

**GARBHINI PANDU: AN AYURVEDIC INSIGHT****Dr. Vidhya Sarode<sup>1\*</sup>, Dr. Vishakha Pachore<sup>2</sup> and Dr. Shweta Govind Mulaje<sup>3</sup>**<sup>1</sup>Head of Department Stirog Evum Prasutitantra<sup>3</sup>, Department of Stiroga Evum Prasuti Tantra Ashwin Rural Ayurved College Manchi Hills, Sangamner.<sup>2</sup>Associate Professor<sup>3</sup>, Department of Stiroga Evum Prasuti Tantra, Ashwin Rural Ayurved College Manchi Hills, Sangamner.<sup>3</sup>Pg Scholar, Department of Stiroga Evum Prasuti Tantra Ashwin Rural Ayurved College Manchi Hills, Sangamner.**\*Corresponding Author: Dr. Vidhya Sarode**Head of Department Stirog Evum Prasutitantra<sup>3</sup>, Department of Stiroga Evum Prasuti Tantra Ashwin Rural Ayurved College Manchi Hills, Sangamner.

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**ABSTRACT**

Every woman's pregnancy is a special and happy time in her life, but it has some complications as well anaemia is one of the numerous problems that are linked to it. It is true that women are the progenitor of humankind. She defends the offspring when she is shielded. The turning point in a woman's life that makes her a mother is when she becomes pregnant. Even while it's a happy journey, there are many physical and physiological changes that come with it, some of which lead to health problems. One of the most prevalent health problems that arise during pregnancy in underdeveloped nations is gestational anemia, which calls for prompt medical attention to preserve the lives of both the mother and the unborn child. The ancient Indian school of Ayurveda has placed greater emphasis on women's health with wide accounts of labor, pregnancy, and the management issues that arise. Pregnancy difficulties have been documented by Ayurveda under the heading Garbhodravas. The most common Upadrava among them is Garbhini Pandu. Ayurvedic literature characterize Garbhini Pandu as a symptom rather than a Vyadhi. The current study aims to explain the correlational aspects with modern science while thoroughly evaluating the Garbhini Pandu and its management as explained in Ayurveda.

**KEYWORDS:** Pandu, garbha, chikitsa, garbhodrava, Ayurveda.**INTRODUCTION**

Anemia in pregnancy is defined as a hemoglobin level of  $<11$  g/dl.<sup>[1]</sup> It is further classified into mild, moderate and severe, when the hemoglobin level is between 10.0 to 10.9, 7.0 to 9.9, or  $<7.0$  g/dl, respectively.<sup>[2]</sup> The prevalence of anemia in pregnancy has been reported as 29.9% globally.<sup>[3]</sup> The World Health Organization (WHO) classifies anemia in pregnancy based on its prevalence. A prevalence below 4.9% is considered as an insignificant public health problem. However, it is classified as mild, moderate or severe when the prevalence of anemia is between 5.0 and 19.9%, 20.0 and 39.9%, or  $\geq 40.0\%$ , respectively.<sup>[1]</sup> Based on existing Indian data, maternal morbidity rates are assumed to be greater in anemic women.<sup>[4]</sup> There is ample evidence to suggest that maternal iron deficiency anemia during the early stages of pregnancy is the cause of both preterm delivery and LBW babies.<sup>[5]</sup> Maternal anemia has significant adverse effects on both mothers and infants.<sup>[6]</sup> The risk of death among pregnant women with severe anemia has been reported to be twice that of mothers without severe anemia.<sup>[7]</sup> This is contributed by severe hemorrhage at delivery or postpartum.<sup>[8,9]</sup> as well as

complications due to anemia such as heart failure.<sup>[8,10]</sup> In terms of fetal outcome, anemia increases the occurrence of perinatal morbidities such as low birth weight, prematurity due to spontaneous preterm birth<sup>[9,11]</sup>, and neonatal iron deficiency.<sup>[12,13]</sup> Many studies have reported that the commonest cause of anemia in pregnancy is due to iron deficiency.<sup>[14]</sup>

