Original Article

To Study the Efficacy of Jatamansi Phanta in Hypertension

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Abstract

Raised blood pressure is a major risk factor for coronary heart disease and ischemic as well as hemorrhagic stroke. Blood pressure levels have been shown to be positively and progressively related to the risk for stroke and coronary heart disease. In some age groups, the risk of cardiovascular disease doubles for each incremental increase of 20/10 mmHg of blood pressure, starting as low as 115/75 mmHg. In addition to coronary heart diseases and stroke, complications of raised blood pressure include heart failure, peripheral vascular disease, renal-impairment, retinal hemorrhage and visual impairment. Treating high systolic blood pressure and diastolic Blood Pressure so they are below 140/90 mmHg is associated with a reduction in cardiovascular complications. Blood pressure can be managed with drugs as well as non-pharmacological measures which consist of exercise, weight reduction, salt restriction, eating fruits and vegetables, etc. Non-pharmacological measures play an important role in management of hypertension. The use of medicinal plants for treatment of hypertension is very common because these remedies are easily available and low cost than novel pharmaceuticals. Herbs do not cause side effects like weakness, tiredness, drowsiness, impotence, cold hands and feet, depression, insomnia, abnormal heartbeats, skin rash, dry mouth, dry cough, stuffy nose, headache, dizziness, swelling around eyes, constipation or diarrhea, fever etc.

Keywords: Sarpagandha Vati, Systolic Blood pressure, Diastolic Blood pressure.

INTRODUCTION

Beginning of 21st century brings gift of anxiety and more stress for modern society. This stress and strain of day today life affects one's bodily organs through several psychological mechanism. Stress related diseases are rapidly increasing. Among the psychosomatic diseases, the cardiovascular disorder like hypertension is a quite significant disease [1].

Hypertension is an instrumental disease which is the recent diagnostic invention of modern science. Hence there is no direct reference of hypertension in Ayurvedic classics by name as well as by its pathophysiological views. Many works have been carried out on hypertension to evaluate the perfect diagnosis and mode of treatment on the basis of Ayurvedic principles. But a widely acceptable theory is still not available.

Depending on the criteria for the diagnosis hypertension can be said to be present about 18- 20% of adult population and around 50% of the total cases remain undiagnosed and they never attend any clinic. Moreover, the complications of this disease are more grievous than disease itself. The pathogenesis of Hypertension is not clearly understood in Ayurveda. Hypertension in Ayurved perception is very important by identifying signs & symptoms of the disease [2].

Need For the Study: - In young adults, hypertension can sometimes be due to mental stress reasons and also due to De-merits of modern antihypertensive drugs. Present study was undertaken to evaluate the efficacy of Jatamansi Phanta in the management of Hypertension.

Review of Literature: - Nardostachys jatamansi, commonly known as Jatamansi or muskroot and belonging to the Valerianaceae family, is distributed in the Himalayas from Pakistan, India, Nepal, Tibet and China upto high altitudes of 3000-5000 m (Airi

et al., 2000) [3].

This is blockage of the arteries that supply blood to the kidneys. When the kidneys are depleted of blood supply the response is as if the blood pressure is low thereby releasing hormones that cause the blood pressure to rise. These hormones hold on to salt increasing fluid in the body. While this condition is responsible for causing high blood pressure high blood pressure could create kidney damage blocking blood vessels, too. Patients with renal disease without any hypertension diagnosis will develop hypertension ultimately (Liao, Sung, Hung, Wu, Lu, 2012) [4].

Research shows that a person's blood pressure naturally rises with age. As such, age could be a risk factor. Also, studies show where many environmental elements impact an elevated blood pressure level. For example, some people are sensitive to high salt intake, which creates elevation in the blood pressure. Stress, lack of exercise, and obesity are some environmental elements that impact hypertension. More recently, depression was identified as a significant factor in creating hypertensive disease (Calhoun, Jones, & Texter, 2008) [5].

Whittle (2014) [6]. reviewed 'Implementing Programs to Improve Hypertension Management in Typical Practice Settings concluding that it is. 'Not as Easy as It Sounds.' The expert contends that despite extensive application of evidence – based intervention programs 40% of American patients still do not maintain a blood pressure below 140/90 mm Hg. The concern after reviewing evidence from randomized control trials is that while life style changes do improve blood pressure control, there is no guarantee that patients will adapt to these measures on a daily basis. During the trials pharmacological interventions proved successful. However, due to the serious side effects of these drugs patients many not take them as prescribed. The conclusion was that no problem existed with the evidence obtained from these trials, but effective implementation was the real concern.

AIM AND OBJECTIVES: - 1) To study the efficacy of Jatamansi Phanta and its anti-hypertensive in the management of Hypertension.2) Comparative study of Jatamansi Phanta and Sarpagandha Vati in the management of Hypertension.3) Study of Hypertension in detail.

