

## THE MANAGEMENT OF GARBHINI PANDU (ANAEMIA IN PREGNANCY) WITH AN INDIGENOUS COMPOUND

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### ABSTARCT

Pregnancy is a unique, exciting, and joyous time in a woman's life as it highlights women's amazing creative power. In Ayurveda, direct reference regarding *Garbhini Pandu* is not available, however Kashyapa has mentioned *Panduta in Garbhini* emphasizing that any disease can manifest during pregnancy and the general line of treatment of that particular disease can be adopted. Acharya Charaka has clearly explained about *Bala Varna Hani* and *Vaivaranya* of *Garbhini* in sixth month of pregnancy. It can be considered as reference for *Garbhini Pandu*. Thus *Garbhini Pandu* can be correlated with Anaemia in pregnancy. *Garbhini* nutrition is used for nourishment of herself, fetus, breast and placenta. So nutritional requirements are high during pregnancy which if not fulfilled will lead to *Garbhini Pandu*, which if not treated will lead to maternal and fetal complications and hasten the main aim of healthy mother and healthy progeny. To overcome the *Garbhini Pandu*, indigenous compound containing *amalaki, punarnava, yashtimadhu, loha bhasma* are used. 40 Patients being diagnosed as *Garbhini Pandu* according to inclusion and exclusion criteria were given the drug in dose of 6gm daily in divided doses in the form of *vati* for 3 consecutive cycles with *anupana* as *jala*. Finally the effectiveness of trail drug was assessed 72.50 % in *Garbhini Pandu*. Trial drug was significantly effective in remission of symptoms of *Garbhini Pandu*. It has no side- effects and is most economical. So, indigenous compound containing *amalaki, punarnava, yashtimadhu and loha bhasma* is better remedy for management of *Garbhini Pandu* without any side effect.

**KEY WORDS:** *Garbhini Pandu, Anaemia, Hemoglobin, Loha bhasma, Amalaki, Yashtimadhu, Punarnava.*

### INTRODUCTION:

The traditional Hindu concept of marriage that sacrament which enables one to fulfill *Dharma, Praja & Rati*. Amongst all the four *Ashramas* of

life *Grihastha Asharama* is considered to be the best one with the view that by giving healthy generation to the society the better future of the nation is hoped.

Pregnancy is a very delicate stage of woman's life. Slight negligence in the care of expectant mother can ruin the structure of an ideal family, so lady in a family way needs more care. The fetus may be viable beyond 28<sup>th</sup> weeks of gestation yet if delivered preterm, low birth weight, incidence of perinatal death, morbidity and impaired postnatal growth and development is enhanced, such infants are vulnerable to learning disabilities. The aim of prenatal care is to reduce the incidence of adverse outcome of pregnancy. Maternal nutrition is generally considered as important modulator of fetal growth and development.

The incidence of anaemia in pregnancy<sup>1</sup> widely ranges from 40-80% in the tropics compared to 10 – 20 % in developed countries. Increased incidence of Anaemia in pregnancy in developing countries is mainly due to Endemic Malaria and Hookworm Infestation.

In developing countries like India, most of the woman are already suffering from low grade iron deficiency because of their multiparity, prolonged lactation, dietetic deficiency

and worm infestation, when these women conceive severity of anaemia increases. Prevalence of Anaemia in India is 40-90 %. Anaemia contributes significantly to maternal mortality and to both maternal and fetal morbidity. It is seen with Hb level < 10 gm %. 15-30 % of all maternal deaths are due to anemia. Anaemia if not treated can lead to complications like PIH, accidental hemorrhage, PROM, Pre-term labour, sub involution, embolism and fetal complications like prematurity, low birth weight, fetal distress.

*Harita* mentioned the term '*Vivarnata*' under '*Ashtavidha Garbhopadrava*'<sup>2</sup> & *Kashyapa* in *Khilasthana* used the term '*Ashita Sati*' while explaining *Antarvatni Chikitsa*<sup>3</sup>.

