



## A Narrative Review on GarbhajanyaVishamayata: The Pregnancy Induced Hypertension

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**Abstract:** Gestation, also known as Pregnancy, is the period during which one or more progeny develops inside a woman's womb. It is a crucial stage for a woman as several physiological changes occur during this period in her body. Now a day's, Pregnancy induced hypertension (PIH) is becoming the primary cause of maternal and prenatal mortality and morbidity. The prevalence of PIH is 2-8% of all pregnancies. In India, PIH incidence is higher in primiparae than in multipara. Therefore, finding all possible measures to prevent this disease is essential. In Ayurveda, Acharya Harit explains these conditions under *Garbhiniyadhi*. *Garbhajanya Vishamayata* is a condition in which hypertension develops after 20 weeks of gestation. Therefore, it is a primary concern during Pregnancy and can be prevented by early detection and appropriate treatment. Our Objective is to gain knowledge of ayurvedic aspects of Pregnancy induced hypertension. Detailed information was gathered by studying related classical texts of Ayurveda, research articles and websites. Collected data was later compiled, analyzed and discussed. This review concluded that by following Antenatal care(*manumatic paricharya*), Dos and don'ts (*Pathyapathy*), this disease can be prevented and treated effectively with safe motherhood and a healthy child.

**Keywords:** *Garbhajanya Vishamayata*, Pregnancy Induced Hypertension, PIH, *Masanumasic Paricharya*, *Pathyapathy* in PIH

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## I. INTRODUCTION

Gestation, also known as Pregnancy, is the period in which one or more progeny develops inside a woman's womb. Pregnancy-induced hypertension (PIH) is one of the most critical medical conditions during gestation and postpartum. It originates directly from a gravid state, including gestational hypertension, pre-eclampsia and eclampsia. The causes may include poor maternal nutrition, poor anti-natal care, poor health awareness, Lack related to Pregnancy and women's health, and poor reproductive education.<sup>1</sup> PIH usually develops in the second or third trimester of Pregnancy, marked by high blood pressure and high level of protein in the previously healthy woman's urine<sup>2</sup>. Common complications include maternal morbidity, mortality and intrauterine fetal growth restrictions. The prevalence is about 2-8% of all pregnancies, and the incident has continued to increase worldwide<sup>3</sup>. Risk factors include nulliparity, multifetal Pregnancy, previous history of pre-eclampsia, obesity, diabetes, smoking etc., but the connection between pre-eclampsia and its risk factor is still poorly understood<sup>4</sup>. Though there is no direct reference regarding PIH in Ayurveda, this ailment affects the functions of various systems that can be met in different disease conditions of Ayurveda<sup>5</sup>. Hence the Aim & Objective of this review is to focus on ayurvedic aspects of Pregnancy induced hypertension, its prevention and treatment. PIH can be correlated with *GarbhajanyaVishamayata*, which can be identified as a pathology in the manifestation of different diseases. In Ayurveda, it is mentioned that it is essential to know the characteristics of the disease with the help of *Dosha*, *Dushya* and *Samprapti* to begin the management. As *Vatadosha* is responsible for the average circulation of blood in the body due to its *Chalaguna*, vitiated *Vata* can be considered the main factor responsible for this condition, especially *vyanvayu*. This can happen directly due to *Vataprakopakaaharvihar* intake or by

average.<sup>6</sup> So it becomes our primary concern to comprehend the PIH from an ayurveda perspective. If *garbhiniparicharya* is followed by *garbhini*, then most pregnancy diseases can be prevented. A detailed description of this is also found in various *Samhitas*. This condition can be understood by studying some concepts of Ayurveda, such as *StrotoDushti*, *Shonita Dushti*, *Aam* and *Agni*. Considering oneself, regimens during the antenatal period and synchronization with nature can attain strong resistance to such conditions, which has been highlighted across Ayurveda's classical scriptures. Considering all these details, an attempt has been made to discuss the prevalence, risk factors, and prognosis of PIH with its ayurvedic aspects.

## 2. MATERIALS AND METHODS

This review article emphasizes prevalence, risk factors, prognosis and Ayurvedic remedies for protecting PIH. First, classical texts of Ayurveda were studied in detail, and information was gathered along with related research articles and websites. Collected data was later compiled, analyzed and discussed for a comprehensive understanding of effective pharmacological action to think about utilizing it.<sup>7</sup>

### I.I Observation and Result

"Ayurveda essentially illustrates various remedies and protective care through *Dinacharya*, *Ritucharya*. In Ayurveda, multiple regimens are explained for pre-conceptional, Antenatal, and post-delivery periods. Improving health in regards to PIH has been emphasized in several ways in classical texts. Though PIH is not directly described in Ayurveda, some similar symptoms as a complication have been described. This can be termed *GarbhajanyaVishamayata*. Details are summarized in table no. 1,2,3 and 4.

