Review Article

PRENATAL CARE: AN AYURVEDIC PERSPECTIVE

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Abstract
Pregnancy and childbirth have great importance in every woman’s life. The proper care of pregnant woman imitates on the excellence and wellbeing of offspring. According to Ayurvedic perspective Garbhini Paricharya refers to antenatal care which recommends Aahara (specific dietary regimen), Vihara (Normal daily activities and therapeutic procedures), and modifications in psychological behaviour. In this article Garbhini Paricharya has been discussed in stepwise manner regarding nutritional supplementation to meet increased calorie requirements of pregnant woman, behavioural alterations to enhance spiritual and mental status, and herbal medications and procedures to treat complications during pregnancy. This enables Ayurvedic physicians in the prophylactic as well as therapeutic care of pregnant woman. Proper implementation of Garbhini Paricharya definitely ensures normal healthy delivery and healthy child of desired qualities and longevity.

Keywords: Garbhini Paricharya, Ayurveda, Garbhini, Antenatal care, Pregnancy

INTRODUCTION
Prevalence of maternal deaths is more in developing countries than developed one. The factors responsible are Hemorrhage (2.8 %), Complication of unsafe abortion (19 %), Pregnancy Induced Hypertension {PIH} (17 %), Infection (11 %), Obstructed labour (11 %).1 Majority (80 %) of fetal death occurs in ante partum period due to causes like chronic fetal hypoxia (UGR), Maternal Complications e.g. PIH, Infections, Fetal Congenital Malformation.2 Antenatal care plays crucial role in conquering these obstacles. Antenatal care refers to the regular medical and nursing care recommended for women during pregnancy2. It is a type of preventive care which allows physician to treat and prevent potential health problems throughout the course of the pregnancy. It mainly involves providing prophylactic treatments, regular periodic checkups, Nutritional supplementation and suggesting do’s and don’ts in pregnancy. Ayurveda places an enormous emphasis on the importance of caring for the mother before, during and after pregnancy. Garbhini Paricharya (Antenatal Care) refers to Aahara (specific dietary regimen), Vihara (Normal daily activities and therapeutic procedures), and modifications in psychological behaviour. The main intend behind advising Garbhini Paricharya is to provide proper growth of the foetus and mother, Anupaghata (uncomplicated pregnancy)3, Sukhprasadava (for normal healthy delivery and healthy child of desired qualities and longevity.4 In antenatal period, the food consumed by the pregnant woman becomes congenial to the fetus.5 So there is an increase need of balanced diet with good nutritional value during pregnancy. Any negligence or deprivation in nourishment may affect physical and mental growth of fetus or it may lead to miscarriage, premature delivery and low birth weight. The care of the pregnant woman reflects on the quality and health of the offspring. To achieve this goal our Acharyas have explained a detailed and systematic and month wise regimen and a list of do's and don’ts to be followed in the antenatal period.

Normal Aahara and Vihara of Garbhini

Pregnant woman desirous of producing a healthy and good looking child should give up non-congenial diet and life style.4 Woman from the first day of pregnancy should remain in high spirit, religious, tinted with ornaments and should wear clean and white garments, doing spiritual rites, do auspicious deeds and worship holy being. Her sleeping and sitting place should be covered with soft cushion or mattress. The couch and the bed of a pregnant woman should be low, soft, and guarded on all four sides by a number of soft pillows or cushion. She should eat palatable, liquid, sweet and greasy substances treated with drugs increasing appetite. All these things should be followed till delivery. She should be protected from Garbhopaghatakara Bhavas (Factors harmful to fetus). Medicinal herbs from Jeevaniya Gana should be used internally as well as externally.9 Affectionate behaviour of husband and philanthropic nature of servants helps in maintenance of pregnancy.10 The living place of garbhinis should be fumigated and spiritual atmosphere should be maintained by performing daily worships, Vedic hymns and holy songs.11 She is advised to listen to scriptures - in some families the recitation (paaraayana) of suitable texts such as the Sundara Kandam (from the Ramayana) or the tenth skanda of Bhaagavath is performed routinely.