MATERIALS AND METHODS

Jatamansi is known to relieve anxiety, stress and mental fatigue. Churna of the root of Jatamansi is selected for research. Sarpagandha acts as Nidrajanaka and Hridayavasadaka. It reduces Mastishka Uttejana and high blood pressure. By acting on the vasomotor center it leads to generalized vasodilatation, with lowering of blood pressure.

1.Materials were purchased from renowned pharmacy.

2.Authentication of drugs was done at Botany department of University of Pune.

3.Phanta kalpana was prepared according to Sharangdhar Samhita.

4.Preparation and Standardisation of Jatamansi Phanta was done at Rasashastra Bhaishjya Kalpana Dept. of Bharti Ayurved College.

5.Preparation of Sarpagandha Vati was done in Parco Pharmaceuticals, Pune.

6.Single blind randomized controlled study. 60 patients were selected for the study and divided into two groups randomly.

7.Group A was given 40ml Jatamansi Phanta internally twice a day 10 am. & 8 pm.

8.Group B was given 2 tabs of 250mg of Sarpagandha Vati with lukewarm water internally twice a day 10 am. & 8 pm. [7]

METHODOLOGY

With special Performa minimum 60 Numbers of patients were selected on random basis.

Clinical trials were conducted on patients in OPD and IPD of B.V.M. F's Ayurvedic Hospital after taking their consent.

Clinical study was conducted in 2 groups

Group A : 30 patients receiving Jatamansi Phanta

Group B : 30 patients receiving Sarpagandha Vati

Fresh Jatamansi Phanta was prepared according to Sharangdhar Samhita in front of patients and then was instructed to prepare by themselves.

PLACE OF WORK: - The clinical trial was carried out at OPD and IPD of Bharati Vidyapeeth University Ayurved Hospital, Dhankawadi, Pune-43. Ethics committee of Bharati Vidyapeeth Deemed University, College of Ayurved approved the proposal Dated on 21/3/12. In this study total 60 patients were selected randomly. Two groups of 30 patients were made for the trial. Total 69 patients were screened of which 9 patients were dropped out from study because of irregular follow up & some had to be started with anti- hypertensive medicines [8].

DRUG ADMINISTRATION: -Drug administration is explained in Table No -1

SELECTION OF PATIENTS

INCLUSION CRITERIA: - 1) Age group 18 - 70 yrs.2) Sex - Both male and female 3) Essential Hypertension 4) Newly diagnosed hypertension.5) Mild Hypertension (Stage I Hypertension) 6) Systolic BP: 140 – 159 mm of Hg, Diastolic BP: 90 – 99 mm of Hg.

EXCLUSION CRITERIA: - 1) Secondary Hypertension.2) Diabetes Mellitus Type I & II. 3) Hypertensive Encephalopathy 4) Myocardial Infarction. 5) Stroke 6) Renal diseases 7) Congestive Cardiac Failure 8) Pregnancy Induced Hypertension (PIH)

SUBJECTIVE PARAMETERS: - 1) Headache 2) Dizziness 3) Palpitations 4) Fatigability

OBJECTIVE PARAMETERS: - 1) Systolic and Diastolic blood pressure

CLINICAL ASSESSMENT CRITERIA: - 1) Primary End Points – Relief from Symptoms. 2) Secondary End Points – Control of Systolic and Diastolic Blood Pressure

CLINICAL ASSESSMENT PARAMETERS

- Headache: − Absent
  + Rarely Headache relieves without medication
  ++ Frequently Headache relives by rest
  +++ Severe Headache disturbs daily activities requires medication
- Dizziness: − Absent
  + Rarely for some movement during change of posture
  ++ Often during change of posture
  +++ Often even in lying condition also
- Palpitations: − Absent

+ Occasional (1-2 times in a day)

++ Intermediate (5-6 times in a day)

+++ Continuous

- Fatigability: − Absent

+ Symptomatic without being bedridden

++ Requiring some bed rest

+++ Bedridden more than half a day

INVESTIGATIONS: - 1) Haemogram with E.S.R. 2) Urine – Routine and Microscopic 3) Blood Sugar – Random 4) Lipid Profile 5) Blood Urea and Creatinine 6) ECG 7) Chest X-Ray, USG- Abdomen & Pelvis (if required).

CRITERIA OF DIAGNOSIS:

1) Readings of Blood Pressure were taken in supine posture and their average was utilized for diagnosis. A patient with persistent blood pressure above 150/90 mm of Hg was designated as hypertensive.

2) Essential Hypertension was diagnosed by excluding the other known pathologies of high blood pressure as follows:

i) Coarctation of Aorta was excluded by x-ray and by taking the blood pressure in both the extremities. Renal pathology was excluded by routine, microscopic and occult blood examination of urine and blood urea in estimation.

ii) Endocrine diseases were excluded clinically by careful examination and the presence of other symptoms of the disease. No patient having pregnancy was included in this series [9].

iii) The following investigations were undertaken to exclude other pathologies as well as to assess the condition of the patient.

ROUTINE BLOOD EXAMINATION: - Total leukocyte count and differential count, hemoglobin in gram percentage and erythrocyte sedimentation rate, were carried out.