*Acharya Charaka* in *Shareera Sthana* has explained about *Bala varna hani* of *Garbhini* in 6th month of pregnancy<sup>4</sup>.

It can be considered as reference for *Garbhini Pandu*. The line of treatment in *Panduroga* is *shodhana*, but it is contraindicated during pregnancy. Hence appropriate *shamana* treatment has to be adopted. Thus an attempt had been made to study *Pandu Roga* in *Garbhini* and its treatment according

to Ayurvedic text in the parlance of Iron Deficiency Anaemia.

For this purpose "**Amalaki**"<sup>5</sup> mentioned in *Sushruta Samhita*, chapter-44, "**Punarnava**"<sup>6</sup> mentioned in *Dhanvantari Nighantu*, "**Yashtimadhu**"<sup>5</sup> mentioned in *Sushruta Samhita*, Chapter- 44, and "**Loha Bhasma**"<sup>7</sup> mentioned in *Yoga Ratnakara*, Chapter- *Pandurogachikitsa* has been taken for study.

**Amalaki** is having *Amla Pradhana Pancharasa, Sheeta Virya, Madhura Vipaka* and *Tridoshasamaka*. *Amla Rasa* is *Raktakrita* in nature. It is capable of promoting health, preventing and curing diseases. It is also well known for its *Rasayana* property. **Punarnava** is a *Madhura Tikta Kashaya Rasa, Usna Virya, Madhura Vipaka dravya* with *Dipana, Anulomana* and *Tridosahara* properties. **Yashtimadhu** is having *Madhura Rasa, Sheeta Virya, Madhura Vipaka and Vatapitta Shamaka*. It is having *Jeevaniya and Rasayana* properties. **Loha Bhasma** is having *Tikta, Madhu, Kashaya Rasa, Sheeta Virya, Madhura Vipaka* and *Tridosahara*. It is having *Rasayana* and *Raktavardhaka* properties

Hence these are suitable drugs for *Garbhini Pandu* w.s.r. Anaemia in Pregnancy.

#### AIM AND OBJECTIVES:

- To study the aetiopathogenesis of Anemia in pregnancy.
- To evaluate the therapeutic efficacy of "Indigenous Compound" in anaemia in pregnancy.
- To evaluate the effectiveness of Indigenous Compound in improving Hb %.
- To compare the efficacy of "Indigenous Compound" with dietary supplementary advice.

#### DRUG REVIEW:

##### AMALAKI:

*Rasa - Amla Pradhan Pancharasa except salt taste - Charaka)*

*Guna -Laghu, Ruksha, Sheeta*

*Virya -Sheeta*

*Vipaka-Madhura*

*Karma - Tridosahara, Pittasamaka*

##### PUNARNAVA:

*Rasa -Madhura, Tikta, Kashaya*

*Guna – Laghu, Ruksha*

*Virya- Usna*

*Vipaka- Katu*

*Karma- Kaphavata hara, Sothahara*

##### YASHTIMADHU:

*Rasa -Madhura*

*Guna -Guru, Snigdha*

*Virya -Sita*

*Vipaka-Madhura*

*Karma -Tridosahara, rasayana,  
vrshya, chaksushya.*

**LOHA BHASMA:**

*Rasa- Tikta, Madhura, Kashaya*

*Guna -Sara, ruksha, guru*

*Virya -Sheeta*

*Vipaka-Madhura*

*Karma -Tridoshashamaka, Rasayana*

*Pandu, Raktavardhaka*

**MATERIAL AND METHODS:**

**SELECTION OF PATIENTS:**

Patients were selected among those attended the OPD of Prasuti Department of Shri Siddharudha Charitable Hospital, Bidar in random sample fashion.