**Table 1: Classification of Pregnancy Induced Hypertension<sup>8</sup>**

| Severity | Range   |
|----------|---|
| mild     | Systolic BP 140-149 and Diastolic BP 90-99 mmHg         |
| moderate | Systolic BP 150-159 and Diastolic BP 100-109 mmHg       |
| severe   | Systolic BP $\geq 160$ and Diastolic BP $\geq 110$ mmHg |

**Table 2: Etiopathogenesis for manifestation of PIH<sup>9</sup>**

| As per modern medicine          | As per Ayurveda  |
|---------------------------------|--|
| Nulliparity                     | <i>Kaphaprakopa</i> (vitiation of <i>Kapha dosha</i> )   |
| Obesity                         | <i>Shopha</i> (Oedema)   |
| Diabetes mellitus               | <i>Madhumeha</i> (DM)  |
| Placental perfusion             | <i>Doshadushti</i> , <i>Dhatudushti</i> (vitiation of <i>dosha</i> and <i>dhatu</i> )  |
| Oxidative stress                | <i>Pandu</i> (anaemia)   |
| Dietary deficiencies or excess. | <i>Viruddhaahara</i> (incompatible/antagonistic food), <i>Abhihyandiahara</i> , <i>Lavaanaahara</i> (excessive intake of salt) |

**Table 3: Sampraptighatak (Pathogenesis) of Pregnancy Induced Hypertension<sup>10</sup>**

|   |                                   |
|---|-----------------------------------|
| Dosha (bodily humour)                                   | Vatapradhantridosha               |
| Dushya (tissue)   | Rasa, Rakta                       |
| Agni (digestive and metabolism strength)                | Jatharagni, Dhatavaagnimandya     |
| Strotas ( body channel)                                 | Rasa, Rakta                       |
| Strotodushtiprakar (type of affliction of body channel) | Sanga                             |
| Udhhbhavsth (site of origin of disease)                 | AmashayaPakshyasa                 |
| Vyaktasthana (the place where symptoms appear)          | Sarvasharir                       |
| Rogmarga ( site of pathogenesis)                        | BahyamadhyamAvayavaHridayadhamani |
| Sadhyasadhy ( prognosis)                                | Kricchasadhy                      |

**Table 4: Sigh and symptoms of PIH**

| Sr. No. | As per Modern Medicine   | As per Ayurveda          |
|---------|--|--------------------------|
| 1.      | Abnormal weight gain.  | Paadshotha(Pedal Oedema) |
| 2.      | Rise of BP.  | Akshepa (Convulsions)    |
| 3.      | Diminished urinary output  | Mutraaplata (oligurea)   |
| 4.      | Oedema   | Shop (Oedema)            |
| 5.      | Eye symptoms(Changes in vision, blurred vision, light sensitivity) | Vamana (Vomiting)        |
| 6.      | Nausea, Vomiting   | Atisar (Diarrhea)        |
| 7.      | Severe headache  | Sangyanash (Coma)        |

**Table 5: Investigations & Screening test for the diagnosis of PIH<sup>11</sup>**

| Sr. No. | Investigations  | Screening tests  |
|---------|---|--|
| 1.      | CBC (HB%, PVC, Platelet count etc.)                     | Doppler ultrasound – at 24 weeks or less to get information regarding impaired blood flow to the fetus |
| 2.      | Urine test for protein urea                             | Diastolic notch presence- to get information regarding uteroplacental circulation.                     |
| 3.      | Renal function test for blood urea, ser. Creatinine etc | End Diastolic frequency – to determine the placental insufficiency.                                    |
| 4.      | Uric acid   | Rollover test – between 28 and 32 weeks  |
| 5.      | Liver function test                                     | Average mean arterial pressure – to determine the risk of pre-eclampsia or PIH.                        |
| 6.      | Coagulation test  | -  |
| 7.      | Ophthalmoscopic examination                             | -  |