**Table 1: Consequences of IDA in pregnancy.**<sup>[15-24]</sup>

Antepartum complications	Intrapartum complications	Postpartum complications	Fetal outcome
Increased risk of preterm delivery	Prolonged labor	Postpartum hemorrhage	Low birth weight
Premature rupture of membranes	Increased rates of operative delivery and induced labor	Purperal sepsis	Prematurity
Preeclampsia	Fetal distress	Lactation failure	Infections
Intrauterine Death	Abruption	Pulmonary thromboembolism	Congenital malformation
Intercurrent infection		Subinvolution of uterus	Neonatal Anemia
Antepartum hemorrhage Congestive Heart Failure		Postpartum depression	Abnormal cognitive development
			Increased risk of Schizophrenia

According to an RCT study that included a Cochrane review, daily iron supplementation during childbirth increased pregnant women's hemoglobin levels in underdeveloped nations compared to intermittent iron supplementation.<sup>[25]</sup> According to certain research, taking iron supplements every day or once a week is ineffective at preventing gestational anemia.<sup>[26]</sup> The World Health Organization states that parenteral iron therapy results in a more quicker erythropoietic response and complete correction of iron deficiency when compared to oral iron administration when it comes to the prevention and treatment of severe anemia.<sup>[27]</sup> It has been demonstrated that women who consume large amounts of iron on an empty stomach experience gastrointestinal distress.<sup>[28]</sup> While intravenous or intramuscular iron supplementation is linked to allergic responses and anaphylactic shock, it is also noted that parenteral iron therapy predisposes patients to venous thrombosis, cardiac arrest, and mortality.<sup>[29,30]</sup> Because gestational anemia impacts pregnant women's ability to birth a normal, healthy baby, it must be effectively managed. India has a strong history of using traditional medical systems. One such traditional Indian medical system that emphasizes illness prevention and treatment is Ayurveda, one of many that are practiced. The scientific practise of managing ailments through Ayurveda is based on Aptopadesha, and its roots can be traced back to the Rigveda and Atharvaveda. Ayurveda is a life science with more understanding on health maintenance, medicinal medications, treating different diseases, and ethnic traditional traditions than it is a medical science.<sup>[31]</sup>

### GARBHINI PANDU

Anemia during pregnancy, or Garbhini Pandu, is explained in Ayurveda as a symptom of Garbhini rather than a sickness. It is explained as a Garbha problem that affects pregnant women. The expanding fetus is thought to compress Rasa Nadi, preventing Rasa from flowing freely into the body and causing Pandu. In addition, excessive consumption of Amla (sour), Lavana (salty), and Katu (pungent) Rasa (taste) in Aahara, as well as

daytime sleep deprivation, Vegavidharana (suppression of urges), and Manasika Bhava (psychological effects) can all contribute to Garbhini Pandu.<sup>[32]</sup> In the context of Rakta Gulma, Acharya Kashyapa has described Pandu as a symptom of Garbhini, and none of the Brhatrayees like In their Samhithas, Acharya Charaka, Susruta, and Vagbhata have all explained this.<sup>[33]</sup>

### AETIOLOGY AND PATHOGENESIS (NIDANA AND SAMPRAPTI)

Due to the multitasking nature of today's world, women are unable to maintain a healthy diet and way of life during pregnancy. These Apathyakara Aaharavihara result in Uttarottaara Dhatunirmiti Hani, also known as Vikrut Dhatu Utpatti, and the manifestation of Garbhini Pandu. They also cause Rasa Dhatu to become vitiated. The Ayurvedic lifestyle is particularly beneficial for expectant mothers and is important for the birth of healthy offspring. Because the foetus depends on the mother for nutrients, the woman is believed to be the center of "Suprajanirmiti." Acharya Haritha states that "Garbhini Pandu," one of the Ashta-Garbhopadravas, is the most prevalent illness that affects pregnant women and is brought on by the fetus. Ayurvedic medicine lists the reasons behind these illness as excessive eating of Amla (sour), Lavana (salty), and Katu (pungent) Rasa (taste) Aahara; daytime sleep; Vishamashana (improper dietary habits); Vegavidharana (suppression of desires); and mental consequences caused by Manasika Bhava. Consequently, Pandutva in Garbhini and the vitiation of Rasavaha and Raktavaha Srotas follow.<sup>[34]</sup>

