taken preferably with a mercury sphygmomanometer; otherwise, a recently *calibrated* aneroid manometer or a *validated* electronic device can be used.

Two or more readings separated by 2 minutes should be averaged. If the first two readings differ by more than 5 mm Hg, additional readings should be obtained and averaged.

### **Medical History**

A medical history should include the following:

Known duration and levels of elevated blood pressure;

patient history or symptoms of CHD, heart failure, cerebrovascular disease, peripheral vascular disease, renal disease, diabetes mellitus, dyslipidemia, other comorbid conditions, gout, or sexual dysfunction;

Family history of high blood pressure, premature CHD, stroke, diabetes, dyslipidemia, or renal disease;

Symptoms suggesting causes of hypertension;

History of recent changes in weight, leisure-time physical activity, and smoking or other tobacco use;

Dietary assessment including intake of sodium, alcohol, saturated fat, and caffeine;

History of all prescribed and over-the-counter medications, herbal remedies, and illicit drugs, some of which may raise blood pressure.

Psychosocial and environmental factors (e.g., family situation, employment status and working conditions, educational level) that may influence hypertension control.

Physical Examination

The initial physical examination should include the following:

Two or more blood pressure measurements separated by 2 minutes with the patient either supine or seated and after standing for at least 2 minutes in accordance with the recommended techniques mentioned earlier;

Verification in the contralateral arm (if values are different, the higher value should be used);

Measurement of height, weight, and waist circumference

Funduscopic examination for hypertensive retinopathy (i.e., arteriolar narrowing, focal arteriolar constrictions, arteriovenous crossing changes, hemorrhages and exudates,<sup>57</sup> disc edema);

Examination of the neck for carotid bruits, 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 for bronchospasm;

Examination of the abdomen for bruits, enlarged kidneys, masses, and abnormal aortic pulsation;

Examination of the extremities for diminished or absent peripheral arterial pulsations, bruits, and edema; and

Neurological assessment.

## **Diagnosis of Hypertension**

### **Initial**

### **Evaluation**

The goals of the initial evaluation are to determine baseline BP; assess the presence and extent of target organ damage and concomitant CVD; screen for potentially curable specific causes of hypertension (secondary hypertension); identify hypertensinogenic factors and other CVD risk factors; and characterize the patient to facilitate the choice of therapy (especially drug selection) and define prognosis.<sup>3</sup>

### **Laboratory Tests and Other Diagnostic Procedures**

Routine tests include only urinalysis, complete blood count, blood chemistry (potassium, sodium, creatinine, fasting glucose, total and high-density lipoprotein or HDL cholesterol), and a 12-lead ECG. Optional tests indicated in selected patients for the diagnosis of secondary hypertension and/or comorbid conditions include creatinine clearance, 24-hour urinary protein, measurement of microalbuminuria, uric acid, calcium, glycosylated hemoglobin, fasting triglycerides, limited echocardiography,<sup>34</sup> and plasma renin activity/aldosterone measurements.

**Routine laboratory tests** recommended before initiating therapy are tests to determine the presence of target organ damage and other risk factors. These routine tests include urinalysis, complete blood cell count, blood chemistry (potassium, sodium, creatinine, fasting glucose, total cholesterol, and high-density lipoprotein [HDL] cholesterol), and 12-lead electrocardiogram.

**Optional tests** include creatinine clearance, microalbuminuria, 24-hour urinary protein, blood calcium, uric acid, fasting triglycerides, low-density lipoprotein (LDL) cholesterol, glycosolated hemoglobin, thyroid-stimulating hormone, and limited echocardiography (to determine the presence of left ventricular hypertrophy). More complete assessment of cardiac anatomy and function by standard echocardiography, examination of structural alterations in arteries by ultrasonography, measurement of ankle/arm index,<sup>58</sup> and plasma renin activity/urinary sodium determination may be useful in assessing cardiovascular status in selected patients.

In addition to the complete Blood Count the basic investigations should be:

- 1) Urine routine - To look for the presence of Albumin and Casts, which indicate Renal involvement.
- 2) Blood Sugar - Diabetes and HT if present together becomes all the more important for management as chances of Target Organ damage increase.