**Table 6: Treatment and preventive measures for the diagnosis of PIH: An Ayurveda perspective<sup>12</sup>**

| Sr.No. | Name of drug                    | General Dose & duration  |
|--------|---------------------------------|--|
| 1.     | Gokshuradi guggul               | 250 mg. Twice a day or as advised by the physician.  |
| 2.     | PunarnavaMandur                 | 125 mg Twice a day or as advised by the physician.   |
| 3.     | Yshtimadhuchurna + GuduchiSatwa | Ten central mornings with milk a day or as advised by the physician.   |
| 4.     | Balajirakadikashay              | 15ml Twice a day or as advised by the physician.   |
| 5.     | Punarnavakashay                 | 15 ml Twice a day or as advised by the physician.  |
| 6.     | Punarnavarishta                 | 10 ml Twice a day or as advised by the physician. Avoid in Summer and the hot season.                                    |
| 7.     | SwarnamaliniVasanta rasa        | 125 mg Twice a day or as advised by the physician with milk.   |
| 8.     | Kalyanakghruta                  | 10 ml once a day or as advised by the physician with milk.   |
| 9.     | Pipallyadighruta                | 10 ml before food Twice a day or as advised by the physician.  |
| 10.    | Garbhiniparicharya& Yoga sanaas | Yogasana Marjariasana, Konasana, Veerbhadrásana, Trikonásana, Badhakonasana, Shavásana, Bhramari pranayama <sup>13</sup> |

### 3. DISCUSSION

*Garbhajanya Vishamayata*(PIH) is grouped as a hypertensive disease in the late second and third trimesters of Pregnancy. Increased blood pressure, oedema and raised protein urea are its core symptoms. <sup>xiv</sup>. Other symptoms may include abnormal weight gain, changes in vision, blurred vision, light sensitivity, headache, nausea and vomiting. This is a poorly understood disease with a broad range of indications and severity. Most cases remain unnoticed and may lead to morbidity and mortality or severe complications, which are uncommon but include eclampsia, stroke, severe bleeding from the placenta after birth, HELLP syndrome, premature birth, and stillbirth. There are scattered references regarding these symptoms in Ayurveda. All these symptoms are classified under *Garbhiniyyadhi*, i.e. the illness during Pregnancy. There is a separate chapter named *Antarvartinichikitsa Upadhyay* in *Khil than* of Kashyap samhita, which deals with the management of shopha in the sixth month of Pregnancy.<sup>xv,xvi</sup>. Acharya Sushruta also explained the use of *Gokshur Siddha yavagu*(gruel prepared from *Gokshura*) in the sixth month of gestation<sup>xvii</sup>. All this highlighted that the pathology is caused by *dushti* of (vitiated) *Vata dosha*, specially *Vyan Vayu* and *Rakta dhatus*<sup>xviii</sup>. By studying the *nidan* of *rasa* and *rakstavaha* *astrotasodushti*, most of the factors match with PIH<sup>xix</sup>. When *siragatVata Prokop* (vitiation of *siragataVata*) occurs, it causes the diseases like shopha(swelling), loss of elasticity and thickening of blood vessels, *spandana* (palpitations) etc., which can be related to cardiovascular system<sup>xx</sup>. Ayurveda has illustrated the *pathyapatha* (use of a healthy diet and lifestyle), *garbhiniyarcharya*(month-wise regimens), *garbhasthapakdravya* (substance beneficial for the maintenance of Pregnancy) and some treatments for the better fetal outcome. The main purpose is to provide normal growth of fetus and mother, uncomplicated Pregnancy and normal delivery with a healthy child.<sup>xxi</sup>. Medicine with *raktashodhak*, *anulomaka*, *hrudya*, *medya*, *mutral*, and *vatashamak* properties should be used in such conditions. Medications which contain *Gokshur*(*Tribulus Terrestris L.*) and *Punarnava*(*Boerhaavia diffusa*) possess *rasayana*, *raktajanan* and *mutrala* action and induced diuresis. These include a large quantity of potassium and alkaloids, which nourishes the *dhatus*, cause *Vatasamshaman* and increase the Osmo regulation of plasma. This drug also possesses antioxidant and anti-inflammatory properties, which are helpful in the breakdown of

### 5. AUTHORS CONTRIBUTION STATEMENT

Pargaonkar AS, Jibkate B, and Deshpande M. contributed to the research's design and implementation, the analysis of the results, and the writing of the manuscript.