### ROOP (CLINICAL PRESENTATION)

Screening for anemia during pregnancy is essential because it's one of the most prevalent issues in developing nations. According to guidelines, the screening for anemia should begin in the first trimester, again at 24–28 weeks, and again at 36 weeks of gestation.<sup>[35]</sup> In addition to the hemoglobin values recommended by the World Health Organization and the Centers for Disease Prevention for anemia in pregnant

women, pallor with a peripheral smear demonstrating normal RBC morphology is taken as a criterion for defining the physiologic anemia of pregnancy; any deviation from this is regarded as pathologic.<sup>[36]</sup> Biochemically, hypochromia (mean corpuscular hemoglobin less than 27 pg) and microcytosis (mean corpuscular volume less than 27 pg) are the hallmarks of iron deficiency anemia. greater than 80 feet.<sup>[37]</sup> The reticulocyte hemoglobin content, the proportion of hypochromic reticulocytes, and the percentage of circulating microcytes are established biomarkers of iron deficiency anemia or erythropoiesis, and they are tested using contemporary automated analysers.<sup>[38]</sup> Ayurveda does not address Garbhini Pandu in isolation. Following a thorough analysis of the literature, theories, and Nidanapanchaka in regard to Garbhini, it was determined that the Samprapti of Garbhini Pandu entails Pitta Dosha dominance, which raises Rasa Dhatu's Dravabhava. After this Rasadushti, Uttarottara Dhatunirmiti and Dhatushaithilya and Vaivarnya appear. Another description of Pandu is as a sickness associated with Raktavaha and Rasavaha Srotasas. The primary characteristic of Pandu Roga is panduta, which is defined as paleness or skin pallor brought on by both a qualitative and quantitative deficiency in Rasadhatu and Raktadhatu. Pallor of the tongue, lips, skin, sclera, and nails are the initial symptoms.<sup>[39]</sup> Based on the fetal's developmental milestones, the fetal requirements increase as the pregnancy goes on, making the Rasa Dhatu of the Garbhini puts in extra effort to satisfy Garbha's requirements. Garbhini should eat more nutritious food and in larger quantities, but because it isn't readily available, she ends up in Pandu.

#### MANAGEMENT OF GESTATIONAL ANAEMIA (CHIKITSA OF GARBHINI PANDU)

To effectively manage anemia during pregnancy, the source and severity of the anemia must be assessed. The severity of the anemia, extra hazards, maternal comorbidities, and the amount of time left until delivery are some of the considerations that are crucial for selecting the best course of treatment.<sup>[40]</sup> Parenteral iron therapy is administered intravenously starting in the second trimester, and oral and parenteral iron supplements are currently used in the treatment of anemia.<sup>[41]</sup> To avoid anemia during pregnancy, diet and nutrition play a significant role in addition to supplements, and this should be appropriately explained to all expectant mothers. The first prenatal checkup is the recommended time to begin taking a 30 mg daily iron supplement, according to the CDC. Nevertheless, regional suggestions vary.<sup>[42]</sup> The WHO suggests that all pregnant women take 30 to 60 mg of elemental iron per day, but British recommendations do not advocate any regular iron supplementation during pregnancy.<sup>[43]</sup> The World Health Organization also notes that weekly intermittent oral iron supplementation might be used if daily iron consumption is not feasible because of gastrointestinal adverse effects.<sup>[44]</sup> As per the Nutrition Association, the recommended daily allowance (RDA)