- 3) Serum Creatinine - elevated Creatinine suggests early renal Failure, and in absence of another cause, indicates that HT may be of long standing in that patient
- 4) Serum Cholesterol - Hyperlipidemia can both be a cause and effect of HT. If present unless treated will not let BP come under control. Lipid Profile should be carried out if Myocardial involvement is suspected, as it tells more about blood lipids i.e. HDL, the good friendly Cholesterol(Normal M 35-45,F 45-65mg/dl) and LDL, the bad and unfriendly Cholesterol(Normal upto 150mg/dl).
- 5) Serum Uric Acid - Hyperuricemia is one of the most common cause for HT not responding to the treatment.
- 6) X-Ray Chest PA view - For Cardiomegaly specially. LVH indicates that HT is chronic and has been present for some time. Since LVH is reversible with very good control of BP,
- 7) E.C.G. - Tells about Myocardial involvement and Ischaemic changes in the heart.
- 8) Fundoscopy - To see the Retinal Hemorrhage and Papilledema which again indicates hypertensive state.<sup>3</sup>

#### **Complications which can arise: -**

1. Arteriosclerosis
2. Arteriolar inflammation
3. Heart failure
4. Angina pectoris
5. Cerebro-vascular accident- cerebral hemorrhage
6. Thrombosis and subarachnoid hemorrhage
7. Hypertensive encephalopathy
8. Malignant hypertension
9. Renal damage
10. Haemorrhages - epistaxis, haematemesis, haemoptysis
11. Reduced life expectancy or death

Lifestyle modification should be adjunctive therapy for all patients recommended for pharmacologic therapy. For patients with multiple risk factors, clinicians should consider drugs as initial therapy plus lifestyle modifications.

For those with heart failure, renal insufficiency, or diabetes.

#### **MANAGEMENT:**

Management of essential hypertension does not only include the prescription of a remedy but a case of high blood pressure needs to be managed with the aim of preventing further progress of the disease.

Prevention is based upon lifestyle changes that include:

- Weight loss, if you are overweight. Excess weight adds to heart strain. In some cases, weight loss may be the only treatment needed to lower your blood pressure.
- Exercise to improve cardiac fitness.
- Dietary adjustments to lower fat and modify sodium in the diet.
- In severe cases with acute changes, bed rest for a period of time might be advisable and help to reduce an excessive rise in arterial tension.
- Where sedentary life habits seen to have an adverse influence moderate exercise in the form of regular walks will benefit.
- The importance of physical and mental relaxation in hypertension must be stressed and here proper psychotherapy, particularly in incipient cases may have a truly curative value.
- A decrease in smoking or, when necessary, a complete elimination of the smoking habit, is often advisable, considering the blood-pressure raising quality of nicotine.

- Among dietary measures, nothing can reduce high blood-pressure quicker than a period of fasting or a pure fruit diet, which can be combined with bed rest. A vegetarian diet has proved definitely helpful.

### **Treatment Strategies**

Raised blood pressure is not a disease in itself. It is a sign of some underlying disorder. Homeopathy offers good prognosis for cases of hypertension. The treatment aim is to control it rather than to cure it.<sup>5</sup>

Most patients with persistent systolic levels above 160 mmHg and/or diastolic levels above 95 mmHg should receive treatment for hypertension. Some experts believe that drug therapy should be initiated if the diastolic pressure remains above 90 mmHg despite vigorous attempts with non-pharmacologic measures, this being especially true in those with other significant risk factors.<sup>16</sup>

The practitioners of the allopathic system of medicine have tried to combat this malady by trying to develop drugs designed to reduce the high arterial pressure. Over the years they have been successful in developing drugs with profound blood pressure lowering capabilities, but the magnitude of the problem at the community level has remained, the reasons for this are many, including the adverse effect of drugs and relatively higher cost of treatment, but the absence of a holistic view of disease is probably the most important. As with other conditions, the inclination is to treat the "results" of disease. This ultimately proves less successful, and is also detrimental to the health of the patient.<sup>6</sup>

The goal of hypertensive treatment is to prevent morbidity and mortality associated with high blood pressure.