**CRITERIA FOR SELECTION OF PATIENTS:**

**INCLUSION CRITERIA:**

- Women having pregnancy between 3 to 6 month.
- Women with Anaemia i.e., Hb % between 7.0 to 10 gm %.
- Women having complaints of symptoms of Anaemia.
- Haematological investigation suggestive of mild to moderate degree of anaemia i.e., Hb %, Peripheral blood pictures showing microcytic, normocytic, hypochromic type erythrocyte were registered.

- Patients were selected irrespective of age and parity.

**EXCLUSION CRITERIA:**

- Severe anaemia (Hb % < 7.0 gm %)
- Past history of Jaundice.
- Diseases such as Haemolytic anaemia, Haemoglobinopathies, Bone marrow insufficiency, Haemorrhagic anaemia, Sickle cell anaemia etc.
- Anaemia due to APH, bleeding piles, multiple pregnancies.
- Any other complications like gestational diabetes, PIH, Heart disease.

**STUDY DESIGN/ MANAGEMENT OF PATIENTS:**

For the present clinical study, 40 patients will be selected on the basis simple randomized sampling method according to inclusion criteria under a single group.

- Drug - Indigenous compound
- Dose - 6 gm daily in divided doses
- Sahapana - Madhu*
- Anupana - Jala*
- Route - Orally
- Duration - 3 months
- Follow up - After each month

**ASSESSMENT CRITERIA:**

**SUBJECTIVE PARAMETERS:**

- General weakness
- Giddiness
- Breathlessness
- Palpitation

**OBJECTIVE PARAMETERS:**

- Pallor
- Oedema of lower extremities
- Hb%

**CLINICAL ASSESSMENT SCORING**

**METHOD:**

The criteria for assessment of treatment is based on improvement in cardinal symptoms like pallor, weakness, palpitation, oedema, Hb % RBC count.

According to the severity and intensity of the cardinal symptom these were graded on the basis of scoring system.

**SCORING SYSTEM:**

**1) Pallor**

- 0 - No Pallor
- 1 - Pallor of conjunctiva
- 2 - Pallor of conjunctiva, mucous membrane
- 3 - Pallor of conjunctiva, skin, mucous membrane, nail.

**2) Weakness**

- 0 - No Weakness
- 1 - Feeling of weakness after heavy work.
- 2 - Feeling of weakness after mild work.
- 3 - Feeling of weakness during rest.

**3) Giddiness**

- 0 - No Giddiness
- 1 - Occasionally present

Giddiness occurs on just getting up or standing up posture or on light exercise.

- 3 - Giddiness occurs in all postures on slight change of posture.

**4) Breathlessness**

- 0 - No Breathlessness at all
- 1 - Mild breathlessness with normal activities.

Breathlessness stops her daily activities intermittently.

- 3 - Breathlessness stops her daily activities frequently.

**5) Palpitation**

- 0 - Absent
- 1 - Palpitation on Heavy Exertion
- 2 - Palpitation during daily work
- 3 - Palpitation at rest.

**6) Hb %**

- 0 - >10gm%
- 1 - 9-10gm%
- 2 - 8-9gm%
- 3 - 7-8gm%

**OBSERVATIONS:**

For current project work of Indigenous compound oral treatment package in total 40 patients suffering from *Garbhini Pandu* with special

reference to Anemia in pregnancy, fulfilling the both inclusion and exclusion criteria were registered. The observations and the results of the therapy statistically analyzed by following methods.

A) Descriptive observational Statistical Analysis.

B) Assessment of the effect of indigenous oral medication in the patients of *Garbhini Pandu*, by adapting paired't' test.

**RESULTS:**

**Statistical Analysis of Effect on Pallor**

Follow up	BT	AT			t' Value	P Value	Relief %	Remarks
	(Mean)	(Mean )	SD	SE				
I	1.9	1.45	0.7828	0.1238	5.649	P=0.000	55%	HS
II	1.9	0.65	0.9213	0.1457	11.18	P=0.000	70%	HS
III	1.9	0.276	0.6790	0.1072	12.75	P=0.000	85.5%	HS

In Pallor, after 1<sup>st</sup> 30 days 55.00%, after 60 days 70.00% and after 90 days 85.5% relief was observed. The statistical evidence shows that there is highly significant difference in pallor between BT and AT in 30 days, 60 days and 90 days.

