

**LITERATURE REVIEW OF GARBHINI PARICHARYA WITH SPECIAL REFERENCE TO FOAD HYPOTHESIS****Dr. Trupti Shirirang Sawarde\*<sup>1</sup> and Dr. Varsha Suresh Deshmukh<sup>2</sup>**

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**ABSTRACT**

In *Ayurveda*, the systematic supervision during pregnancy is called as “*Garbhini Paricharya*”. The nine months diet regimen is a unique concept in *Ayurveda*. It changes in accordance with the growth of the fetus in the womb and at the same time ensures health of the mother. A healthy mother brings forth a healthy baby. *Garbha Poshana* take place by *Upsnehana*, *Upswedana* and directly through *Apara*. Food taken by the *Garbhini* is used for the nourishment of *Garbhini*’s own body, to provide nutrition and helps the growth of the *Garbha* and preparation of *Stanya* (breast milk). *Garbhini Paricharya* is enumerated in *Masanumasika Pathya*, *Garbhopaghatakara Bhavas*, *Garbhasthapaka Dravyas*. The FOAD hypothesis proposes that occurring defect due to fetal under-nutrition is result of improper dietary habits of mother during pregnancy. The nutrients and vitamins required for conception as well as for proper development of fetus and for avoiding of FOAD are already described in *Ayurveda* under *Garbhini Paricharya*. Hence to follow *Garbhini Paricharya* in

authentic way is need of and hour. In this article relation between *Garbhini Paricharya* with FOAD Hypothesis is explained in details.

**KEYWORDS:** *Garbhini Paricharya*, FOAD, *Garbhopaghatakara bhavas*, *Garbhasthapaka Dravyas*.

## INTRODUCTION

A woman is treasured by the richness of continuing the human race. In *Ayurveda*, *Stree* is considered as the root cause of progeny. Wide range of knowledge regarding *Garbhini Paricharya*, *Masanumasika Pathya*, contraindication for *Garbhini*, guidelines for the management of *Prasuta Stree* are given in various Samhitas.

Charaka has explained that due to the *Prachalita Dhathus* and *Doshas*, the lady is prone for getting *Vikrutis*, thus pregnant lady should be treated just like a pot filled with oil<sup>[1]</sup>, even the slightest excitement can create problem to pregnant lady as well as the fetus. The *Garbhini Paricharya* refers to the care given to pregnant lady. It has to be started as soon as the signs and symptoms of pregnancy are seen.<sup>[2]</sup> Various *Aharas*, *Viharas*, and *Aushadhas* in the form of do's and don'ts are explained for maintaining the physical and mental health of pregnant women.<sup>[3]</sup>

Ayurveda consider food to be best source of nourishment as well as medication for the pregnant women. The nine months' diet regimen is a unique concept in *Ayurveda*. It changes in accordance with the growth of the fetus in the womb and at the same time ensures health of the mother. Mother and child must be considered as a one unit. During antenatal period fetus is a part of mother for about 280 days. During this period, the fetus obtains all the building material and oxygen from mother's blood. Child health is closely related to maternal health. If a mother is healthy then there is less chance for premature birth, still birth or abortion. *Garbhini Paricharya* was advised thousands of years ago in classical texts of *Ayurveda* for pregnant women are now proven completely scientific.

### ***Garbhini paricharya***

This *Garbhini Paricharya* can be described into three parts-

1. *Masanumasika Pathya*
2. *Garbhopaghatakara bhavas*
3. *Garbhasthapaka Dravyas*

### ***Masanumasika Pathya***

During pregnancy fetus starts to get nutrition from mother through placenta. Adequate nutrition is needed for monthly constant and proper growth of embryo. The requirement of nutrition varies according to developmental stage of fetus month wisely (*Masanumasika Vrudhi*). Pregnancy imposes the extra nutrients requirement hence the dietetic requirements

of the mother also changes month wise. In *Ayurvedic Samhitas*, the month wise dietetic regimen is given in details known as *Masanumasika Paricharya* for woman right from the first month up to the ninth month of pregnancy.

