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Research Article

AN OBSERVATIONAL STUDY ON EFFICACY OF KSHEERABALA TAILA SHIRODHARA AND TAB ARJIN IN THE MANAGEMENT OF ESSENTIAL HYPERTENSION

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ABSTRACT

Hypertension is one of the most common complex disorders. The etiology of Hypertension differs widely amongst individuals with in a large population. The increasing incidence of Hypertension is a cause for global concern as it mainly affects the adults and elderly population effecting 29% of adult population. It is an independent predisposing factor for heart failure, coronary artery disease, stroke, renal disease, and peripheral arterial disease (PAD). It is also a risk factor for all clinical manifestations of atherosclerosis. Incidence of Hypertension is also high in Indian population. Around 40-45 million Indians are believed to be suffering from Hypertension. The treatment of Hypertension in contemporary science includes administration of beta blockers, calcium channel blockers, ACE inhibitors and other different modalities; in spite of such a comprehensive approach the treatment of Hypertension has still many limitations. The major drawback is the probable adverse effects and cost of medicine. Hence there is a always a scope for management of Hypertension with alternative approach making use of cost effective, safer management strategies. The present study was conducted on 30 patients of Essential Hypertension with ksheerabalataila shirodhara for 7 consecutive days along with Tab Arjin 1 tab tid with water as anupana for a period of 30days. Observation was done before intervention, 2 mid test assessments were done on 7th and 15th day and post-test assessment was done on 30th day. Intervention revealed that 12patients had marked improvement, 9 had moderate improvement and 7 had mild relief while insignificant relief was noticed in 2 patients.

Keywords: Shirodhara, Ksheerabalataila, Tab Arjin, Essential Hypertension.

INTRODUCTION

Hypertension is one among the most alarming health problems of present era. It is estimated that approximately 1 billion people worldwide are suffering from high Blood pressure and its number is expected to increase to 2.5 billion by the year 2025¹. The increasing incidence of Hypertension is a cause for global concern as it mainly affects the adults and elderly population effecting 29% of adult population and it is an independent predisposing factor for heart failure, coronary artery disease, stroke, renal disease, and peripheral arterial disease (PAD)². It is also a risk factor for all clinical manifestations of atherosclerosis. Incidence of Hypertension is also high in Indian population. Around 40-45 million Indians are believed to be suffering from Hypertension.

Essential Hypertension which is also called as primary Hypertension represents a substantial portion of Hypertension,

accounting 90-95% of the cases. It is that variety of Hypertension wherein no obvious underlying cause can be recognized³. Despite the considerable attention that has been focused on the diagnosis and management of Essential Hypertension by the clinical and research community, the diagnosis of Hypertension is still a problematic area as the disorder is usually asymptomatic. That is why it is often called as “silent killer”⁴. Apart from the problem of diagnosis, the management of essential Hypertension is also an area which has lot of limitation considering the idiopathic nature and chronicity of the disease. This is an area where there is a lot of scope for clinical research. An early and effective intervention may minimize the possibility of complications involving multiple systems.

Shirodhara⁵ is an external therapeutic procedure of panchakarma used by clinicians for various indications which includes psychological, neurological, metabolic and

autoimmune diseases. Taila dhara is one of the varieties of shirodhara which is considered specifically useful in various diseases where vatadosha plays predominant role. Ksheerabalataila is the most commonly used formulation particularly indicated in vatavyadhis.

AIM AND OBJECTIVE

To study the combined effect of ksheerabalatailashirodhara and Tab Arjin in Essential Hypertension.

MATERIALS AND METHODS

Design

Patients were selected from the O.P.D and I.P.D of Government Ayurveda Medical College and Hospital, Mysore, India. A total of 44 patients between the age group of 30-70 years fulfilling the criteria for the diagnosis of the disease were registered for the study. Out of these, 14 patients dropped during various stages of the study and 30 patients completed the intervention. Data were collected as per the proforma of the case sheet. The study was an observational with pre and post test design.

Diagnostic criteria

The 7th report of Joint National Committee on Prevention, Detection, Evaluation and intervention of HBP were considered as the standard for the diagnosis of HTN (Table 1).

Inclusion criteria

Patients of either sex between the age group 30-70 years either treated or freshly detected cases of Essential Hypertension were selected. Patients with HTN stage 1 and HTN stage 2 with or without symptoms were included for the study. In treated cases the earlier medication was withdrawn gradually and completely, after complete withdrawal of earlier treatment flush out period of 7 days was given and then intervention was started.

Exclusion criteria

Patients suffering from any other systemic disorders which interfere with the course of the disease and intervention were excluded.

