



Review Article

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A CRITICAL ANALYSIS ON NUTRITIONAL QUALITIES OF FOOD INDICATED IN GARBHINI PARICHARYA (PRE NATAL CARE)

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ABSTRACT

Ayurveda has given great emphasis on garbhini paricharya (pre natal care) which has dual goal of easy parturition and healthy progeny. In this paper, authors have made an effort to do critical analysis and scientific description on nutritional qualities of diet for pregnant woman as explained in classical Ayurveda textbooks. There is specific food regimen prescribed for pregnant woman throughout nine months. Authors propose to analyze "why there is specific food article indicated for the particular month?". Authors are trying to make scientific explanation like chemical composition and properties of foods with specific reference to garbhini, e.g. use of gokshur (*Tribulus terrestris*) at 6th month, helps to reduce edema and other complication of water accumulation by gravid uterus, because gokshur has diuretic and nephroprotective properties. Consumption of adequate milk during whole pre natal period supplies the required nourishment to mother and fetus, because milk contains all vitamins (except vitamin C), minerals and fat, protein and carbohydrates. In this paper, authors are proposing scientific explanation on all foods which are suggested by acharyas during pre natal regimen.

Keywords: pregnancy, garbhini paricharya, diet and nutrition, pre natal care, *Tribulus terrestris* Linn.

INTRODUCTION

Body is made up of aahara¹ (food). Healthy body tissues depend directly on essential nutrients in food. This is essentially true during pregnancy because a whole new body is being formed. The tremendous growth of a baby from the moment of conception to the time of birth depends entirely on nourishment from the mother. Ayurveda consider food to be best source of nourishment as well as medicine for the pregnant woman. The month wise diet is singularly unique to Ayurveda. It changes in accordance with fetus in the womb and at same time ensure health of the mother. Pregnant woman should follow a careful regimen of food and behavior during pregnancy. This regimen is known as garbhini paricharya (pre natal care)²⁻⁴. The diet during pregnancy should be adequate to provide: (1) The needs of growing fetus, (2) The maintenance of maternal health, (3) The strength and vitality required during labor, (4) Successful lactation.⁵⁻⁷

Month wise Dietary Regimen for Pregnant Woman

Month wise regimen according to acharya Charaka and Sushruta^{8,9} is explained in Table 1. The mother's food habits and nutritional status before conception as well as during pregnancy influence the outcome of the pregnancy. In classical text books of Ayurveda there is a specific food regimen mentioned according to month.

According to Acharya Sushruta

First, second and third month dietetic regimen

Madhur, sheeta dravapraya aahara (sweet, cold and liquid diet) are advised for 1st, 2nd, and 3rd month of pregnancy¹⁰. There is lot of foods which has above mentioned qualities among them milk is best one. During the 1st trimester of pregnancy most woman experiences nausea, vomiting and loss of appetite¹¹. The use of sweet, cold and liquid diet like milk prevents dehydration and supply required optimum nourishment. These food is easy to digest and agnideepaka (increases digestive power).

Brief development of fetus

The whole gestational period is subdivided into 3 stages¹²: (1) Germinal period: (1st -3rd week), (2) Embryonic period: (4th - 8th week), (3) Fetal period: 3rd month up to termination of pregnancy.

Germinal period

The main events in this period are fertilization, cleavage, implantation and formation of germ layers¹³. Milk is vata and pitta shamak and kapha vardhak.¹⁴ So vata helps in controlled division of cell and kapha helps to increase the size of cell. Milk is known to increase the kledata (moistening) of the body, which can be understood as intracellular fluid. Milk is prithavi and jala mahabhuta

predominant, which helps in moistening and shaping of embryo.¹⁵

Embryonic period

In this period organogenesis occurs i.e. all the 3 germ layers undergo individual differentiation and most of the tissue and organ of body are formed.¹⁶ This period is very much crucial; hence no drug should be given during this period because drug can disturb the organogenesis and may lead to teratogenicity.¹⁷ Only folic acid supplementation is required because it is essential for production of methionine (for methylation reaction of DNA).¹⁸ Acharya Kashyapa explained that fetus will not be stable before 4 months, so no medicine should be given.¹⁹ So up to 3 month use of these sweet, cold and liquid diets is beneficial. Milk is natural source of folic acid and it is also a good source of carbohydrate, fat, protein (almost all amino acids), and all vitamins (except Vitamin C), minerals and enzymes which is essential for fetal and mother nourishment. Progesterone hormone which is essential to continuation for pregnancy, milk is the external source of this.²⁰ Nourishment of fetus till vyaktagarbha (conspicuousness of body parts of embryo) supplied from Rasa by upasneha (attracting moisture) and upasweda (osmosis)²¹, for this milk is helpful, because breast milk is the updhatu of rasa dhatu.²² Cow or goat milk is almost similar to breast milk.