Articles Beneficial For Pregnant Lady
Sali and shashtiik rice (rice having maturity 60 days), Mudga (green gram Vigna radiata ) wheat flour of parched rice, butter, ghrita, milk, rasala (curd mixed with sugar and condiments), honey, sugar, jack fruit (Artocarpus heterophyllus), banana (Musa acuminata), fruits of Amalaki

Table

<table>
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(Emblica officinalis), draksha (Vitis vinifera), sour and sweet substances. Pleasant mode of life using anointment with cooling agents, musk, sandal, camphor, moonlight bath should be followed. Vaghbata have advised bathing with cold decoction of medicinal herbs which alleviates vata dosha. Dietary regimen described by different ancient texts have been compiled in following table.

### Table 1: Month wise dietary regimen for pregnant women

<table>
<thead>
<tr>
<th>Months</th>
<th>Charaka</th>
<th>Sushruta</th>
<th>Vaghbata</th>
<th>Haarita</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>Sheeta Ksheera And Saatmya Bhojana</td>
<td>Madhur, Sheeta, Drava Aahar</td>
<td>Upasansanskriti Ksheera For 1st 12 Days Shaliparni (Desmodium gangeticum) Palasha Siddha Ghrita (Ghee Medicated With Butea monosperma) Followed By Cold Deocetion of Suvarna Rajata Siddha Jala, Swadu, Sheeta Drava, Aahara.</td>
<td>Yashirmadhau (Glycyrrhiza glabra) or Parushaka (Grewia asiatica) or Madhupushwa With Navaneeta With Madhur Payo Anupana</td>
</tr>
<tr>
<td>Second</td>
<td>Madhur Aushadhi Siddha Ksheera</td>
<td>Madhur, Sheeta, Drava Aahar</td>
<td>Madhur Aushadhi Siddha Ksheera</td>
<td>Kakoli (Roscoea procera) Sidhha Ksheer</td>
</tr>
<tr>
<td>Third</td>
<td>Madhu Sarpi Siddha Ksheera</td>
<td>Madhur, Sheeta, Drava Aahar</td>
<td>Madhu, Sarpi, Ksheera</td>
<td>Krishara</td>
</tr>
<tr>
<td>Fourth</td>
<td>Ksheera and Laksha (10gms) Navaneeta</td>
<td>Shashtika Odana With Dadhi and Dugdha Navaneeta Siddha Jangal Mamsa Yukta Hridya Aama</td>
<td>Ksheera And Laksha (10gms) Navaneeta</td>
<td>Sanskrita Odana</td>
</tr>
<tr>
<td>Fifth</td>
<td>Ksheera and Ghrita</td>
<td>Shashtika Odan With Dugdha, Ksheera Sarpi Yukta Jangal Mamsa Yukta Hridya Aama</td>
<td>Ksheera and Sarpi</td>
<td>Paayasa</td>
</tr>
<tr>
<td>Sixth</td>
<td>Madhur Aushadhi Siddha Ksheera and Sarpi</td>
<td>Shwadanshtra (Tribulus terrestris) Siddha Sarpi or Yavagu</td>
<td>Madhur Aushadhi Siddha Ksheera and Sarpi</td>
<td>Madhur Dudhi</td>
</tr>
<tr>
<td>Seventh</td>
<td>Madhur Aushadhi Siddha Ksheera and Sarpi</td>
<td>Vidarigandhadi Siddha Sarpi</td>
<td>Madhur Aushadhi Siddha Ksheera and Sarpi</td>
<td>Ghritakhandha</td>
</tr>
<tr>
<td>Eighth</td>
<td>Ksheeryavagu and Sarpi</td>
<td>Asthapanina Basti Followed by Anuvasana Basti</td>
<td>Ksheeryavagu And Sarpi Ashapana Basti Followed by Anuvasana Basti</td>
<td>Ghritapurana</td>
</tr>
<tr>
<td>Ninth</td>
<td>Madhur Aushadhi Siddha Taila Anuvasana and Yoni picu</td>
<td>Snidhga Yavagu and Jangal Mamsaras Till Delivery</td>
<td>Madhur Aushadhi Siddha Taila Yonipichu</td>
<td>Vividha Anna</td>
</tr>
</tbody>
</table>