Statistical methods

Descriptivestatics, Chi-square test, contingency co-efficient analysis, repeated measure ANOVA, Paired Samples t-test using SPSS for windows software.

Investigations

Patients were subjected to routine investigations of blood, urine etc. to exclude any other systemic disorders.

Intervention

Shirodhara was carried out with ksheerabalataila during the first 7 days of intervention for about 45mins daily and Tab Arjin 1 tabtid was given after food with water as anupana along with shirodhara & after completion of the shirodhara for 30 days.

Duration :-

Duration of the study was 30 days during which patients were advised for limited usage of salt, fat rich diet, quitting smoking and alcohol and also patients were asked to avoid stressful situations.

Assessment criteria

The assessment was done considering systolic, diastolic and mean Blood pressure readings in all the 3 postures i.e. supine, sitting and standing at pre-test i.e. 0th day, 2 mid test

assessments on 7th and 15th day respectively and post-test assessments on 30th day.

Overall assessment

The assessment was graded in following manner,

Marked improvement: Reduction in systolic Blood pressure in the range of 30-40 mm Hg and diastolic Blood pressure up to ≥ 15 mm Hg.

Moderate improvement: Reduction in systolic Blood pressure in the range of 20-29 mm Hg and diastolic Blood pressure in the range 11-14 mm Hg.

Mild improvement: Reduction in systolic Blood pressure in the range of 10-19 mm Hg and diastolic Blood pressure in the range 5-10 mm Hg.

Insignificant improvement: Reduction in systolic Blood pressure in the range of 0-9 mm Hg and diastolic Blood pressure in the range 0-4 mm Hg.

The mean of both is taken and overall assessment is done.

OBSERVATION AND RESULTS

Pre-test

Both fresh and treated cases were included. In the present study, 19 patients were fresh and 11 patients were treated earlier. Majority of the patients i.e. 21 patients who approached for treatment were symptomatic. Freshly detected case reported with the complaints such as giddiness, headache and fatigue. The symptoms like palpitation and insomnia were observed predominantly are known cases of Hypertension. Out of 30 patients, 23 patients had fatigue, followed by insomnia was observed in 20 patients, giddiness in 18 patients, headache in 17 patients and palpitation was found in 10 patients. In both fresh and treated cases, three consecutive Blood pressure readings were taken in supine, sitting and standing posture to define initial BP. There was difference between Blood pressure readings taken in different positions such as supine, sitting and standing posture. The systolic Blood pressure was high in supine and sitting position, when compared to standing, while the diastolic pressure was high in standing position, when compared to supine, although in few patients the vice-versa was also observed. The difference in pressure between supine and standing was within 5mm Hg in fresh cases, where as in treated & chronic cases difference was more than 10mm Hg.

In the present study familial predisposition was observed in 55% of the cases, excessive salt intake was observed in 42% of cases and the risk factors like smoking, alcohol, obesity was found only in 18% of the cases. Overall, fresh cases were observed with frequent measurement of Blood pressure and then intervention was started. In treated cases the earlier medication was withdrawn gradually and completely, after complete withdrawal of earlier treatment flush out period of 7 days was given and then intervention was started.

Mid-test:- 7th day

Patients were subjected to shirodhara for 7 days with ksheerabalataila. Convincing the patients for shirodhara therapy was very difficult, as most patients preferred oral drugs and OPD based treatments. So treatment was carried out on OPD and IPD basis. Blood pressure readings were taken before and after the procedure, and It was observed that there was a significant decrease in both systolic and diastolic Blood pressure i.e. systolic 15-20mm

Hg and diastolic 8-12 mm Hg before to after therapy. In some patients the change was observed up to 25 mm Hg systolic and 15 mm Hg diastolic. After completion of 7th day of procedure most of the patients reported sense of wellbeing and marked reduction in the symptoms. In some patients symptoms like heart burn, nausea & palpitation persisted even after 15th day of intervention.

Post-test observation

After the intervention there was significant reduction in both systolic and diastolic Blood pressure, the reduction in systolic Blood pressure was more marked. There was significant

reduction in symptoms like fatigue, giddiness, insomnia and palpitation. Overall assessment of the study revealed that out of 30 patients, 12(40%) patients had marked improvement, 9(30%) had moderate improvement and 7(24%) patients had mild relief while 2(6%) patients had insignificant relief. Overall, the study revealed that the selected interventions have a significant role to play in the management of Essential Hypertension. Reduction of BP was observed markedly with P value <0.000 (Table 2-7).

