

THE COMPARATIVE CLINICAL STUDY OF PUNARNAVADI KWATH WITH TABLET METHYLDOPA IN GARBHINI SHOTHA W.S.R TO PIH

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ABSTRACT

Pregnancy is a unique, exciting and often joyous time in a woman's life, as it highlights the woman's amazing creative and nurturing powers while providing a bridge to the future. *Garbhopadrava*¹ is a disease that comes to existence after conception and manifestation of the disease is in body of mother. *Garbhopadravas* are mentioned in *Harit Samhita*. *Garbhini shotha* is one of the common *updrava*. On the basis of signs and symptoms *Garbhini shotha* is correlated with PIH in modern science. Treatment of this disorder still remains a challenge to even the most experienced obstetricians, mainly because exact aetiology is unknown. According to Ayurvedic text main treatment of *Garbhini shotha* is *Shothhar chikista*. I have tried to assess *Shothahar* and antihypertensive effect of *punarnavadi Kwath*². Hence study entitled the comparative Clinical Study of *Punarnavadi Kwath* with Tablet Methyldopa In *Garbhini Shotha* With Special Reference to PIH” is undertaken. It is a humble attempt to expand the concept of *Garbhini Shotha* according to *Ayurveda* and to yield a flourishing result to this world wide problem through *Ayurveda*, this topic has been selected for the study.

Keywords: *Garbhini Shotha, Garbhopadrava, PIH, Punarnavadi Kwath*

INTRODUCTION

“*Kaumarbhritya Tantra*” is a special branch of *Ashtang Ayurveda* that deals with women’s health and also about the different stages of her life like menarche, pregnancy, delivery, lactation and at last menopausal stage. During pregnancy, maternal physiology is altered due to

foetus & disease of pregnant woman due to foetus are termed as “*Garbhopadrava*” *Garbhini Shotha* is such kind complication or *Upadrava* mentioned in *Harit samhita* & *Kashyap samhita*. According to Modern Science common causes of oedema of pregnancy are – Pre–

eclampsia³, Anaemia and Hypoproteinemia. According to *Kashyap vata* is the main cause of *shotha*⁴ Due to high percentage of *Garbhopadrava shotha* the disease has to keep in mind to find out remedy for it. According to Charakacharya, pregnancy is very delicate stage⁵. In *Kashyap samhita*, treatment for *Garbhini shotha* is –*Kwatha* of *Punarnava* root, *Deodaru* and *Murva* along with *anupana* of *madhu* is indicated in *garbhini shotha*. *Punarnava*⁶ is one of the most *shothaghna* drugs without any side effect. It decreases *kleda*, which is responsible for oedema because of its diuretic property. It has *raktavardhak*, *rasayan* and cardio tonic properties too. *Deodaru* also have *shothaghna* property and it is included in *stan-yashodhak gana* by *Charak*⁷. Also *deodaru* is included in *masanumasik kashayas* recommended by *Sushruta* to be given in 1st and 10th month of pregnancy as *garbha sthapak in yonigat rakta strava*. *Murva* is also included in *stan-yashodhak gana* by *Charak*. Because of its *tikta* and *madhura rasa* it is *kapha – vataghna* and *cardiotonic* too. Also *deodaru* and *murva* both are included by *Sushruta* in *yoga of mutra udavarta chikitsa* for their *mutra recha* property⁸. As *punarnava*, *deodaru* and *murva* are easily available and affordable, the treatment cost becomes economical. Use of diuretics like frusemide in treatment of oedema of pregnancy

gives time relief to mother, but likely to cause harm to the fetus by diminishing placental perfusion. *Punarnava*, *deodaru* and *murva* have no known side effects on both mother and fetus. So for these properties of *punarnava*, *deodaru* and *murva*⁹, they are selected for the treatment of *Garbhini shotha*. If this proves its efficacy it will be a great achievement through Ayurved to the obstetrics science. Therefore present study entitled “The Comparative Clinical Study Of *Punarnavadi Kwath* with Tablet Methyldopa In *Garbhini Shotha* With Special Reference to *PIH*”¹⁰ is undertaken. Hence in a humble attempt to expand the concept of *Garbhini Shotha* according to Ayurveda and to yield a flourishing result to this world wide problem through *Ayurveda*, this topic has been selected for the study.

MATERIAL AND METHODS

For this clinical study two groups were taken including 30 patients in each group which were selected from M.A Podar Hospital OPD and IPD.