for iron for a third-trimester pregnant woman is 30 mg.<sup>[45,46]</sup> The WHO advises routine deworming with a single dose of mebendazole (400 mg) or albendazole for all expectant women who are native to regions where hookworm/Trichuris is common with 500 mg of mebendazole.<sup>[43]</sup> Gestational anemia, or Garbhini Pandu, is successfully treated in Ayurvedic medicine. Additionally, Garbhini Pandu is common in Garbhini like other illnesses, according to Acharya Kashyapa. In his Samhita, Acharya Haritha expressed his opinions regarding the Ashta Garbhopradravas, of which Garbhini Pandu is one. Garbhini Pandu is referred to as a "Varnatva" and Pandu is described as a Rasapradoshaja Vikara. Because Tridoshas is involved, Shodhana is stated to be the first line of treatment in Pandu, while it is contraindicated in Garbhini, according to Charaka. If this Garbhini Pandu is not adequately treated, it can result in Dhatu Shaithilya and Dhatu Kshaya, which can ultimately cause intranatal issues such as delayed labor, postpartum hemorrhage, and death.<sup>[47]</sup> Even doctors avoid giving drugs to pregnant women because they could harm the developing fetus in the womb. Pregnancy is seen as a delicate time in a woman's life. Even Ayurveda, which has prescribed the same medication since ancient times, notes that it should be administered in a gentle manner that does not harm the fetus and that has Snigdha and Soumya Gunas. Ayurvedic Acharyas recommend certain medications in Garbhini Pandu, such as Ghritas like Prakash, Dadimadi, Katukadi, Panchatikta, and Mahatikta. There are various types of bahasmas, including Lohabhasma, Roupayabhasma, Vangbhasma, Mandoorbhasma, and Swarnamakshikbhasma. Kalpas such as Navayas Loha and Tapyadi Loha. Vasant Kalpas such as Laghumalini Vasanta and Madhumalini Vasant, etc. These drugs are supposed to improve Dhatvagni and Jatharagni, which assists in relieving and works wonders for treating Garbhini Pandu. It is necessary to promote Pathya and Apathya for the easily digestible Garbhini Pandu Aahara Padarthas, such as Yava, Mudga, Masura, Shastikshaali, Kharjura, Guda, Mrudvika, and Jaangal Mansrasa.

#### COMPLICATIONS (UPADRAVAS)

If an illness is not appropriately treated, it will eventually cause irreversible problems. If Garbhini Pandu is not treated appropriately, it can result in intra-natal issues such postpartum hemorrhage, prolonged labor stage, and even death, as well as complications for the mother and the fetus such as Dhatu Kshaya and Shaithilya.<sup>[47]</sup>

#### DISCUSSION

With pitta as the primary Pitta Dosha, Pandu Roga is regarded as a Tridoshaja Vyadhi. This manifests as skin discoloration and pallor (Pandu), which are brought on by blood vitiation (Vidushya Rakta) and decreased blood (Alpa Rakta).<sup>[48]</sup> According to Ayurveda, anemia that develops during pregnancy, known as Garbhini Pandu, is mostly brought on by the vitiation of Rasa Dhatu. Rasa Dhatu has to work twice as hard during pregnancy as it

does in non-pregnant people. It fulfills three functions, including feeding the fetus, the breast, and the expectant mother. Rasa Dhatu's multiple responsibilities and stress during pregnancy cause it to be unable to meet the demands of the expectant mother, which results in the pregnant woman who has Garbhini Pandu is affected.<sup>[49]</sup> Numerous research projects, including Dadimadi Ghrita, Punarnavadi Mandura, Navayasa Lauha, Dhatri Lauha, Pradarantaka Lauha, Sarva-Jvara-Hara Lauha, Birhat Yakrdari Lauha, and Trikatrayadi Lauha, have examined iron deficiency anemia and demonstrated its effectiveness in the general population. Some of the medications for gestational anemia that have been shown to be beneficial in clinical trials are Dhatri Lauha Vati, Pandughni Vati, Punarnava Mandura and Dhatri Lauha, Mandura Bhasma, Dadimadi ghrita, Draksha Ghrita, and so on. The current study has attempted to provide a detailed discussion of Garbhini Pandu as described in Ayurvedic classics and has attempted to correlate Garbhini Pandu with modern science's understanding of prenatal anemia based on signs and symptoms.<sup>[50]</sup>

## CONCLUSION

One of the most prevalent health problems that arise during pregnancy in underdeveloped nations is gestational anemia, which calls for prompt medical attention to preserve the lives of both the mother and the unborn child. The ancient Indian science of Ayurveda has extensive descriptions of pregnancy, labor, and its management difficulties, placing a greater emphasis on women and their health. Ayurvedic medicine's description of Garbhini Pandu has a correlation with gestational anemia. Garbhini Pandu have been effectively treated by ancient experts since ancient times, and they are still being treated today. The definition of garbhini, its treatment, and its relationship to gestational anemia in modern medicine have been the main goals of the current study.

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