URINE ANALYSIS: -Physical, chemical and microscopic examination for its reaction, albumin, sugar, acetone, R.B.C., pus cells, casts etc. were done to exclude other pathologies.

BIOCHEMICAL INVESTIGATIONS: - 1) Random blood sugar was done in all the patients to exclude diabetes mellitus.2) Blood urea was estimated in every case to exclude renal pathology.3) Serum cholesterol was done in all the cases.

ELECTROCARDIOGRAM: - E.C.G. was done to see hypertrophy and ischemic changes.

DISCUSSION: - At present a layman too is aware about the disease hypertension because of its increased incident, its associated morbidity and mortality.

Hypertension is a psychosomatic and hemodynamic disease. It is also known as silent killer or hidden killer because of its associated hazards without expressing any symptomatology. Therefore, awareness for hypertension in the society has been increased.

In modern science the therapy for hypertension is a palliative in nature. Hence there is no perfect answer for hypertension in allopathic medicine. For Ayurveda the concept of disease is new because it is an instrumental disease invented recently. But it is present at least since the existence of Ayurvedic Samhitas in the form of signs and symptoms because many references present

in Samhitas like Pakshaghata, Hridroga, Mutraroga and other Symptomatologies give the accurate indirect references of hypertension, but lack of proper detail description in Ayurvedic Samhitas made Ayurvedists to study upon it [11].

AGE: On the observation of age wise distribution of Hypertension, it was found that maximum no. of patients (41.66%) were between the age group of 51-60.

Among the three Avastha of human life, this age group belong to Madhyama Avastha. In this avastha physiologically the dominance of Pitta and Vata is seen. EHT is a Vata - Pitta Pradhana Tridoshaja Vyadhi, so this might be cause of EHT in this age group.

The probable cause of this age group might also be due to irregularity of diet Asatmya Aahar and also due to stress factor.

SEX: Sex incidence in Hypertension in present study was found to be more in females i.e.; 51.66%, while in male it was 48.33%. No conclusion can be made on the basis of this short time study, but it can be said that at present day the ladies of middle-class family are living in more depression and stress full environment. So, it may be cause of Hypertension.

HEADACHE: On the observation of headache Group A and Group B both are highly significant. The symptom of headache decreased due to the Kapha Vataghna property of Sarpagandha.

DIZZINESS: Both Group A and Group B are highly significant in terms of Dizziness. Result occurred due to the Pittahar and Sheeta viryatmaka property of Jatamansi.

PALPITATION: Regarding the effect of therapy, result was highly significant in both Group A and Group B ($P<0.001$). Tikta rasa of Jatamansi does Pachana of Raktagata kleda and Madhura Rasa does rasa Poshana thus resulting into Rakta Prasadana, decrease in Palpitation.

FATIGABILITY: In terms of fatigability both Group A and Group B are highly significant. Patients of fatigue had Pitta dominancy to obstruct Vyana or Udana. Vatahar karya and Balya property of Jatamansi resulted in the decrease of this symptom.

SYSTOLIC AND DIASTOLIC B.P.: Control of systolic and diastolic B.P. was found to be highly significant in Group A and Group B. Tikta Rasa of Jatamansi does Pachana of Raktagata kleda and Madhura rasa does rasa Poshana thus resulting into Rakta Prasadana. And being Vataghna it acts on the Gati of Pranavayu thus resulting into control of systolic and diastolic B.P. [12]

In this Studied 9 cases were dropped out during the study. Out of which 4 patients failed to maintain follow-up and Rest 5 needed to be started with Anti – Hypertensive drugs.

RESULT: - In assessing overall effect of the therapy, it was seen that –

1)Overall statistical analysis of both Group A (Jatamansi Phanta) and Group B (Sarpagandha vati) shows both groups to be highly significant in the control of Hypertension.

2) P-value of all the symptoms in Group A and Group B are highly significant ($P<0.001$).

3) P -value of systolic and diastolic blood pressure also is highly significant in both groups.

4) Both groups equally acted on the symptoms of Hypertension thus producing equal relief from symptoms.

5) Both groups had equivalent action on the systolic and diastolic blood pressures resulting in equal anti-hypertensive effect.

CONCLUSION

1. Vata acts as the major Dosha in Hypertension.

2. Pitta also plays secondary role in producing the symptoms in Hypertension i.e. dizziness and headache.

3. Regarding the drug Jatamansi Phanta Tikta rasa of Jatamansi does Pachana of Raktagata kleda and Madhura Rasa does rasa Poshana does resulting into Rakta Prasadana does helps in reducing Blood Pressure.

4. Kapha Vataghna property of Sarpagandha helps in reducing Hypertension.

5. Both groups equally acted on the symptoms of Hypertension thus producing equal relief from symptoms.

6. Both groups had equivalent action on the systolic and diastolic blood pressures resulting in equal anti-hypertensive effect.

7. Hence, I conclude, that both groups, Group A (Jatamansi Phanta) and Group B (Sarpagandha Vati) are equally effective in the control of Hypertension.

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