In this study I have put honest attempts to treat the patients with Homoeopathic remedies. and tried to know the effects of Homoeopathic remedies and solve the problem of the community in a more gentle way.

### **GOALS OF THE MANAGEMENT OF HYPERTENSIVE PATIENTS:**

1. Achieving a total and on-going physical well-being.
2. Prevention and progression of chronic complications.
3. To treat a Hypertensive patient as a whole with Homoeopathic remedies without any adverse effects, in low cost level.
4. Homoeopathy has a lot of potential to help in reducing the proportion of the hypertensive population in the community, and thereby make a contribution in reducing overall cardiovascular mortality levels.
5. Patient education for successful long-term management by adhering to appropriate diet and exercise.

### **MATERIALS AND METHODS:**

This study on "Efficacy of Homoeopathic remedies in Essential Hypertension" is undertaken at A. M. Shaikh Homoeopathic Medical College and research centre, Nehru nagar Belgaum during the period of 01-01-2006 to 01-02-2010

### **MATERIALS:**

Around 60 patients of Essential Hypertension below the age group 50 were kept under observation. The above patients were selected on the basis of inclusive and exclusive criteria randomly from Hospital OPD, and village health camps.

### **METHODS:**

The above 60 patients of Essential Hypertension were identified on clinical presentation. A detail case history was taken according to the schema of model case Performa with especial emphasis on the history of

presenting complaints, past history, family history, personal history, life space history, mental complaints, and causation, along with general physical and systemic examination.

Blood pressure is recorded in lying down, standing position and sitting position.

Diagnosis was made on the basis of clinical presentation and with the help of recording the Blood pressure.

Investigations for Lipid profile, abdominal sonography, ECG, chest X-Ray and Echo cardiograph were done as and when required.

Remedy was selected after analyzing, evaluation and repertorisation of the case. Intercurrent remedy was given when required.

All the cases were reviewed every seventh, fifteenth day. Especial advice for diet and exercise was given in each follow-up.

The results of the treatment were based on the following:

General well being of the patient.

Reduction in Blood pressure level.

All the criteria should be fulfilled for at least 3 months to label the case as improved, not improved

### **OBSERVATIONS AND RESULTS:**

#### **Age incidence**

Sl.No.	Age group	No. of subjects	Percentage of incidences
01	20-30years	09	15.00%
02	31-40years	18	30.00%
03	41-50years	33	55.00%

#### **Sex incidence**

Sl.No.	Sex	No.of subjects	Percentage of incidences
01	Male	20	33.33%
02	Female	40	66.67%
	Total	60	

#### **Symptoms manifested**

Sl.No.	Manifestations	No. of subjects	Percentage
01	Headache/hemicrania	23	38.33
02	Heaviness in head	02	3.33
03	Vertigo	06	10
04	Palpitation	04	6.67
05	Breathlessness on walking	05	8.33
06	Pain in upper arms	07	11.67
07	Other symptoms like weakness, gall stones, thyrotoxicosis, anxiety, chest pain, pain in lower extremities, dimness, and generalized dropsy.	13	21.67

#### **Remedies prescribed**

Sl.No.	Remedies	No.of subjects	Percentage of incidences
01	Nux vomica	11	18.33
03	Calc carb	09	15

04	Sepia	08	13.33
05	Natrum mur	07	11.67
06	Lachesis	04	6.67
07	Pulsatilla	03	5.00
08	Argentums nit	02	3.33
09	Aconite nap	02	3.33
10	Gelsemium	02	3.33
11	Graphites	02	3.33
12	Aurum met	01	1.67
13	Lycopodium	01	1.67
14	Ignatia	01	1.67
15	Sanguinria	02	3.33

#### Acute and sectoral remedies

Sl.No.	Remedies	No.of subjects	Percentage of incidences
01	Strophanthus	03	5
02	Viscum alb	03	5
03	Rawulfia	01	1.67
04	Spartium	02	3.33
05	Allium sativa	01	1.67

#### NO. OF PATIENTS IMPROVED, NOT IMPROVED AND DROPPED OUT

IMPROVED	49
NOT IMPROVED	06
DROPPED OUT	05
TOTAL	60

#### Discussion:

The present study was primarily aimed at determining the effectiveness of the homoeopathic approach in the management of essential hypertension below the age group 50 years. An attempt was also made to find out if possible, remedies which are more useful in treating the condition. To achieve these aims, 60 cases of essential hypertension below the age 50years were subjected to three months of homoeopathic treatment, and the change in blood pressure levels before and after treatment were evaluated.