Month	Charak Samhita	Sushruta Samhita	Ashtang Sangraha	Harita Samhita
1 <sup>st</sup> Month	Anupsanskrita dugdha + satmya aahara in morning and evening <sup>[4]</sup>	madhura, sheeta, drava aahara <sup>[5]</sup>	Madhuyashti, madhukapuspa with butter, honey and sweetened milk <sup>[6]</sup>	yastimadhu, parushaka, madhukpushpa with navaneeta + madhu and madhura dugdha <sup>[7]</sup>
2 <sup>nd</sup> Month	madhura aushadhi siddha dugdha <sup>[8]</sup>	madhura, sheeta, drava aahara <sup>[9]</sup>	Sweetened milk treated with kakoli <sup>[10]</sup>	kakoli siddha dugdha <sup>[11]</sup>
3 <sup>rd</sup> Month	madhu and sarpi upsanskrit dugdha <sup>[12]</sup>	madhura, sheeta, drava aahara + sastikaudana <sup>[13]</sup>	Krishara <sup>[14]</sup>	Krishara <sup>[15]</sup>
4 <sup>th</sup> Month	ksheera navaneeta (2 tola) <sup>[16]</sup>	sashtikaudana + dadhi, dugdha, navaneeta sidha aahara, jangala mansa and hridya aahara <sup>[17]</sup>	Medicated cooked rice <sup>[18]</sup>	Kritaudana <sup>[19]</sup>
5 <sup>th</sup> Month	Ksheerasarpi <sup>[20]</sup>	Sashtikaudana with dugdha, jangala mansa sahita hridya aahara, ksheerasarpi <sup>[21]</sup>	Payasa <sup>[22]</sup>	Paayasa <sup>[23]</sup>
6 <sup>th</sup> Month	Madhura aushadhi siddha ksheera sarpi <sup>[24]</sup>	Gokshura siddha sarpi or yavagu <sup>[25]</sup>	Sweetened curd <sup>[26]</sup>	Gokshura siddha sarpi or yavagu <sup>[27]</sup>
7 <sup>th</sup> month	Madhura aushadhi siddha ksheera sarpi <sup>[28]</sup>	Prithaka parni siddha sarpi <sup>[29]</sup>	Ghritakhandha <sup>[30]</sup>	Ghritkhandha <sup>[31]</sup>
8 <sup>th</sup> Month	Ksheerayavagu with sarpi <sup>[32]</sup>	Anuvasana and asthapana basti <sup>[33]</sup>	Ghritapuraka <sup>[34]</sup>	Ghritapuraka <sup>[35]</sup>
9 <sup>th</sup> Month	Anuvasana basti + yoni pichu <sup>[36]</sup>	Snigdha yavagu + jangala mansrasa <sup>[37]</sup>	Different varieties of cereals <sup>[38]</sup>	Anna sevana <sup>[39]</sup>

## Scientific Review according to Trimesters

### First Trimester

In first three months there are symptoms of pregnancy like nausea, vomiting and loss of appetite so the pregnant lady is unable to have *Samanya Aahara*. Hence *Drava*, *Snigdha* and *Madhur Aahara* like *Dugdha*, *Sarpi*, *Navaneeta* etc are advised. *Drava Aahara* will prevent the dehydration, *Madhura* and *Snigdha Aahara* help in maintenance of proper health of mother and proper nutrition of the fetus. *Krishra* advised mostly to avoid Nausea, indigestion.

### Second Trimester

Fourth month onwards there is growth of muscular tissues of fetus. Hence there is extra requirement of protein so *Jangala Mamsarasa*, *Audana*, *Ksheera*, *Payasa* etc. are advised. There are chances of pedal edema, hypertension, pre-eclampsia, to overcome these disorders *Mutral Dravyas* like *Gokshura* and *Yavagu* are advised.

### Third Trimester

In 7th month there is maximum weight gain of the fetus along with that chance of PIH and pedal edema & IUGR are more. Hence *Mutral*, *Brihana*, *Shoshnashaka*, *Pitta* and *Kapha Nashaka Dravya* are used. *Basti* is explained in view of *Anulomana* of the *Vata* so as to facilitate the normal delivery and relieve *Malabaddhata*. *Basti* also affect the autonomous nervous system governing myometrium and help in regulating their function during labour.

### The Fetal Origin of Adult Disease (FOAD) Hypothesis

David Barker first popularized the concept of fetal origins of adult disease (FOAD). Since its inception, FOAD has received considerable attention. The FOAD hypothesis holds that events during early development have a profound impact on one's risk for development of future adult disease.

