

**ROLE OF DHATRI LAUHA IN MANAGEMENT OF GARBHINI PANDU ROGA (IRON DEFICIENCY ANAEMIA IN PREGNANT WOMEN)***¹Dr. Lariya Neelam and ²Dr. Bhadrawat Anand¹Associate Professor, Department of Kayachikitsa, Sri Sai Institute of Ayurvedic Research and Medicine, Bhopal.²Ayurved Medical Officer, Department of Panchkarma, Govt Aastang Ayurved College, Indore.

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ABSTRACT

Ayurveda is one of the most ancient system of medicine. The pledged purpose of Ayurveda as a medical system is to ensure a healthier and longer life to the humanity. In India a large majority of people suffering from malnutrition, many nutritional deficiency disease like anaemia which is described in Ayurveda as Pandu Roga due to poverty, illiteracy and lack of health services. Majority of the people have their haemoglobin percentage lower than normal and due to this their immunity also decreases. In this 21st century, life style has changed very rapidly. Now there is competition in every field, so most of the people have a lot of stress. As life style is changing in the society, diet, habits are also changing very rapidly. As a result of this, people suffer from various diseases. "PANDU ROGA" is a very common disease, seen especially in developing countries like India. Iron deficiency anaemia (IDA) continues to be the commonest etiology of anaemia in pregnancy. The prevalence of iron deficiency (ID) in pregnant Indian women is amongst the highest in the world. Untreated iron deficiency (ID) has significant adverse feto-maternal consequences. Anaemia in pregnancy is multi-factorial. Iron deficiency anaemia (IDA) is the most common one. Major cause is increased demand of iron during pregnancy. Iron deficiency anaemia (IDA) continues to be major public health problem in India. It is estimated that about 20% of maternal deaths are directly related to anaemia and another 50% of maternal deaths are associated with it. Ayurvedic management is an effective way of curing anemia in general by a large number of Lauha preparations of which Dhatri Lauha has been used widely for centuries. The drug Dhatri Lauha tablet containing Amalaki (Emblica Officinalis), Lohabhasma (Incinerated Iron), Yashtimadhu (Glycyrrhiza glabra L.) and bhavanaarth: Guduchi Kwath (Tinospora Cordifolia).

KEYWORDS: Pandu Roga, Iron deficiency anemia, Ayurveda, Pregnancy.**INTRODUCTION**

Ayurveda is one of the traditional medicinal systems of Indian. *Pandu Roga* is correlated with as anaemia in modern medicine.^[1] Anaemia refers to a state in which the level of haemoglobin in the blood is below the reference range appropriate for age and sex. Other factors, including pregnancy and altitude, also affect haemoglobin levels and must be taken into account when considering whether an individual is anaemic.^[2] *Panduroga* is described with details in all major Ayurvedic texts like *CHARAK SAMHITA (chikitsa16)*, *SUSHRUTA SAMHITA (sutra uttar 40)*, *ASHTANGA HRIDAYA (nidan13, chikitsa16)* etc. As per *Ayurveda*, *Panduroga* is *Rasapradoshaj vikara and Rakta dhatu kshaya*. According to *Acharya Charak* the Sign and symptoms are *Panduta, daurbalya, hridspandanadhikya, akshikuta shotha, etc.* Anemia is the most common nutritional deficiency disorder in the world. WHO has estimated that prevalence of anemia in pregnant women is 14% in developed and 51% in developing countries

and among them, 65–75% are in India.^[3] There are different types of anaemia described in modern medicine like iron deficiency anaemia, megaloblastic anaemia, hemolytic anaemia and so on. Out of which Iron deficiency anaemia is the commonest nutritional deficiency disorders present throughout the world. Iron deficiency anaemia occurs when iron losses or physiological requirements exceed absorption. In pregnancy, iron is diverted to the fetus, the placenta and the increased maternal red cell mass, and is lost with bleeding at parturition.^[4] The prevalence of anaemia was 98% among the pregnant females in this region of rural India. Out of these 41.76% had mild anaemia, 37.05% had moderate anemia, 15.88% had severe anaemia and 3.29% very severe anaemia according to ICMR classification of anaemia.^[5] The relative prevalence of mild, moderate and severe anaemia are 13%, 57%, 12% respectively in India (ICMR data). The issues of control of IDA in India are multiple. Inadequate dietary intake of iron, defective iron absorption, increased iron

requirements due to repeated pregnancies and lactation, poor iron reserves at birth, timing of umbilical cord clamping, timing and type of complementary food introduction, frequency of infections in children, and excessive physiological blood loss during adolescence and pregnancy are some of the causes responsible for the high prevalence of anaemia in India.^[6] Around 30% (2 billion) of the total world population suffers from anaemias and half of these, some 600 million people have iron deficiency.^[7] In India 30% adult males, 45% adult female, 80% pregnant female, 60% children have iron deficiency anaemia.^[7] Multiple factors lead to anaemia in pregnancy, nutritional iron deficiency anaemia (IDA) being the commonest. Underlying inflammatory conditions, physiological haemodilution and several factors affecting Hb and iron status in pregnancy lead to difficulties in establishing a definitive diagnosis.^[8]

Concept of Anaemia^[9]

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 2nd trimester. WHO definition as follows. Hb% <11.0 g % in 1st & 3rd trimester, 10.5 g % in 2nd trimester.