Asthapana Basti prescribed by Sushruta in eighth month should be given with Badarodaka (Medicated water with Ziziphus jujuba) mixed with Bala (Sida cordifolia), Atibala (Abutilon indicum), Shatapushpa (Anethum sowa), Palala (Pestled Sesamum Seeds), Milk, Curd, Mastu (Soar Butter), Oil, Salt, Madanphala, Honey and Ghrita. This should be followed by Anuvasana Basti of oil medicated with milk and decoction of drugs of madhura group.

### First Trimester

The most important event during first trimester is embryogenesis. Mammalian embryo requires an increasing amount of energy as it develops during embryonic and fetal stages. All this energy is provided by Kshira, Ghrita, Krushara, milk medicated with madhur rasa medicine as it is rich source of energy. Secondly during this period woman suffer with nausea and vomiting. This may results in dehydration, loss of nutrients. The dietary regimen suggested by most of the ancient Acharyas during first trimester is in liquid state, of madhur rasa and having high nutritional value which helps to replenish the nutrients and corrects the dehydration. Vata is responsible for cell division during embryogenesis. The imbalance in vata dosha may hamper its normal functions and process of cell division. During first trimester vata dosha is alleviated in pregnant woman. In dietary regimen Ghrita, Milk, Madhur dravyas, Medicated Shaliprni (Desmodium gangeticum) sidha Ghrita, Kanak-Rajat kwathit shitodak are suggested which are well known for their vatashamani properties. These dietary articles help in regulating normal functioning of vata.

### Second Trimester

During second and third trimester more energy is required. According to Ayurveda mamsa dhatu development mostly occurs in 2nd trimester. Fetal growth in 2nd trimester occurs by cellular hyperplasia and cellular hypertrophy. Protein requirement is more. Most protein should be supplied from animal sources such as meat, milk, cheese because they furnish amino acids in optimal combinations. Milk and dairy products have long been considered nearly ideal sources of nutrients especially protein and calcium for pregnant woman. Milk provides nourishment and stability to the fetus. Meat helps in maintenance of pregnancy, provides nourishment to foetus and suppresses alleviated vata of pregnant woman. Cooked Shashti rice advised in Garbhini Paricharya is rich in carbohydrate and provides energy to the body. During last month of second trimester pedal oedema is observed. So ghrita medicated with Gokshura (Tribulus terrestris) is used which is well known for its diuretic activity which in turns reduces oedema.

### Third Trimester

Ghrita medicated with prithakparnyadi (vidarigandhadi) group of drugs are diuretic, balya, overcomes pedal oedema and provides nutrition to foetus. Rice Gruel (yavagu) consumption in eighth month make woman free from various diseases and delivers the child possessing properties like best health, energy, complexion, voice, compactness of body and much superior to other family members. Most women experience constipation in pregnancy due to pressure of gravid uterus over the bowel and effect of progesterone. Asthapana Basti (a procedure of administering the drugs
Contraindicated Diet for Pregnant Woman
Consumption of excessive heavy, hot, pungent, substances like wine, Vishtambhī food (Hard to digest)

Contraindicated Life Style for Pregnant Woman
Excessive coitus, Exercise such as carrying of heavy weight, Squatting, Abnormal sitting, obnoxious Garments, Peeping in a pit or well, Sleeping in Supine position etc. Vehicle ride, Misdeed by Indriya.

