



## Effect of *Punarnavadi Mandoora* in the Management of *Garbhini Pandu* w.s.r to Iron Deficiency Anemia in Pregnancy –A Review

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### ABSTRACT:

India is one of the countries where anaemia during pregnancy is common. Anemia in pregnancy is caused by a various factors. The most common disorder in a pregnant woman is iron deficiency anaemia. *Rasa Pradoshaja vikara* is a disorder that arises due to inappropriate *Rasa Dhatu* in the mother and constantly rising foetal demands. According to Ayurvedic classics, for decades, a variety of *Lauha* preparations have been used to treat anaemia. *Punarnava Mandoora* is an Ayurvedic preparation that has been described in various Ayurvedic texts. It's a traditional Ayurvedic treatment for a variety of ailments. It works as a diuretic, cleanses the blood, and increases blood circulation. It raises hemoglobin levels and alleviates anaemia symptoms. *Punarnava Mandoora* is also used for Oedema, *Pliha vikara* (Spleen diseases), *Yakruta vikara* (Liver diseases), *Udara* (Abdominal distention), *Arsha* (Hemorrhoids), and *Twacha vikara* (Skin diseases). This review article highlightseffect of *Punarnavadi mandoor* in the management of *Garbhini pandu* W.S.R to anemia in pregnancy

**Keywords**-Pandu, Anemia, *Punarnavadi mandoor*

### INTRODUCTION

The most common nutritional deficiency condition is anaemia in the world . According to the WHO, the prevalence of anaemia in pregnant women is 14% in developed countries and 51 % in developing countries, with India accounting for 65–75%.<sup>1</sup> India contributes is about 80% of the maternal deaths due to anemia in South Asia.<sup>2</sup> Because of the high incidence of anaemia in pregnancy and the severe effects for both mother and baby, obstetric and public health practitioners have made managing anaemia in pregnancy a top priority. There are no direct references to *Garbhini Pandu* (anaemia in

pregnancy) in Ayurveda, but according to *Acharya Kashyapa*, *Pandu* is mentioned as a symptom of *Garbhini* in the definition of *Rakta Gulma*.<sup>3</sup> *Acharya Harita* has also described *Vivarnatva* as one of the eight complications of *Garbha*.<sup>4</sup> The empirical use of various iron preparations in the treatment of anaemia dates back to ancient times. In *Pandu Roga*, *Lauha Bhasma* and *Mandura Bhasma* are *Pandughna* (antianemic), *Prinana* (nourishing), and *Raktaprasadana* (blood toner) properties.<sup>5</sup> Ayurvedic physicians have successfully used *Punarnava Mandura* to treat all forms of *Pandu*. It has been included in the ASHA



drug kit for the National Reproductive Health Care Programme by the Indian government to prevent anemia.<sup>6</sup>

## AIMS & OBJECTIVE

- To evaluate the *Garbhini pandu* with special reference to Iron deficiency Anemia in pregnancy.
- To evaluate efficacy of *Punarnava Mandura* on *Garbhini Pandu*.

## MATERIAL & METHOD

Material related to *Garbhini pandu* and anemia is collected from Ayurvedic text including *Brahatriye*, *Laghutriye*, *Bhavaprakash nighntu*, *Rasratnasamucchaya*, *Sidhabhashajyamani mala* and text book of modern medicine. The available commentary's of Ayurvedic sahitas has also referred to collect relevant matter. The index, non-index medical journals has also referred to collect information of relevant topic.

### Literary review

Pregnancy is a special time in a woman's life because it emphasizes her incredible creative strength.<sup>7</sup> There is no direct reference in Ayurveda to *Garbhini Pandu*, but *Aacharya Kashyapa* mentioned *Panduta in Garbhini*, stressing that any disease can manifest during pregnancy and the general line of treatment for that disease can be used. In the sixth month of pregnancy, *Acharya Charaka* specifically explained *Bala Varna Hani* and *Vaivarnya of Garbhini*<sup>8</sup>, it can be used as a guideline for *Garbhini Pandu*.<sup>9</sup> *Garbhini* nutrition is used to feed herself, her foetus, her breasts, and her placenta. So, during pregnancy, nutritional requirements are high, which, if not met, can lead to *Garbhini Pandu*, which, if not treated, can cause maternal and foetal complications, delaying the main goal of a healthy mother and progeny.<sup>10</sup> According to the standard laid down by WHO, Anemia in pregnancy is described as a hemoglobin concentration in the peripheral blood of 11 gm or less. Plasma volume expands during pregnancy (to a limit of about 32 weeks), resulting in hemoglobin dilution. As a result, any Hb level below 10 gm/dl during pregnancy is considered anaemia.<sup>11</sup> India's population is rapidly growing, and the majority of the population lives in poverty, unable to eat nutritive diet. Hookworm, tuberculosis, malaria, and other viruses are the primary causes.<sup>13</sup> Since most women in developing countries like India already have low-grade iron deficiency due to multiparity, prolonged lactation, dietary deficiency, and worm infestation, the severity of anaemia increases