In India 90% of anaemia in pregnancy are nutritional origins. Iron deficiency is the most common cause along with acute blood loss. Iron deficiency anemia is due to increase iron demand. Fe stores being constant or depleted in pregnant state are the cause.

IDA during Pregnancy^[10]

Causes

The woman who has got Sufficient iron reserve and is on a balanced diet is unlikely to develop anaemia during pregnancy in spite of an increased demand of iron but if the iron reserve is inadequate or absent the factors which lead to the development of anemia during pregnancy are

Increase the demand of iron

Demand of iron during pregnancy is markedly increased and adequate balanced diet content not more than 18-20 mg of iron and assuming that the absorption rate is increased by two folds 20%, the demand is hardly fulfilled.

Diminished intake of iron

Apart from socioeconomic factors, faulty dietetic habits, loss of appetite and vomiting in pregnancy are responsible factors.

Disturbed metabolism

Apart from the faulty absorption mechanism just described, pregnancy depresses the erythropoietic function of the bone marrow. The exact mechanism is not clear but it probably interferes with specific amino acid synthesis and lack of utilization of the available haemopoietic factors. Presence of infection mildly

interferes with the erythropoiesis, one should not even ignore the presence of asymptomatic bacteriuria.

Pre pregnant health status

Majority of women in the tropics actually start pregnancy on a pre-existing anaemic state or at least with inadequate or with a nil iron reserve. It is the state of the stored iron which largely determines whether or not and how soon a pregnant woman will become anaemic.

Symptoms

The patients have got no symptoms and the entity is detected accidentally during examination however the following features may developed slowly. Lassitude and a feeling of exhaustion or weakness may be earliest manifestation. The other feature are anorexia and indigestion palpitation caused by ectopic beats, dyspnoea, dizziness and swelling of the legs.

Causes Of Pandu^[11]

Kshaara, amla, lavana, atiushna, viruddha asaamy bhojan. Pavta, maasha, til tail nishevan. Vidagdhaanna, divaswapa, vyaayaammaithun. Vega dhaaranam, kaama, chinta, bhaya, krodha.

Symptoms Of Pandu^[12]

Shortness of breathing, fatigue, changes in stool colour, angina, bodyache, enlargement of spleen, headache, yellow skin. *Karna kshweda, hataanalaha, durbala, sadana, annadwasha, shrama, Bhrama, pindikaudweshana, katiruksadana, ururuksadana, arohanaayasa.*

Dhatri Lauha for Garbhini Pandu

DHATRI LAUHA is described in our classical text (CHAKRPANI, CHIKITSA STHAN 30 AND AYURVED SAR SANGRAH) for treatment of Pandu Roga. Contents of Dhatri Lauha are Kashaya, Ruksha, Sheeta, and Tridoshashamaka specially Kapha-Pitta Shamaka. Dhatri is Rasayana and Yakruttejaka and has been proved as antioxidant, immunomodulator, and hepatoprotective.^[13] Yashtimadhu (Glycyrrhiza glabra L.) is Rasayana and active bio-availability enhancer.^[14] Amruta (Tinospora cordifolia [Willd.] Miers.) is also Rasayana and hepatoprotective. All these drugs have action on Rasavaha and Raktavaha Srotas and enhance the essence of all the Dhatus. Lauha Bhasma possesses a significant hematinic and Deepana-Pachana property. Amalaki,^[15] and Amruta^[16] is a rich source of Vitamin C which enhances the iron absorption. Thus, cumulative effects of all the drugs lead to the correction of metabolism, increase iron absorption, improved blood formation in Garbhini Pandu.

AIM AND OBJECTIVES

- To assess the efficacy of Dhatri Lauha in management IDA.
- To highlight the Pandu Roga in various classical texts of Ayurveda.

- To focus on the Probable mode of action of *Dhatri Lauha* in *Garbhini Pandu*
- To study the concept of *garbhini pandu* w.s.r. to IDA in pregnancy.

MATERIAL AND METHODS

To review the foremost *Ayurvedic* classics in the context of *Garbhini Pandu* explained by the *Acharyas*. To search out websites and journals providing information regarding the *Pandu Roga* and Anaemia will also be reviewed. Dig out *Ayurvedic* classics related to *Dhatri Lauha*.