### REFERENCES

- I. Khan NT, Jadhav MG. An ayurvedic approach in management of PRE –ECLAMPSIA. PIJAR. 2017 Feb;1(3):32-8.
2. Ghulmiyyah L, Sibai B, Sibai B. Maternal mortality from pre-eclampsia/eclampsia. Semin Perinatol. 2012;36(1):56-9. doi: 10.1053/j.semperi.2011.09.011, PMID 22280867.

the pathogenesis of PIH.<sup>xxii,xxiii,xxiv</sup>. *Guduchi* (*Tinospora cordifolia*) and *Arjuna* (*Terminalia arjuna*) possess cardioprotective, antioxidant, hypotensive and diuretic activity. Drugs like *Sarpagandha* (*Rauvolfia serpentine*) and *Jatamansi*(*Nardostachysjatamansi*) possess hypotensive and diuretic activities. *Yashtimadhu* (*Glycyrrhiza glabra*) possess antioxidant and anti-inflammatory activity<sup>xxv</sup>. *Pippali*(*Piper longum*) possess bioavailability enhancement properties which promote fast absorption of the nutrients<sup>xxvi</sup>. It is antioxidant<sup>xxvii</sup>, anti-inflammatory<sup>xxviii</sup> and also possess vasodilator activity<sup>xxix</sup>. These medicines help in limiting the complications of this disease. However, non-responsive cases of PIH should not be considered for the same treatment. Such conditions are explained under *arista Lakshana*, *upadrava*, *vyapada* and *asadhyalakshana* of *mudhagarbha*.<sup>xxx</sup>. As the main responsible factors for PIH are vitiated *Vata* and *rakta*, the drugs which possess anti-atherosclerotic, vasodilator, cardiotonic, hypotensive, antioxidant and diuretic properties should be advised<sup>xxxi</sup>. Apart from the use of medicine, Ayurveda explains such as healthy and quality diet, restrictions of salty food, yoga, meditation, taking adequate rest, elevating the foot, avoid caffeine, alcohol, and nicotine. Practising *garbhiniyarcharya*, *yoga* and *pranayam* can improve sleep, relieve low back pain, reduce headache, nausea, and vomiting, and lower the risk of preterm labour and PIH.

### 4. CONCLUSION

Aggravation of all three *doshas*, predominantly *Vatadosha*, *dushita rasa* and *rakta*, vitiated *rasavaha*, and *Rautavaara strotasa*, are mainly responsible for the manifestation of PIH. Ayurveda treatment improves the health of the mother and fetus and relieves the symptoms. Regimens like pre-conceptional, antenatal and post-delivery care are well explained in the literature of Ayurveda for the prevention of PIH. Hence the early diagnosis of the condition at its initial stages can prevent complication and helps in better management of the disease. With this conception, it can be concluded that with ayurvedic medicine and proposed regimens, this condition of PIH can be treatable with support to healthy fetal growth. But further clinical studies are required to establish appropriate and exact results.

### CONFLICT OF INTEREST

Conflict of interest declared none.

3. Moodley J. Maternal deaths associated with hypertensive disorders of Pregnancy: a population-based study. *Hypertens Pregnancy*. 2004;23(3):247-56. doi: 10.1081/PRG-200030301, PMID 15617624.
4. Rao AK, Daniels K, El-Sayed YY, Moshesh MK, Caughey AB, Caughey AB. Perinatal outcomes among Asian American and Pacific Islander women. *Am J Obstet Gynecol*. 2006;195(3):834-8. doi: 10.1016/j.ajog.2006.06.079, PMID 16949421.
5. Tiwari PV, Vranasi: Chaukhambha orientalia. *AyurvediyaPrasuti Tantra evamStreeroga*. 6th ed. Vol. I; 2014. p. 290-754.
6. Rathod JP. MANAGEMENT OF PREGNANCY-INDUCED HYPERTENSION THROUGH AYURVEDA: A CASE REPORT.
7. Kulkarni K, Swamidas S, Mishra R. An Aerial view on GarbhajanyaVishamayata to Pregnancy Induced hypertension. *J Ayurveda Integr Med Sci*. 2021 Sep 15;6(4):271-9.
8. Kintiraki E, Papakatsika S, Kotronis G, Goulis DG, Kotsis V, Kotsis V. Pregnancy-induced hypertension. *Hormones (Athens)*. 2015 Apr;14(2):211-23. doi: 10.14310/horm.2002.1582, PMID 26158653.
9. Kulkarni K, Swamidas S, Mishra R. An Aerial view on GarbhajanyaVishamayata was to Pregnancy Induced hypertension. *J Ayurveda Integr Med Sci*. 2021 Sep 15;6(4):271-9.
10. Shabeena D, Siddesh S. Clinical approach to garbhajanya VISHAMAYATA (toxaemia during pregnancy): a conceptual study. *World J Pharm Life Sci*. 2019;5(3):186-93.
11. Davies GA, Wolfe LA, Mottola MF, MacKinnon C, Arsenault MY, Bartellas E, Cargill Y et al. Exercise in Pregnancy and the postpartum period. *J ObstetGynaecol Can JOGC= Journal d'obstetrique et gynaecologie du Canada: JOGC*. 2003 Jun 1;25(6):516-29.
12. Maine D. Role of nutrition in the prevention of toxæmia. *Am J Clin Nutr*. 2000;72(1):298S-300S. doi: 10.1093/ajcn/72.1.298S.
13. Vridhajeekava. Kashyap Samhita. Hindi Comment Satyapal BhisagacharyaKhil Than [reprint], -chapter. 2006;10(152/3):302.
14. Agnivesh, Samhita Charak. Hindi commentary by KasinathSastri and G.N. Chaturvedi. Vol. I. Varanasi: Chaukhambha Bharati Academy [reprint], Sutra than 18/6; 2019. p. 322.
15. Sushruta, Samhita S. Hindi commentary by Ambikadutta Shastri. Varanasi: Chaukhambha Sanskrit Sansthan [reprint], ShareerSthan-chapter 2020;1:10(4):99.
16. Rathod JP. MANAGEMENT OF PREGNANCY-INDUCED HYPERTENSION THROUGH AYURVEDA: A CASE REPORT.