**Statistical Analysis of Effect on Weakness**

Follow up	BT	AT			t' Value	P Value	Relief %	Remarks
	(Mean)	(Mean )	SD	SE				
I	1.9	1.25	0.7425	0.117	8.510	P=0.000	65%	HS
II	1.9	0.575	0.7472	0.1181	12.778	P=0.000	90%	HS
III	1.9	0.25	0.543	0.0858	14.187	P=0.000	90%	HS

In weakness, after 1<sup>st</sup> 30 days 65.00%, after 60 days 90% and after 90 days 90.00% relief was observed. The statistical evidence shows that there is highly significant difference in weakness between BT and AT in 30 days, 60 days and 90 days.

**Statistical Analysis of Effect on Giddiness**

Follow up	BT	AT			t Value	P Value	Relief %	Remarks
	(Mean)	(Mean )	SD	SE				
I	1	0.625	0.7048	0.1114	4.837	P=0.000	55%	S
II	1	0.25	0.6699	0.1059	8.062	P=0.000	72.5%	HS
III	1	0.11	0.3790	0.05991	11.50	P=0.000	90%	HS

In Giddiness, after 1<sup>st</sup> 30 days 55.00%, after 60 days 72.5% and after 90 days 90% relief was observed. The statistical evidence shows that there is significant difference in giddiness between BT and AT in 30 days, 60 days and 90 days.

**Statistical Analysis of Effect on Hb%**

Follow up	BT	AT			t Value	P Value	Relief %	Remarks
	(Mean)	(Mean )	SD	SE				
I	2.125	1.675	0.7299	0.1154	5.649	P=0.000	52.5%	HS
II	2.125	1.425	0.6751	0.1067	7.286	P=0.000	75%	HS
III	2.125	0.45	0.8149	0.1289	12.333	P=0.000	82.5%	HS

In Hb%, after 1<sup>st</sup> 30 days 52.5%, after 60 days 75% and after 90 days 82.5% relief was observed. The statistical evidence shows that there is highly significant difference in Hb% between BT and AT in 30 days, 60 days and 90 days.

**OVERALL RESULTS:**

**Showing the result of total cases**

Effect	Trial Group	Percentage (%)
Cured	29	72.50
Improved	7	17.50
No Change	4	10.00
Total	40	100.00

**DISCUSSION:**

**DISCUSSION ON DRUG:**

Indigenous compound contains *Amalaki, Punarnava, Yashtimadhu and Loha Bhasma*.

**AMALAKI:**

*Amalaki* has all rasa except salt and has *laghu, ruksha guna, sheeta veerya, tridosahara* and *pitta shamaka* properties. *Pitta* is main *dosha* of *Pandu roga* and *Amlaki* mitigates the *pitta dosha* and correct the *Pandu*.

Its *karma* is *Rasayana, Deepana, Sothahara, Balavivardhana, Jivaniya* etc.

*Mandagni* is the main cause of *Pandu roga*. Its *laghu, ruksha guna, deepana karma* helped in cleaning the obstruction of *srotas* and there by clearing the minute channels within the body and increases the function of *Dhatwagni, Pachakagni* and *Ranjaka pitta* thus increasing the absorption and assimilation of iron along with better utilization in *rakta dhatu* and increases haemoglobin percentage.

*Amalaki* itself contains Fe 1.2mg/100gm, but it contain abundant amount of Vitamin-C, 192mg/100gm which being a strong reducing agent

and converts ferric form of iron in ferrous form and iron absorption always takes place in ferrous form. So *Amalaki* helps in absorption of elemental iron content which is present in food or we can say that it increases the iron absorption which is essential factor in Anaemia.