There are no direct references of *Garbhini Pandu* (IDA in pregnancy) in *Ayurveda*, except *Acharya Kashyapa* has described *Pandu* as a symptom of *Garbhini* in the description of *Rakta Gulma*,^[17] *Acharya Harita* has also described *Vivarnatva* as one of the eight complications of *Garbha*.^[18]

Probable Mode of Action of *Dhatri Lauha*

Dhatri Lauha has *Pandughna* (antianemic), *Prinana* (nourishing), *Raktaprasadana* (bloodtoner) properties.^[19] *Dhatrilauha* having *Tridosha*, *Rasayana* and *Rasa Poshaka* (nutritional) properties may be considered the best to maintain the aggravated *Pitta*.^[20]

Amalaki, due to *Madhura Rasa* (sweet taste) and *Sheeta Virya* (cold potency) reduces *Pitta* and thus breaks down the main factor in the pathogenesis of *Pandu Roga*.^[21] Further, it contains richest source of vitamin-C, which helps in the absorption of iron thus increases its bioavailability.^[22] *Yasthimadhu*, due to *Varnya* (complexion promoting) and *Pitta* pacifying property maintains the normal color of the skin. *Guduchi* being *Tikta Rasa* (bitter taste) increases appetite,^[23] *Krimighna* (anti helmentic) and effective against many infections.^[24] *Lauha Bhasma*, the oxide of iron has a direct impact on bodily iron.^[25] *Dhatrilauha* possesses many fold effectiveness in anemia (IDA). Nutritional anemia is the most common due to increased demand of iron during pregnancy.^[26] In healthy, iron-sufficient women, Hb concentrations change dramatically during pregnancy to accommodate the increasing maternal blood volume and the iron needs of the fetus.^[27]

DISCUSSION

Pregnancy is a wonderful period which gives feeling of happiness and fulfilment to a woman for bringing a new life in to the world. Pregnancy is a phase in which mother's body functions are hyper activated in order to fulfil the needs of the developing fetus. Due to nutritional deficiency IDA more common during pregnancy. In IDA marked reduction in haemoglobin concentration which leads to insufficient oxygen supply to body tissue. In *Ayurveda* classics this condition more likely correlated with *garbhini Pandu*. According to *harita samhita*, there are 8 *garbhopadrava*. *Vivarnata* can be correlated with *garbhini pandu*. In *Garbini dhatu*

Saratva (essence) is lost for give (nourishment) *poshana* to the *garbha* therefore *dhatu* become *nihsaratva* (loss of essence) which leads to *ojakshaya*. *Dhatri Lauha* is best to Cope up from *nihsaratva* condition because it's drugs have *Rasayana* properties along with *lauha bhasma* which indicated to manage the IDA from many years.

Acharya Harita has described *Garbhini vivarnata* while *Charaka* mentioned *Garbhini Balavarnahani* during 6th month of pregnancy and *Kashyapa* has described *Ashita sati* (paleness during pregnancy) which if not treated may lead to maternal death.

CONCLUSION

The woman has power to give origin to offspring. This *Janani* power gives her the place of God since the life evolution on the universe woman has been worshipped as *Maa* due to their motherhood, love and affection qualities towards child. Every woman has right to experience the happiness of motherhood, hence pregnancy comes with lots of responsibilities to nourish, care and protect for each and every need of growing foetus.

Garbhini's rasa and *rakta* give nourishment to *Garba*. *Garbhini pandu* occur due to foetal demands and improper *rasa dhatu* functioning leads to malnourishment of body. Now a days due to stressful life style and decreased nutritive value of food mother unable to complete the extra demand of nutrients through diet alone. This give rise to IDA in pregnancy. During pregnancy some physiological changes occur in which extra demand of iron and vitamins included especially in latter half. Therefore physiological deficiency stage remains throughout the pregnancy If not fulfilled will lead to IDA in pregnancy. For the management of IDA iron compound given in pregnancy period to every woman which have some side effect on body.

Gabhini inappropriate nourishment by *Ahara rasa* is also key factor for increase prevalence of *pandu* in pregnancy. IDA in pregnancy more nearer to *pitta* predominant *pandu*. In pathogenesis vitiated *pitta* with predominant *doshas* depleted to *rasa dhatu* (nutrients) which subsequently malnourished to successive *dhatu*, lastly greater impact on *ojas*. *Ojas* taken here as blood or immunity by the *Chakrapani* commentator of *Charak Samhita* so overcome from this condition we have to choose a medicine which pacify *pitta* and diet those give nourishment to *rasa dhatu* Both requirements completed by *Dhatri Lauha*.

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