Table 1: Showing the range of Blood pressure according to 7th report of the Joint National Committee on detection, evaluation and the treatment of HBP

Hypertension stage	Systolic (mm hg)	Diastolic (mm hg)
Normal	< 120	< 80
Pre Hypertension	120-139	80-89
Stage I Hypertension (mild)	140-159	90-99
Stage II Hypertension (Moderate)	≥160	≥ 100

Table 2: Showing descriptive statistics of Systolic Blood pressure (SBP) in supine posture

	Mean	Std. Deviation	N
SBP BT	157.6000	8.17184	30
SBP 7 th day	131.5000	8.12728	30
SBP 15 th day	135.7000	7.87468	30
SBP AT	133.5000	8.84665	30

Source	Type III Sum of Squares	df	Mean Square	F	Significance
CHANGE	11946.200	3	3982.067	130.654	.000
Error(CHANGE)	3474.500	114	30.478		

Table 3: Showing descriptive statistics of Systolic Blood pressure (SBP) in sitting posture

	Mean	Std. Deviation	N
SBP BT	154.6000	6.62054	30
SBP 7 th day	134.3000	10.42820	30
SBP 15 th day	132.9000	7.98617	30
SBP AT	131.1000	8.64444	30

Source	Type III Sum of Squares	df	Mean Square	F	Significance
CHANGE	10596.500	3	3532.167	72.053	.000
Error(CHANGE)	5588.500	114	49.022		

Table 4: Showing descriptive statistics of Systolic Blood pressure (SBP) in standing posture

	Mean	Std. Deviation	N
SBP BT	151.5000	6.70820	30
SBP 7 th day	131.2000	10.53116	30
SBP 15 th day	129.1000	9.70024	30
SBP AT	128.5000	7.45160	30

Source	Type III Sum of Squares	df	Mean Square	F	Significance
CHANGE	11502.619	3	3834.206	67.452	.000
Error(CHANGE)	6480.163	114	56.844		

Table 5: Showing descriptive statistics of Diastolic Blood pressure (DBP) in supine posture

	Mean	Std. Deviation	N
DBP BT	94.5000	5.10418	30
DBP 7 th day	83.0000	6.56947	30
DBP 15 th day	81.1000	5.71148	30
DBP AT	80.0000	4.58831	30

Source	Type III Sum of Squares	df	Mean Square	F	Significance
CHANGE	5241.675	3	1747.225	61.938	.000
Error(CHANGE)	3215.850	114	28.209		

Table 6: Showing descriptive statistics of Diastolic Blood pressure in sitting posture

	Mean	Std. Deviation	N
DBP BT	95.1000	6.97288	30
DBP 7 th day	82.1000	6.13789	30
DBP 15 th day	82.7000	5.47819	30
DBP AT	77.5000	5.50120	30

Source	Type III Sum of Squares	df	Mean Square	F	Significance
CHANGE	4736.475	3	1578.825	45.229	.000
Error(CHANGE)	3979.450	114	34.907		

Table 7: Showing descriptive statistics of Diastolic BP in standing posture

	Mean	Std. Deviation	N
DBP BT	91.6000	6.03847	30
DBP 7 th day	81.0000	6.40723	30
DBP 15 th day	80.0000	5.61951	30
DBP AT	78.5000	3.66348	30

Source	Type III Sum of Squares	df	Mean Square	F	Significance
CHANGE	4196.300	3	1398.767	39.737	.000
Error(CHANGE)	4012.900	114	35.201		

DISCUSSION

The result of the study revealed that, shirodhara along with Tab Arjin effectively lowered Blood pressure and reduced majority of the symptoms, which is statistically highly significant with P value 0.000. The symptoms such as headache, fatigue, giddiness, insomnia were reduced after intervention while other symptoms like palpitation and chest pain showed insignificant response. After observing the mean Blood pressure values, it is seen that systolic BP reduced upto 14 mm Hg while diastolic BP reduced upto 9 mm Hg on 7th day. On 15th day systolic BP reduced upto 22 mm Hg and diastolic BP reduced upto 12 mm Hg. After treatment systolic BP reduced upto 24 mm Hg and diastolic BP reduced upto 15 mm Hg. Freshly detected and untreated cases responded well while treated cases of more than 2 years of history showed lesser improvement. The results were encouraging in majority of the patients where stress played an important role.

CONCLUSION

In this clinical trial it is observed that there is a marked reduction in the levels of BP. Systolic Blood pressure reduced considerably than diastolic Blood pressure. Symptoms like headache, insomnia, giddiness and fatigue showed marked improvement, while not much reduction was observed in other

symptoms such as chest pain and palpitation. In mild to moderate degree of Hypertension and when freshly detected, shirodhara therapy gives positive result. This suggests that ksheerabalatailashirodhara and Tab Arjin has a significant role to play in managing Essential Hypertension and in reducing the symptoms of Hypertension.

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