Benefits of Garbhini Paricharya
Woman sustains her healthiness and delivers the child having outstanding virtues in respect of Strength, Voice and Intelligence etc than other family members. Placenta (apara), Foetal Membrane or Vaginal canal, pelvis, waist, sides of the chest and back, becomes soft. Vata anulamana helps in expulsion of foetus during delivery and in normalization and elimination of urine and stool with ease. Moreover it facilitates easy removal of placenta. Her skin, nails becomes softer. Woman gains overall boost in strength and complexion. Ahaar rasa produced in pregnant woman is utilized in providing nourishment to mother herself, nourishment and growth of baby and formation of stanya (breast milk), which results into increase in calorie requirement during pregnancy. Pregnancy requires an additional 8000 kcal, most are accumulated in the last 20 weeks. To meet this demand, calorie requirement of 100 to 300 kcal per day is recommended during pregnancy. Calories are necessary for energy and whenever caloric intake is inadequate, protein is metabolized rather than being spared for its vital role in foetal growth and development. In Garbhini Paricharya the concept behind using food articles or preparations having madhura rasa predominance might be helpful in meeting the increased caloric needs during pregnancy. After going through Garbhini Paricharya suggested by different Acharyas it is observed that use of milk and madhur drug has been advised in each month. In pregnancy vata is increased. This may be due to obstruction by Garbha (foetus). Madhur rasa is congenial since birth, excellent for formation of dhatu, Vata, pitta, preeminent in Brihan karma, Lactogenic, Increases longevity of life and excellent in enhancing complexion. It may cross placental barrier and gives high energy nutrients to the foetus. Milk, it is also congenial, increases intellectual level (Medhya), Strength (bala), Lactogenic, Relieves dypsis. Iodine is found in milk and dairy products which is essential for producing hormones made by the thyroid gland which has direct effect on development the foetal brain. Milk is a whole diet and good source of calcium. The drug of madhura group are anabolic, thus use of these will help in maintenance of appropriate health of mother and normal growth and development of foetus.

Nutritional significance of various dietary supplements used in Garbhini Paricharya
Shali-Shashhtik (Rice)
It is rich in carbohydrates, provides fuel for body, excellent source of niacin, Vitamin D, Calcium, Fibre, Iron, Thiamine and Riboflavin.

Mudga (Green Gram or Vigna radiata)
It is rich source of low fat protein. It has a wide amino acid profile, providing at least every type of amino acids. It contains both insoluble and water soluble fibres. Water soluble fibre reduces LDL cholesterol and reduces risk for cardiovascular diseases. It has low glycemic index. It digests slowly and releases glucose into your bloodstream, stabilizing blood sugar which in turn lowers risk of developing diabetes.

Wheat
This food is very low in saturated fat, Cholesterol and Sodium. It is also a good source of dietary fibre and very good source of Manganese and Selenium.

Butter
It contains a high amount of saturated fat and provides 7 % of recommended dietary allowance of Vit A based on a 2000-Calorie diet. Vit A is important to vision health.

Ghee
It contains 112 calories/tbsp and 33 mg of cholesterol. The total fat content is 12.7 g. It provides many essential fatty acids such as omega-3 and omega-6 which provides anti-inflammatory properties, Regulate DNA products and assist with cellular communication. Protein content of ghipta 0.04 g/tbsp, which includes 17 amino acids essential for good health. It contains 3 % linoleic acid, an antioxidant. It also contains Vitamin A, D, E, K, Calcium, Potassium and small amount of riboflavin and pantothenic acid.

Rasala (Shrikhanda)
It contains 436 Calories , Total Fat 24.5 g, Sodium 6 mg, Total carbohydrate 40.8 g, Protein 10.1 g, Calcium 1 %, Vit C 1 %, Iron 1 %.

Milk
It is rich source of Proteins and Vitamins Proteins are vital for building and maintaining tissues such as muscles. It contains Vit A, D, B1, B2, B5, B12, Minerals Calcium, Phosphorus; Zinc, Lactose provides slow release of energy.