Barker hypothesised that the associations between IUGR or LBW at birth or during infancy and later CVD reflect permanent effects of fetal undernutrition. The fetus is dependent on the transfer of nutrients from the mother and adapts to an inadequate nutrient supply in a number of ways. The FOAD hypothesis proposes that although occurring defect due to fetal undernutrition is result of improper dietary habits of mother during pregnancy and these adaptations become permanent because they occur during critical periods of early development like intrauterine as well as after birth. The evidence that certain diseases do have links pointing to fetal origins- adverse influences early in development, and particularly during intrauterine life, can result in permanent changes in physiology and metabolism, which result in increased disease risk in adulthood.

Neonatal size is strongly related to maternal BMI, height, head circumference and even birthweight.<sup>[40,41]</sup> This probably has both genetic and environmental components, but strongly suggests that the nutrition of a female throughout her life (during her own foetal life and childhood as well as during pregnancy) influences the growth of foetus. Nutritional effects on foetal growth are also shown by the drop in birthweight observed during famines. There is

some evidence that improving the micronutrient quality of mothers' diets leads to an increase in foetal growth. Foetal growth depends on the uptake of nutrients at the end of a complex materno-foetal supply line. Due to FOAD there increases the risk of Low birth weight, Cardiovascular diseases, Diabetes Type-2, Adult obesity, higher cholesterol concentration, immune system disturbance, neurodegenerative disorder, Cleft Lip- Cleft palate, Cardia malformations, Cancer etc.

It has been argued that the increased risk of adult disease attributable to intra-uterine under nutrition is very small and the effects are most marked at the extremes of birthweight. In addition, effects of size at birth are conditioned by childhood growth and adult obesity and predict large differences in the risk of CHD, hypertension and diabetes.

### **Prevention of FOAD according to Modern Science**

There are periods before and during pregnancy in which specific nutrients are required for optimal development. There is growing evidence that optimal dietary intake of important nutrients, like iodine, docosahexaenoic acid (DHA), choline, and folate, is necessary during pregnancy and lactation. Foetal nutritional status is affected by the intrauterine and childhood nutritional experiences of the mother. Maternal nutritional status at time of conception is an important determinant of outcomes. Intrauterine nutritional environment affects health and development of the foetus throughout life.

Some essential nutrients given in order to prevent FOAD pre and post conception to the mother includes DHA, Omega Fatty Acids, Folate, Choline, Folic acids, Iodine, Vitamin B12 and Vitamin B6. Growth Hormones are also given such as Calcium, Vitamin D, Anti Oxidants, L- arginine, Fructo-oligo Saccharides, Dietary fibers, etc.

### ***Garbhopaghatkara Bhava***

*Garbhini* should avoid use of *Teekshna*, *Ruksha*, *Ushnadravys*. Should give up foul smelling articles and should not eat dried up, stale, putrefied or wet food.<sup>[43]</sup> *Vishtambhi* (hard to digest), *Vidahi* food as these are harmful for the foetus.<sup>[44]</sup> She should avoid heavy exercises, coitus, harsh or violent activities, ride over vehicles, excess satiation, excess emaciation, sleeping in day and awakening in night, sitting in uneven places and should avoid fasting, grief, anger, visiting lonely places, cremation ground, prolonged stay near fire or hot sun etc. Her sleeping and sitting place should be covered with soft cushion/mattress.<sup>[45]</sup> All these psychological and physical strains like carrying heavy weight or vehicle riding may

precipitate abortion due to sudden increase in intra-abdominal pressure. Susruta in 8th month of pregnancy has indicated *Asthapana Basti* followed by *Anuvasana Basti* of oil medicated with milk and decoction of *Madhura* group of drugs for clearing the retained faeces and *Anulomana* of *Vayu*. Due to the movement of *Vayu* in right direction the lady delivers without difficulty and remains free from complications.<sup>[46]</sup> Whereas *Acharya Charaka* and *Acharya Vagbhata*, in 9th month has advised *Anuvasana Basti* with medicated oil with *Madhura* group of drugs and *Yoni Pichu* (vaginal tampons) with the same oil used for *Sthana* and *Garbhamarga*.