The study has shown that homoeopathic medicines have a positive effect on the hypertensive status of the patients in the study sample. The efficacy is demonstrated by the results of the statistical analyses (both diastolic and systolic levels), which show that the pretreatment and post treatment levels of blood pressure are indeed, different. Finally, an analysis of the cardiovascular risk profile before and after treatment has also demonstrated a reduction in the percentage of cases in the higher risk groups.

The remedies used in this study were essentially prescribed based on the chronic totality. Due to the relatively small size of the sample, no single remedy could be identified as clearly more efficacious than the others. However, remedies like Nux vomica were found to be more effective in at least 11 patients (18.33%). Almost 9 patients (15 percent) of the patients fell into the category of Calcarea carb and 08 (13% belong to sepia constitution). About 07 (8.33%) personalities responded to Natrum Mur. The potencies used also varied, and no single potency was found to have a superior effect. In few cases initially the case was started with Nux vomica to treat acute complaints of severe biliousness and giddiness then followed with the constitutional drug in the next visit after repertorisation. In two of the cases the case was interfered with Aconite to reduce the tension. In one case i.e. case no.31, OPD No.22476, KAM blood pressure 200/100 mm of Hg the case was referred to other system to manage the acute and then followed with homoeopathic remedies, along with the other systems medicines, hence cannot conclude the case. At the beginning of the study 3 cases were dropped out after one or two follow ups, due various reasons. 06 cases did not respond well to well selected remedies, nor to the specific or sectoral remedies like Strophanthus or despite putting maximum efforts to give the best selected medicine as well as with

But the results of this study are certainly encouraging, and warrant further studies with more stringent criteria. Such a study, with a good sample size, will also help in evaluating the relative efficacy of various medicines in the treatment of essential hypertension.

#### **Summary and Conclusion:**

*The prevalence of Hypertension in the age group below 50 years is not uncommon. If Hypertension is treated before becoming chronic, complicated and without pathological cause can be treated better and it should be patient oriented rather than disease oriented. With Homoeopathic remedies Hypertension can best be treated at "prehypertensive stage". Patients respond well to the constitutional remedy than to a specific remedy like Rawulfia, viscum alb or strophanthus. The following study was undertaken to see the effects of Homoeopathic remedies in Essential Hypertension at clinical research unit, at A.M.Shaikh Homoeopathic Medical College and research centre Belgaum. The patients of Secondary Hypertension and the age group above 60years are excluded from the study.*

#### **It was observed by the above studies that:**

- Patients of Essential hypertension do suffer from sense of general un-well being, against the common belief that hypertension is asymptomatic and we can detect it if we are Keen observer. Hence High blood pressure can no more be called as Silent Killer if the physician is able to analyze the case properly.
- Patients who have high blood pressure manifest with different manifestations, but some of the common symptoms with which patient presents are:
- Headache, hemicranias, vertigo, trembling, pain in the shoulders, scapular region, palpitation and breathlessness.
- It was observed that besides symptomatic relief, with homoeopathic remedies patient's response was very much satisfactory as regard to their High blood pressure in each follow-up.
- Patients who are not on antihypertensive drugs respond very well to the Homoeopathic remedies comparing to patients on anti Hypertensive drugs. However patients who were on anti hypertensive drugs, the dosage was slowly tapered, and then stopped the drugs.
- A maintaining dose of their respective medicine is required to maintain the normal levels of blood pressure at the interval of every week, fortnight or a month.
- It was observed that **patients responded well to constitutional remedies than to specific remedies** like Strophanthus, rawulfia, vis alb etc.

- **Nux vomica was found an ideal remedy for hypertensive personalities**, to temporarily sooth and calm the patients who are irritable, angry and hypochondriac.

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Homeopathy for hypertensive treatment

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