when they conceive.<sup>14</sup> *Pandu* is a *Santharpanoththa vikara* and a *Rasa Pradoshaja vikara*. *Pandu* is a condition characterized by a pallor of the body that is remarkably similar to medical science's "Anemia."<sup>15</sup> As per Ayurvedic literature, *Rakta* has its own importance. *Rakta* is an important element in the body. It having properties like *Jeevana*, *Prinana*, *Dharana*, and *Poshana*.<sup>16</sup> *Rakta* is frequently vitiated by *Doshas*, especially *Pitta dosha* and causes diseases such as *Pandu*. *Pandu* is considered as a distinct disorder in Ayurveda, with its own pathogenesis and treatment.

**Causes of Pandu-** *Kshaara*, *amla*, *lavana*, *atiushna*, *viruddha asaamyata bhojan*, *maasha*, *tila tail nishevan*, *Vegadhaanna*, *divaswapna*, *vyaayaammaithun*, *kaama*, *chinta*, *bhaya*, *krodha*.<sup>17</sup>

### Samprapti of Pandu

Due to above said factor, *pitta* located in the *Hruadya (sadhaka)* gets aggravated is thrown into circulation through 10 *dhamanis* by vitiated *vata*. The *pitta* vitiated by *nidana* and spread by *vata* in the body. It finally gets lodged between skin and muscles and further contaminates *kapha*, *vata*, *rakta*, *twacha* and *mansa*. The *pitta* imparts turmeric pale and green colors on skin and causes *panduroga*. The above said etiological factors are those which causes vitiation of *pitta*, which leads to inflammation in all parts of body which comes in contact with vitiated *pitta* in circulation. The immunity deteriorates hence forth and causes autoimmune response. These causes afflict liver mainly and damage it, inflammatory process first begins in liver causing autoimmune hepatitis, jaundice and anemia are chief manifestations of this process.<sup>18</sup>

### Symptoms of Pandu–

Shortness of breathing, fatigue, changes in stool colour, angina, body ache, enlargement of spleen, headache, yellow skin. *Karna kshweda*, *hataanalaha*, *durbala*, *annadweshya*, *shrama*, *Bhrama*, *gaatrashula*, *jwara*, *swasa*, *gourava*, *aruchi*, *akshikutshoth*, *sheernalomaha*, *kopanaha*, *shishirdweshi*, *nidraaluhu*, *alpavaak*, *pindikaudweshyana*, *katiruksadana*, *ururuksadana*, *arohanaayasa*.<sup>19</sup>

### Anaemia in pregnancy

Due to physiological hemodilution during pregnancy fall in Hb occurs. There is 2.5 to 3 times increase in plasma volume as compared to RBC mass. Maximum increase occurs in 2<sup>nd</sup> trimester.<sup>20</sup>

### Complications of anaemia in pregnancy:

The main consequence of anaemia is tissue hypoxia. The plasma volume increases & compensatory peripheral vasodilatation increases blood flow to the tissue accompanied by an increased cardiac output & fall in systemic vascular resistance. The complaints of anaemia are also related to tissue hypoxia.<sup>21</sup>

### Management of *Garbhini Pandu* through *Punarnavadi mandoor* (Table no 1.)

*Punarnavadi mandoor* enhancing digestive ability through its effect on *Srotasa* (micro channels) and *Agni* (digestive fire mechanism) as a result of their *Deepana* (appetizer), *Pachana* (digestive) properties. As a result, the disease (*Pandu*) is cured, and the body's immunity is enhanced during pregnancy. It is an important therapy for anaemia caused by iron deficiency. It greatly raises hemoglobin levels and alleviates anaemia symptoms. According to the research, it boosts iron and ferritin levels in the blood and enhances overall iron binding capability. It has two effects. To begin with, it raises hemoglobin levels and may also stimulate blood formation. The second action is that it causes diuresis and thereby decreases the body's accumulated fluids. It alleviates all signs of anaemia, including severe exhaustion, pale skin, breathing difficulties, dizziness, weakness, cold hands and feet, unpleasant tingling feeling in the legs, and a rapid heartbeat.