### ***Garbhashthapaka Dravya***

*Garbhashthapaka dravyas* counter act with the effect of *Garbhopaghatakara Bhavas* and help in the proper maintenance of the *Garbha*. They can also be used in the treatment and prevention of abortion. These are to be used as a routine as they are beneficial for the maintenance of proper health, growth and development of the mother and foetus. Some of the *Garbhashthapaka Aushadhis* are *Aindri*, *Brahmi*, *Satavirya*, *Sahashravirya*, *Amogha*, *Avyatha*, *Shiva*, *Arista*, *Vatyapushpi*, *Vishwasenkanta* etc. These should be taken orally as preparations in milk and *Ghee*. A bath with cold decoction of these drugs should be given during pushya nakshatra. Drugs of the *Jeevaneeya Gana* can also be used in a similar way. *Acharya Kashyap* has advocated that amulet of *Trivrita* should be also tied in the waist of pregnant woman.

## **DISCUSSION**

In *Ayurveda* detailed *Garbhini Paricharya* has been explained by all the *Acharyas*. Specific *Aahar* and *Vihara* are explained which should be followed by the *Garbhini* which is specific for each month considering the general condition of mother in that month, to overcome the expected complications of that particular month of pregnancy and also for the supplement of all the nutrients required by the foetus of that gestational age. It is explained that if the pregnant women follow all the guidelines explained in *Ayurveda* then there will be vaginal delivery of a healthy baby without any complication.

In our *Samhitas*, *Garbhopaghatakara Bhava* are also explained which should be avoided during pregnancy otherwise severe complication may occur which will affect the development & nourishment of the *Garbha* as well as health of the *Garbhini*. *Garbhini Paricharya* is been described in regards to following points- *Masanumasika Pathya*, *Garbhopaghathakara Bhavas*, *Garbhashthapaka Dravyas*, have discussed various diets and



various Dos and Don'ts in pregnancy. Similarly in modern medicine there is description of Antenatal Care by describing antenatal diet i.e. extra calorie diet is required, diet to prevent anemia, personal hygiene, rest and sleep, exercise, light work, prohibited drugs and coitus, etc. So the ancient Knowledge described is not only unique but also scientific with modern sciences. So Antenatal Care described in *Ayurveda* is very beneficial.

Neonatal health is strongly related to maternal BMI, height, head circumference and even birthweight. This probably has both genetic and environmental components, but strongly suggests that the nutrition of a female throughout her life as well as during pregnancy, influences the growth of her foetus. The nutrients and vitamins required for conception as well as for proper development of foetus and for avoiding of FOAD are already described in *Ayurveda* under *Garbhini Paricharya*. Modern medicines like iron tablets, multivitamins etc used has some or the other adverse effect on health of mother like constipation, nausea etc. All these vitamins, minerals and nutrients are important for foetus growth but not at the cost of mother's health. In accordance to avoid these effects all the required vitamins, mineral, and nutrients should be given in the form of diet. These dietetic regimen is given by Acharyas in the *Garbhini Paricharya*.

## CONCLUSION

*Garbhini Paricharya* mentioned in our ancient texts is very specific. The *Masanumasika Paricharya* helps in proper development of foetus. The life of pregnant women is at risk during whole pregnancy and delivery, as it is one of the most crucial times of her life. The *Garbhini Paricharya* itself helps in *Punarnavikarana* of her body. Thus proper implementation of *Garbhini Paricharya* ensures normal healthy delivery and *Suprajanan*. Some essential nutrients which helps in prevention of FOAD includes DHA, Omega Fatty Acids, Folate, Choline, Folic acids, Iodine, Vitamin B12 and Vitamin B6. Growth Hormones are also given such as Calcium, Vitamin D, Anti Oxidants, L- arginine, Fructo-oligo Saccharides, Dietary fibers, etc. All these nutrients are available in dietetic regimen given in *Garbhini Paricharya* like milk, *Ghee*, buttermilk, *Jangala Mamsarasa*, *Audana*, *Ksheera*, *Payasa*, different types of seasonal fruits, etc. All these nutrients are provided to mother in diet form and not in any medicine form which is easy to follow. Definitely following *Garbhini paricharya* to the fullest in every month will reduce the chances of Foetal Origin of Adult Disease and will also give rise to *Suprajanan* i.e. a good healthy progeny.

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