

Research Article

Study the efficacy of Punarnava Churna in gestational hypertension

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Article Received on: 09/06/2020 Accepted on: 27/06/2020 Published on: 30/06/2020

ABSTRACT:

Gestational hypertension is one of important and common complication in pregnancy. In Ayurved classics Hypertension is not described anywhere. But we can logically use ayurvedic drugs which can decrease signs and symptoms of Hypertension .Day by day there is tremendous research is going on to find new antihypertensive drugs and they become more costly .here in this research punarnava churn is used to control gestational hypertension with taking control drug LMethylidopa. Punarnava is reduce signs and symptoms like shotha, weight, gain, headache. punarnava has diuretic (Mootral) property helps to control blood pressure with no side effect and cost effectively.

KEY WORDS: Gestational hypertension, Punarnava, L-Methylidopa

INTRODUCTION:

Hypertension is common complication in pregnancy. Gestational hypertension is important cause of maternal and perinatal morbidity. Effective management of hypertension play role in outcome of pregnancy. If blood pressure more than 140/90mmHg first time in pregnancy after 20 weeks without proteinuria we called gestational hypertension. Gestational hypertension causes preeclampsia; eclampsia.10% pregnancies are complicated by hypertensive disorder. In modern science L methylidopa, hydralazine, Nifedipine, labetalol are the choice of drug in gestational hypertension. In Ayurvedic classics Acharyas have mentioned a few disordered causes during pregnancy. They have given specific treatment given for them. In garbhini chikitsa adhyay of chikitsasthan and antarvartini chikitsa adhyay of chikitsa of khalsthana kashyapa has emphasized that proper management of disorders during pregnancy is helpful for protection and development of both mother and fetus. Though pregnancy induced hypertension not described in classics,a few scattered references when put together give an idea about disease. In modern science many drugs having so many side effect i.e. drowsiness, lethargy, dry mouth, hepatitis, hemolytic

anemia etc. if they are taken for long time. Punarnava is vaatanulok, Mootral, shothagn property. This study how punarnava churn decrease blood pressure along with decreasing symptoms like Edema, headache, Oliguria, weight gain.

AIM:

Study the efficacy of Punarnava churn in Gestational Hypertension

OBJECTIVES:

1. To study the effect of Punarnava churn in Gestational Hypertension.
2. To study the effect of L-Methylidopa in Gestational Hypertension.
3. To do comparative study of effect of Punarnava churn and L-Methylidopa on Gestational Hypertension.

MATERIAL AND METHODS:

Clinical Type

1. Trial type -Simple randomized open clinical trial.
2. Sample size-15 patient in each group.

3. Collection of Drug- The drug collected from local pharmacy and authentication and Standardization was done at standard lab
4. Form of drug- churn.

MATERIALS:**1. Trial Drug name –Punarnava churn**

Latin name-	Boerhaviadiffusa
Family-	Nyctaginaceae
Gun-	Laghu, Ruksha
Ras-	Madhur, Tikts, Kashay
Vipaka-	Madhur
Veerya-	Ushna
Doshghnata-	Tridoshghang
Karma-	pandughn, shothhar, hridrognashak
Dose -	5gm
Kaal-	two times after meal
Anupan -	water
Follow up-	0 th , 15 th , 30 th day

2. Control Drug Name- L Methyl Dopa.

L-Methyl dopa has been most widely used antihypertensive drug during pregnancy.

Dose-	250 mg
Kaal-	HS
Anupan -	water
Follow up-	0, 15 th , 30 th day

Selection criteria of the patients

For the present study 15 patient were selected from opd of S.R.P.T. Department SSt Ayurved college, sangamner.

Inclusive Criteria:

1. Pregnancy lady having BP more than 140/90 mmHg for the first time during pregnancy.
2. Pregnant lady having rising of systolic BP at least 30 mmHg or rising of diastolic BP 15 mmHg over previous MAP or MAP more than or equal to 105mmHg.

Exclusive Criteria:

1. Preeclampsia (persistent proteinuria more than equal to 30 mg/dl in random urine samples alongwith hypertension).
2. Eclampsia (preeclampsia with convulsion).
3. Patient suffering from cardiac and liver disease.

Criteria for assessment of the overall effect of therapy:

Complete relief	: 100%
Marked improvement	: Above75%
Moderate improvement	: 51 -75%
Mild improvement	: 26 - 50%
No relief	: Below25%

DISCUSSION:

Both trial and control drugs were given to both groups with follow up on the 15th and 30th day. Below observation found using assessment criteria.

1. Systolic blood pressure was reduced 9.66% in Group A (P < 0.001) and 10.51% in Group B (P < 0.01). All these values are statistically highly significant. Thus the effects of both groups are equal in systolic blood pressure. Diastolic blood pressure was reduced by 16.58% in Group A (P < 0.001)

And 13.73% in Group B (P < 0.01). These values are statistically highly significant. Thus Group A (Punarnava churn) is more effective in reducing diastolic blood pressure.

In the Samprapti of the disease, due to Nidana Sevana Vata Dushti takes place. Due to Ruskha, Khara and Sheeta guna, it decreases the flexibility and increases the Kathinya and thus causes Sankocha of vessels and Vyana Vaya may lead to forcible blood flow in the vessels and thus hypertension manifests. Thus vatadushti is the main etiological factor in the pathogenesis of the disease pregnancy induced hypertension.