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MULTIDISCIPLINARY EDUCATIONAL RESEARCH**  
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17. Acharya Vidhyadhar Shukla. AgnivesaCharakasamhita Volume-I, Vimanasthana, Hindi. Pratishthan CS. Shloka, 12-13. Commentary 5:589-916.
18. VrddhaVagbhatacharya, Shloka. Ashtanga Sangraha, ChaukhambhaKrishnadasAcadamy. Varanasi: Sahrirasthana [Chapter]-3. p. 208-209-742.
19. Al-Ali M, Wahbi S, Twaij H, Al-Badr A, Al-Badr A. *Tribulus terrestris*: preliminary study of its diuretic and contractile effects and comparison with *Zea mays*. *J Ethnopharmacol*. 2003;85(2-3):257-60. doi: 10.1016/s0378-8741(03)00014-x, PMID 12639749.
20. Hemalatha S, Hari R. Comparative antioxidant activities of crude ethanolic and saponin rich butanol extracts of *Tribulus terrestris* fruits. *Int J Pharm Biol Sci*. 2013;4(4):784-93 27.
21. Baburao B, Rajyalakshmi G, Venkatesham A, Kiran G, Shyam Sunder A, Ganga Rao B. Anti-inflammatory and antimicrobial activities of methanolic extract of *Tribulus terrestris* Linn plant. *Int J Chem Sci*. 2009;16(2):209-18.
22. Baburao B, Rajyalakshmi G, Venkatesham A, Kiran G, Shyam Sunder A, Ganga Rao B. Anti-inflammatory and antimicrobial activities of methanolic extract of *Tribulus terrestris* Linn plant. *Int J Chem Sci*. 2009;16(2):209-18.
23. Rackova, Jancinova V, Petrikova M, Drabikova K, Nosal R, Stefek M, Kovácová M et al. Mechanism of anti-inflammatory action of liquorice extract and glycyrrhizin. *Nat Prod Res*. 2007;21(14):1234-41. doi: 10.1080/14786410701371280, PMID 18075885.
24. Pattanaik S, Hota D, Prabhakar S, Kharbanda P, Pandhi P, Pandhi P. Effect of piperine on the steady-state pharmacokinetics of phenytoin in patients with epilepsy. *Phytother Res*. 2006;20(8):683-86. doi: 10.1002/ptr.1937, PMID 16767797.
25. Natarajan KS, Narasimhan M, Shanmugasundaram KR, Shanmugasundaram ER. Antioxidant activity of a salt/spice/herbal mixture against free radical induction. *J Ethnopharmacol*. 2006;105:76-83.
26. Kumar S, Arya P, Mukherjee C, Singh BK, Singh BK, Parmar VS, Parmar VS, et al. Novel aromatic ester from *Piper longum* and its analogues inhibit expression of cell adhesion molecules on endothelial cells. *Biochemistry*. 2005;44(48):15944-52. doi: 10.1021/bi050941u, PMID 16313198.
27. Shoji N, Umeyama A, Saito N, Takemoto T, Kajiwara A, Dehydropiperonaline O. an amide possessing coronary vasodilating activity, isolated from *Piper longum* L. *J Pharm Sci*. 1986;75:1188-89.
28. Bachman MS. Yoga mama, yoga baby: Ayurveda and yoga for a healthy pregnancy and birth. *Sounds True*. 2013 Nov 1.