Group A: 30 patients were given *Punarnavadi Kwath*

Group B: 30 patients were given Tablet methyl-dopa

Ingredients of *Punarnavadi Kwath* as follows :

Contents of *Punarnavadi Kwath*:

- 1) *Punarnava*-7 gm approximately
 - 2) *Deodaru* - 7 gm approximately
 - 3) *Murva* - 7 gm approximately
- Water – 320 ml
- Total= 20 gm

Drug dosage and Duration:

Group A: This group was termed as Trial group
Sample size: 30

Drug used: *Punarnavadi Kwath*

Dose: 40 ml *Punarnavadi kwath* twice daily orally with *Madhu*.

Duration of treatment: 10 days.

Group B: This group was termed as control group

Sample size: 30

Drug used: Tablet methyl dopa 250mg TDS

Duration of treatment: 10 days

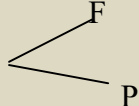
INCLUSION CRITERIA:

- 1) Age - 20 to 40 yrs
- 2) Any Gravidae
- 3) Patient having pitting pedal oedema.
- 4) Blood pressure up to 160/110 mm of Hg.
- 5) Urine albumin trace to +2
- 6) Pregnant patient of gestational age of 28-36 weeks.

EXCLUSION CRITERIA:

- 1) Eclampsia
- 2) Complicated pregnancy
- 3) Patient having known cardiac problems
- 4) Diabetes
- 5) Patient having severe renal pathology
- 6) Patient having medical and surgical emergency
- 7) Patient having severe anaemia with pedal oedema
- 8) Patient having HIV, VDRL, HBsAg +ve
- 9) Having past history of any thromboembolism or DVT.

INVESTIGATIONS

- 1) Blood - CBC
ESR
Blood group
BT, CT
HIV
VDRL
HBsAg
BSL 
- 2) Urine a) Routine
b) Microscopic
- 3) USG obstetrics:

CRITERIA/ PARAMETERS FOR ASSESSMENT OF PATIENTS:

To assess the improvement in symptoms, gradation, on the basis of severity has been stated here. The changes in the gradation of symptoms indicate the effect of the drug under clinical trial.

Subjective Criteria:

According to changes in severity the manifestation will be graded as follow:

- | | |
|----------|---|
| Normal | 0 |
| Mild | 1 |
| Moderate | 2 |
| Severe | 3 |

Garbhini shotha will be assessed from-

A) HEADACHE-

- 0 – No headache
- 1 – Mild (does not interfere with work)
- 2 – Moderate (intermittent which disturbs activity)
- 3- Severe (continuous which restricts routine activity)

B) VOMITTING -

- 0- No vomiting
- 1- Only once a day
- 2- More than two times a day
- 3- More than 3-4 times a day

C) EPIGASTRIC PAIN –

- 0 – No pain
- 1 – Mild pain (able to do routine work)
- 2 – Moderate (intermittent type of pain)
- 3 – Severe (continuous unable to do routine work)

D) GIDDINESS –

- 0 – No giddiness
- 1 – Giddiness which does not interfere routine work
- 2 - Giddiness which does may interfere routine work
- 3 – Giddiness with which patient is unable to do routine work

OBJECTIVE CRITERIA

The diagnosis of *Garbhini shotha* was done based on clinical observation and following criteria before and after completion of treatment.

- 1) Patient’s wt in kg
- 2) Pedal oedema measurement in cm
- 3) Blood pressure in mm of Hg
- 4) Pit filling time in second
- 5) Urine albumin, Gradation

Nil-0

Trace-1

+1-2

+2-3

- 6) Placental insufficiency

Absent- 0

Present- 1

Follow up:

At 1st visit complete systemic and local examination was done with all required investigations and USG obstetric. Consent was taken and required treatment was started. Follow up of 10 days was given. Symptomatic assessment was done record was maintained. Efficacy of treatment was concluded with help of clinical parameters mentioned above.

CLINICAL EFFICACY OF THE THERAPY:

Table 1: Comparison of Results of Symptoms of two Groups by Mann Whitney U Test

Sr. No	Symptom	ΣR ₁	ΣR ₂	U ₁	U ₂	SD	Z	P
1	Headache	905.50	924.50	440.50	459.50	67.64		>0.05 not significant
2	Vomitting	1026.5	803.50	338.50	561.50	67.64		>0.05 not significant
3	Epigastric Pain	959	871	406	494	67.64		>0.05 not significant
4	Giddiness	910	920	445	455	67.64		>0.05 not significant

Subjective-

In Headache, the % of relief observed in Trial Group was 25 % and in Control Group was 22.58%. In Vomiting, the % of relief observed in Trial Group was 48 % and in Control Group

was 15.78% Epigastric Pain the % of relief observed in Trial Group was 48.57 % and in Control Group was 42.85% Giddiness The % of relief observed in Trial Group was 62.5 % and in Control Group was 45.83%

Objective-

In weight of Patient % of relief observed in trial group was 0.02 % and in control group was 0.11% while in Pedal oedema the % of relief observed in trial group was 5.66% and in Control Group was 1.47%.And in Pit filling time the % of relief observed in trial group was 48.01 % and in Control group was 3.594%.