Honey
Energy – 64 calories in 1 tbsp
Fat- 0 g
Carbohydrate -17.3 g (fibre 0.04, Sugar 17.25)
Protein- 0.06 g

Sugar
It is rich in Carbohydrates.
Jack Fruit
They provide more calories, contains simple sugar like fructose and sucrose that when eaten replenishes energy. They are rich in dietary fibre, so acts as laxatives and relieve constipation. Fresh fruit has small amount of Vitamin A, Flavonoid pigments such as Carotene-B, Xanthine, Lutein. Both these elements together play a vital role in vision function. Vit A, Vit C helps body to develop resistance against infectious agents.40

Banana
It contains low fat, no Cholesterol, Sodium dietary fibre 3.1 g, Sugar, Protein 1.3 g, Vit A 2 %, Vit C 17 %, Calcium 1 %, Iron 2 % High dietary fibre, high in potassium, very high Vit. B6, and Vit C. 41

Fruit of Amlaki
It is a rich source of antioxidants, iron, Vit. A, C Fibre, Potassium, Magnesium, Calcium etc. It prevents ageing, improves vision, prevents constipation, protects and cures diabetes, improves cardiovascular health and prevents anaemia.42

Grapes
It has calorie value of 62, Total fat content is 0.3 g, Sodium 2 mg, Total carbohydrate 15.8 g. Dietary fibre 0.8 g, Sugar 14.9 g, Vit A 2 %, Vit C 6 %, Calcium 1 %, Iron 1 %.43

Table 2: Daily requirement of Nutrients and Minerals during pregnancy

<table>
<thead>
<tr>
<th>Nutrient or Mineral</th>
<th>Daily Requirement</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vit A and Beta Carotene</td>
<td>770 mcg</td>
<td>Bones and Teeth growth</td>
</tr>
<tr>
<td>Vit D</td>
<td>5 mcg</td>
<td>Calcium and Phosphorus absorption, Bones and Teeth growth</td>
</tr>
<tr>
<td>Vit E</td>
<td>5 mg</td>
<td>Helps body to form and use R.B.C. and muscles</td>
</tr>
<tr>
<td>Vit C</td>
<td>80-85 mg</td>
<td>Antioxidant, helps in iron absorption and building immunity</td>
</tr>
<tr>
<td>Thiamine B1</td>
<td>1.4 mg</td>
<td>Rases energy level and regulates nervous system</td>
</tr>
<tr>
<td>Riboflavin B2</td>
<td>1.4 mg</td>
<td>Maintains energy, good eyesight, healthy skin</td>
</tr>
<tr>
<td>Niacin B3</td>
<td>18 mg</td>
<td>Promotes healthy skin, nerves and digestion</td>
</tr>
<tr>
<td>Pyridoxine B6</td>
<td>1.9 mg</td>
<td>Helps in formation R.B.C.</td>
</tr>
<tr>
<td>Folic Acid</td>
<td>600 mcg</td>
<td>Supports the Placenta, prevents spina bifida and other neural nute defects.</td>
</tr>
<tr>
<td>Calcium</td>
<td>1000-1300 mg</td>
<td>Creates strong bones and teethes, prevents blood clots, helps muscles and nerve function</td>
</tr>
<tr>
<td>Iron</td>
<td>27 mg</td>
<td>Production of haemoglobin, prevents anaemia, low birth weight and premature delivery</td>
</tr>
<tr>
<td>Protein</td>
<td>71 mg</td>
<td>Production of amino acids and repairs cell</td>
</tr>
<tr>
<td>Zinc</td>
<td>11-12 mg</td>
<td>Helps to produce insulin and enzymes 44</td>
</tr>
</tbody>
</table>

CONCLUSION
Ayurveda believe food as preeminent source to provide nourishment and medication during the pregnancy period. Ancient Classics proposes a wholesome diet during the period of pregnancy since this eventually results in foetal growth, maternal health, and post delivery lactation. In Garbhini Paricharya normal daily activities and therapeutic procedures and modifications in psychological behaviour is advised. During first trimester, keeping physiology of pregnant woman in mind ancient Acharyas have given more emphasis on using highly nutritious household milk products which are easy to assimilate. In this period dietary regimen and treatment protocol is concentrated on providing nourishment and vata anulomana. In second trimester, Garbhini Paricharya helps in stabilization of garbha and useful in meeting energy and protein requirement. In third trimester drugs and practices which relieve oedema, constipation, backache etc. are employed. Garbhini Paricharya aims at excellence in the formation of the foetus, its development without anomalies, a secure full term delivery and maintenance of the health of the mother.

REFERENCES


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