*Amalaki* contains 81.2% protein also which help in growth promotion and increases the body weight due to positive nitrogen balance. So, during pregnancy, it can be given to patient and it is very safe and helps in removing the weakness which comes during pregnancy.

**PUNARNAVA:**

*Punarnava* is having *Kashaya rasa* which is having *laghu* and *sheeta guna* it pierces all the minute channels and removes the obstruction. *Madhura rasa* which is having *guru, snigdha guna* does the *Raktadhatu vardhana*.

By *Katu vipaka* it stimulates *dhatwagni* to function properly. *Punarnava* is *Agnivardhaka, Vatanulomana* and *Raktavardhaka*.

Root contains Boerhavic acid. Acid converts Ferric form of iron to Ferrous form which is readily absorbed in body.

Antioxidant property will prevent skin pigmentation by which it prevents *vivarnata*.

**YASHTIMADHU:**

*Yashtimadhu* contains constituents mainly glycyrrhizin, glucose, sucrose, starch etc., which are energy promoters of the body. *Yashtimadhu* is also one of the *Raktaprasadana*. Thus it will correct *vivarnata*.

**LOHA BHASMA:**

*Loha Bhasma* has *Tikta, Madhura, Kashaya rasa, Sara, Ruksha, Guru guna, Sheeta veerya, Tridosahara and pittashamaka* properties. *Pitta* is the main *dosha* of *Pandu roga* and so it helps in correcting the *Pandu roga*.

It is having the *karma* like *Rasayana, Raktavardhaka, Varnya* etc.

**MADHU:**

*Madhu* works as a catalyst and have properties like *varnya, balya, yogavahi*, so it will potentiate the activities of drugs and it will help in treating Anaemia.

All the drugs are properties like *Rasayana, Shonitasthapana, Raktavardhaka, Jeevaniya* etc.

Due to all these properties and references, economic value, easy preparation, palatability etc., along with textual reference, drugs are planned to evaluate the efficacy in *Garbhini Pandu*.

**CONCLUSION:**

- Pregnancy is a unique and exciting time in every woman's life and woman is the root mean cause of progeny that requires utmost care in all the aspects of life.
- *Garbhini Pandu* is not directly quoted as a disease entity in the classics rather mentioned under effects of growing *Garbha* on Mother.
- *Pandu* is predominance of *pandu bhava* occurring due to *Dhatukshaya*. Fall in Hb% is called as Anaemia.
- Pallor as cardinal symptom and Hb% as main investigation is the centre of diagnosis of *Garbhini Pandu*.
- Generally *Garbhini Pandu* occurs due to malnutrition and *Dauhridyapoorti*.
- It is more common in multigravida as well as in multipara women due to repeated pregnancy i.e. one of the causative factor.
- Pallor, anorexia, weakness, giddiness, breathlessness, headache, palpitation,

oedema symptoms were noted as the common symptoms in the patients of *Garbhini Pandu*.

- Highly significant effect of these Indigenous drugs was seen in the symptoms and blood values.
- Indigenous compound containing *Amalaki, Punarnava, Yashtimadhu* and *Lohabhasma* possess *rasayana, raktavardhaka*, appetizing, digestive, restorative, diuretic, *shotahara* properties so to help to combat general debility and remove symptom like anorexia, weakness, headache, oedema etc. very well.
- Dietary supplementary advices have insignificant effect on both symptoms as well as blood values. So it can be predicted that only dietic control is not sufficient to treat *Garbhini Pandu*.
- In trial group, the rise in Hb% after treatment was highly significant which helped to improve the general condition of *Garbhini*.
- Along with these drugs nourishing diet must be given to *Garbhini Stree*.
- It is easily available in market.
- This medicine is not having any adverse effect on Mother and fetus. There were no complications and the

treatment was well tolerated by all the patients.

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