### DISCUSSION

*Garbhini Pandu* (pregnancy anaemia) is described as a *Garbha* complication.<sup>23</sup> *Rasa Nadi* is compressed by the growing foetus in pregnant women, causing some obstruction in the flow of *rasa* due to which it will not flow freely into the body, resulting in *Pandu*. *Garbhini Pandu* can be caused by excessive *Amla* (sour), *Lavana* (salty), and *Katu* (pungent) *Rasa* (taste) or indulging in *Vishamashana* (improper diet), *Diwaswapa* (daytime sleep), *Vegavidharana*, and/or suffering from *Manasika Bhava* (psychological factors) after 3 months of pregnancy, due to *Dauhridavastha.Kashaya* (astringent), *Laghu* (light), *Ruksha* (dry), *Shita* (cold), *Katu*, and *Pittakapha Shamaka* are among the ingredients in *Punarnava Mandura*. *Punarnava* is *Anulomana*, *Mutrala* (diuretic), hepatoprotective, and antioxidant. *Mandura Bhasma* has a lot of hematinic, cytoprotective, and hepatoprotective properties. *Triphala* is an anti-anemic and anti-oxidant Ayurvedic *Rasayana*. It comprises *Amalaki* (*Emblica*

*officinalis Gaertn.*), which includes *Rochana*, *Deepana*, and *Anulomana*, all of which aid in the digestion, absorption, and motility of digestive materials in the intestine. It has a direct effect on *Rasavaha* and *Raktavaha Srotas* since it is *Hridya*, *Yakruttejaka*, and *Shonita Sthapana*. It is thought to be a powerful *Rasayana* that enhances the essence of all the *Dhatu*s. Iron and Vitamin C are abundant in *amalaki*. *Trikatu* is a well-known enhancer of bioavailability. *Gomutra* (cow urine) is a key component of the medication, with antimicrobial, antioxidant, and antianemia properties. *Anupana* of buttermilk is digestive in nature due to the presence of probiotics, *Pandughna*, and rich source of minerals and Vitamin B<sub>12</sub>. As *Gomutra* (Cow's urine) is one ingredient of *Punarnava madoora*<sup>25</sup>, it works as *Rasayana* by its antioxidant property. It has been found to be a very good immune enhancer.<sup>26</sup> One of the reasons why *Gomutra* is useful in anaemia is the presence of erythropoietin hormone in Cow's urine. Iron in cow's urine helps to maintain equilibrium and aids in the development of red blood cells and haemoglobin.<sup>27</sup>

### CONCLUSION

*Punarnava Mandura* is a specific poly herbo mineral formulation that can be used as a *Panduhara* and *Rasayana* in anaemia patients, as well as treating most of the pathological manifestations of *Pandu Roga* during pregnancy.

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**Table no 1. Ingredients of *Punarnavadi mandoor*<sup>22</sup>**

| Sr.no | Ingredients   | Quantity |
|-------|---|----------|
| 1     | <i>Punarnava– Boerhavia Diffusa</i>                               | 1 part   |
| 2     | <i>Nishoth roots – Operculina Turpethum</i>                       | 1 Part   |
| 3     | <i>Sonth (dried ginger root) – Zingiber Officinale</i>            | 1 Part   |
| 4     | <i>Kali Mirch (Black Pepper) – Piper Nigrum</i>                   | 1 Part   |
| 5     | <i>Pippali (Long Pepper) – Piper Longum</i>                       | 1 Part   |
| 6     | <i>Vaividang (False Black Pepper) – Embelia Ribes</i>             | 1 Part   |
| 7     | <i>Devdaru (Deodar Cedar or Himalayan Cedar) – Cedrus Deodara</i> | 1 Part   |
| 8     | <i>Chitrak root – Plumbago Zeylanica</i>                          | 1 Part   |
| 9     | <i>Kushta (Indian Costus Root) – Saussurea Lappa</i>              | 1 Part   |
| 10    | <u><i>Haldi (Turmeric) – Curcuma Longa</i></u>                    | 1 Part   |
| 11    | <i>Haritaki – Terminalia Chebula</i>                              | 1 Part   |
| 12    | <i>Bibhitaki – Terminalia Bellirica</i>                           | 1 Part   |
| 13    | <u><i>Amla (Indian Gooseberry) – Emblica Officinalis</i></u>      | 1 Part   |
| 14    | <i>Danti roots – Baliospermum Montanum</i>                        | 1 Part   |
| 15    | <i>Chavya (Java Long Pepper) – Piper Chaba</i>                    | 1 Part   |
| 16    | <i>Indrayava – Holarrhena Antidysenterica Seeds</i>               | 1 Part   |
| 17    | <i>Kutki – Picrorhiza Kurroa</i>                                  | 1 Part   |
| 18    | <i>Piplamool (Long Pepper Roots) – Piper Longum</i>               | 1 Part   |
| 19    | <i>Mustak (Nut Grass) – Cyperus Rotundus</i>                      | 1 Part   |
| 20    | <i>Kakra Singhi (Crab’s claw) – Pistacia Integerrima</i>          | 1 Part   |
| 21    | <i>Kala Jeera (Caraway) – Carum Carvi</i>                         | 1 Part   |
| 22    | <u><i>Ajwain (Carom Seeds) – Trachyspermum Ammi</i></u>           | 1 Part   |
| 23    | <i>Kayaphal</i>   | 1 Part   |
| 24    | <u><i>Mandur Bhasma</i></u>                                       | 2 Parts  |
| 25    | <i>Cow’s Urine</i>  | 8 Parts  |