In Systolic B.P. the % of relief observed in trial group was 2.9 % and in Control Group was 9.637% while in Diastolic B.P the % of relief

observed in trial group was 3.53 % and in Control group was 13.66% .In Urine Albumin the % of relief observed in trial group was 70.83 % and in Control Group was 17.64% .Placental insufficiency the % of relief observed in trial Group was 50 % and in Control Group was 33.33%. In Abdominal Girth the % of relief observed in Trial Group was 0.34 % and in Control Group was 0.361%. In fundal Height the % of relief observed in trial Group was 0.20 % and in Control Group was 0.20%

Table 2: Comparison of Results of Clinical Parameters of two groups by unpaired ‘t’ test

Sr.No	Parameter	Mean ± SD		SEd	T	P
		Trial group	control group			
1	Patients weight	0.016±0.48	0.067±0.314	0.105	0.4758	>0.05
2	Pedal Oedema	1.450±0.37	0.283±0.817	0.201	8.639	<0.0001
3	Pit filling Time	5.23±1.68	0.37±3.25	0.668	7.284	<0.0001
4	Systolic B.P	4.62±5.95	14±7.48	1.764	5.315	<0.0001
5	Diastolic B.P	5.27±5.95	12.93±6.32	1.585	1.585	<0.0001
6	Urine albumin	1.14±0.64	0.30±1.66	2.536	0.584	<0.05
7	Placental Insufficiency	0.07±0.25	0.03±0.18	0.057	0.584	>0.05
8	Abdominal Girth	0.283±0.339	0.300±0.610	0.127	0.130	>0.05
9	Fundal Height	0.07±0.52	0.07±0.58	0.143	0.00	>0.05

DISCUSSION

This study primarily aimed at evaluating the *Shothagna* effects of *Punarnavadi Kwath paan* in the *Garbhini* having *garbhini Shotha*. We selected 60 patients, 30 patients in each trial and control group. In trial group *punarnavadi kwath* 40ml twice daily with *anupan madhu* is given and in control group tab metghyldopa 250mg TDS for 10 days given and results were observed.

The demographic analysis of patients shows that *Garbhini shotha* is commonly found in age group of age 21 to 25 years as it is most fertile age group. Lower socio-economic status and middle class female are more prone to *Garbhini shotha* because maximum symptoms of malnu-

trition are found in these patients. Vitamin deficiency is one of the cause of PIH and in *Garbhini shotha* so hypoproteinemia seen. Maximum patient are having gestational age 32-36 weeks in this period patient have tendency to develop Pedal oedema because pressure on dependant part increases. Primi patient have maximum tendency to PIH. As *Gravida* increases risk became low.

The *shotha* in *Garbhini* is mostly *Kapha-vataj* in nature. *Punarnavadi kwath* by its *katu, tikta, kashay* and *dipa pachan* nature act as *Kapha vata shamak, Kledaghna, Shophaghna, mutral* and *rasshodhan*. Hence *punarnavadi kwath* do *rasshodhan* of *strotas* decrease *kledasanchiti* by

its *mutravridhi* and *kaphavatshaman* and *shothagha*.

As per modern view *Punarnava* has anti-inflammatory action. It has also a cardiotoxic property, increasing number and strength of cardiac systole. So, it reduces Blood pressure. Its diuretic property due to large amount of potassium and presence of alkaloid punarnavine so excrete excess water from body and hence decreases oedema. It also contains large amount of proteins so useful in Hypoproteinemia. *Deodaru* and *Murva* also act as *diuretic*. Decrease oedema by stimulating urination and perspiration.

CONCLUSION

In *Ayurveda*, *Punarnava*, *Deodaru*, and *Murva* are described by *Acharya Kashyapa* for oedema of pregnancy. All three are safe in pregnancy, without any side-effects. A large scale study can be conducted to derive scientific inferences.

- Both drug *Punarnava Kwath* and tablet Methyl dopa are equally effective in Symptoms like Headache, vomiting, Epigastric pain and giddiness.
- *Punarnavadi Kwath* is more effective than Tablet Methyl dopa in Clinical parameters Such as Pedal Oedema, Pit filling time and Urine albumin.
- *Punarnavadi Kwath* useful in Pedal oedema as well as mild hypertension in Pregnancy associate with urine Protein.
- *Punarnava*, *deodaru* and *Murva* these drugs are cost effective and easily available.
- Thus *Punarnavadi Kwath* is more effective in *Garbhini Shotha*.

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