Punarnava churn has Vatanulomana, Raktaprasadana, Shothahar, Pandughna, Mootrala properties. Due to Vatanulomna, it normalizes the function of Apana Vayu. Because all doshas including all Vayu are depending upon the normal function of ApanaVayu, so it normalizes the Vata Vriddhi. Due to Raktaprasadana, Pandughna, Shothagna properties of the drug Rasa, Rakta Preerana takes place. Due to Mootrala property of punarnava churn, it decreases avarodha by decreasing kleda of body and thus decreases Vatavriddhi.

Thus Vatashamana and Vatanulomana effect of the punarnava is responsible for its effect on hypertension.

Criteria of Assessment:

1.	SBP (mm of Hg) Score	
	< 140	0
	140 - 148	1
	150 - 158	2
	160 - 168	3
	> 170	4
2.	DBP (mm of Hg.) Score	
	< 90	0
	90 - 98	1
	100-108	2
	110-118	3
	> 120	4
3.	Oedema	
	No oedema	0
	Oedema only in day but disappears after rest (Phy. Oed.)	1
	Mild pedal oedema	2
	Moderate pedal oedema	3
	Severe pedal oedema	4
4.	Oedema on other body parts	
	No oedema on other body parts	0
	Oedema on face	1
	Oedema on face and vulva / abdomen	2
	Oedema on face, vulva and abdomen	3
	Oedema on whole body	4
5.	Headache	
	Nil	0
	Rarely headache	1
	Frequent headache but does not disturb daily activities	2
	does not require medication	
	Severe headache, disturbing daily activities, no relief on medication	3
6.	Disturbed sleep	
	Sound sleep	0
	Wakes up 1-2 times a night	1
	Difficulty in onset of sleep, remains disturbed in night	2
	Very less sleep in small intervals, makes patient irritable	3
	Not getting sleep whole night	4
7.	Oliguria	
	No	0
	Mild	1
	Moderate	2
	Severe	3
8.	Abnormal weight gain in kgs / week	
	< 0.5	0
	0.5 - 0.9	1
	1 - 1.9	2
	2 - 2.9	3
	> 3	4

2. 63.02% of relief on edema was observed in Group A ($P < 0.001$) and 40% in Group B ($P < 0.01$) These all values are statistically highly significant. This indicates that Group A is more effective in reducing edema.

The relief in the symptom may be due to Mutrala, Anulomana, Shothahara, Srotoshodhana and Vatashamana property of punarnava churn.

50% relief in edema on other body parts was observed in Group A ($P > 0.05$) and 50% in group B ($P > 0.05$) These both values are statistically insignificant.

3. 55.55% relief in Headache was found in Group A ($P < 0.05$) and 36.36% in Group B (> 0.05) Group A showed statistically significant results and Group B showed the insignificant result. This indicates that group A is more effective in reducing headache.

The main causative factor for headache is vitiated Vata. Due to Vatashamana and Vatanulomana property of punarnavachurn headache is relieved.

4. 71.5% relief in disturbed sleep was observed in Group A ($P < 0.001$) and 63.93% in Group B ($P < 0.01$). Even though all these values are statistically highly significant but Group A shows more results than Group B.

5. 50% relief in oliguria was observed in Group A ($P > 0.05$) and 49.62% in Group B ($P > 0.05$). All these values are statistically insignificant.

The relief in the symptom may be due to Vatashamaka Shothahara, Anumolana and Diuretic property of Punarnava churn.

6. 71.24% relief in abnormal weight gain was observed in Group A ($P < 0.05$) and 60% in Group B ($P < 0.01$). These values are statistically significant for group A and highly significant for Group B. Thus statistically the results are in favor of Group B but percentage relief was more in Group A.

The relief in abnormal weight gain may be due to a decrease in edema.

Overall effect of therapies:

Group A:

In this group, no patient got complete relief. Marked

relief and moderate relief were shown by 37.5% of patients each and only 25% of patients showed mild relief.

Group B:

In this group, no patient showed complete relief, 16.67% of patients showed marked relief, 50% moderate relief, 33.33% mild relief and no patient showed no relief.

Comparison between Group A and Group B:

After comparison of two groups, it was found that 33.56% patients got marked relief in Group A and 14.67% in Group B. Moderate relief was shown by 35.7% patients in Group A and 50% in Group B. 23% of patients mildly improved in Group A and 31% of patients mildly improved in Group B.

CONCLUSION:

Gestational hypertension is a very common complication in pregnancy and a very important cause of maternal and perinatal morbidity and mortality.

Ayurvedic classics is not mentioned hypertension as well as pregnancy induced hypertension. So we don't have any direct clue to treat it. But with the help of signs and symptoms, we can try to use drugs that help to relieve these symptoms and finally to treat that disease which not described in ayurvedic classics.

Here signs and symptoms present in gestational hypertension like Odema, weight gain, blood pressure, oliguria can treat by Punarnava churn very effectively.

Modern drugs like antihypertensive have their own side effects so patients in whom antihypertensive are not compatible, we can try punarnava churn. This is cost-effective also.

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Cite this article as:

Ashvini S. Bade, Amit Shinde, Study the efficacy of Punarnava Churna in gestational hypertension, ADJIM 2020: 5(2), p. 01-05.