Fetal nutrition

(According to biomedical sciences) there are 3 stages of fetal nutrition following fertilization.²³ (1) Absorption: Up to nidation (implantation), in the early post fertilization period, the nutrition is stored in the deutoplasm within the cytoplasm and very little extra nutrition needed is supplied from the tubal and uterine secretion (uterine milk). (2) Histotrophic transfer: Following nidation and before the establishment of utero-placental circulation. The nutrition is derived from the eroded deciduas by diffusion and later on from the stagnant maternal blood in the trophoblastic lacunae. (3) Hematotrophic: With the establishment of the fetal circulation, nutrition is obtained by active and passive transfer from the 3rd week onward.

Fourth month

In the 4th month, pleasant food mixed with milk and butter or mixed with meat soup (jangala mamsa rasa) should be given to garbhini.²⁴ As earlier author discussed that fetal development subdivided into three stages, the 3rd stage is fetal period. In this period there is rapid growth of the fetus without much tissue differentiation and complete development of placenta occur²⁵. So for the rapid growth of fetus the nutrient requirement also increases. The butter and ghee with milk fulfills the increased nutrient of the fetus and also supplies the nourishment to mother. Jangala mamsa (meat) is the excellent source of high biological protein, vitamins, fat, minerals (iron and other minerals), and source of a range of endogenous antioxidants and other bioactive substances. It also supplies good amount of calories.²⁶ The high protein contents of meat help in musculature tissue formation of the fetus and iron and B complex vitamins helps in blood formation. The other

vitamins, protein, minerals of meat nourish the body of mother and fetus.

Fifth month

In the 5th month pleasant food mixed with ghee and milk or mixed with jangala mamsa are advised.²⁷ As explained for 4th month, the ghee, milk and meat required for the rapid growth of the fetus and also for better health of the mother. Because the iron supplements are slight during the first 4 months of pregnancy²⁸, it is not necessary to provide iron supplemental during this time. Withholding iron supplementation during the first trimester of pregnancy avoids the risk of aggravating nausea and vomiting. So the classical textbook of Ayurveda mentioned the increased supplementation of iron in form of food (meat) from 4th month. The food supplementation of iron is better than the drug form.

Sixth month

In the 6th month ghee or yavagu (rice gruel) prepared with gokshura are advised.²⁹ yavagu gives strength to the body, nourishes the body tissues and pacifies the vata dosha.³⁰ Gokshura (*Tribulus terrestris*) have diuretic and nephroprotective properties.³¹ Ayurveda also describe the qualities of gokshura as mutravirechaniya (diuretic), shothahara (anti-inflammatory) and krimighna (anti-bacterial),³² so it helps to reduce edema and other complication of water accumulation by gravid uterus in the later months of pregnancy. Gokshura may also prevent the pre eclamptic toxemia of pregnancy.

Seventh month

In the 7th month ghee medicated with prithakparnyadi (vidarigandhadi) group are advised to the garbhini.³³ This group contains many medicinal plants; the combined action of the group are as^{34,35} diuretic, anti-inflammatory, prajasthapana (procreant), vayahsthapana (rejuvenators), balya (tonics), brumhana (weight promoting), angamardaprashamana (restoratives), pacifies vata and pitta. Vidarigandha (*Desmodium gangeticum*) have the calming, strengthening and anti-inflammatory properties³⁶. Research on this plant shows the properties of analgesic, diuretic, cardio tonic and carminative activities. At 7th month the fetal lung get maturity, steroids help in the lung maturity of the fetus. Brihati (*Solanum indicum*) one of the medicinal plant of the Vidarigandhadi group; its chemical constituents are steroidal alkaloid and steroid³⁷ hence this may be helpful in lung maturity of the fetus.

Eight and ninth month

From 8th month up to delivery snigdha yavagu (rice gruel mixed with ghrita) and jangala mamsa rasa should be given to garbhini.³⁸ As discussed earlier snigdha yavagu gives strength to the body, nourishes the body tissue and pacifies vata dosa. It nourishes all living being, and very pleasant.³⁹ Since meat is the rich source of protein, vitamin, iron and other mineral, fat and good amount of calories. It helps in the formation of musculature tissue and blood tissue. It also supplies good nourishment to the fetus and mother. The fetus is the separate physiological entity and it takes what it needs from the mother even at

the cost of reducing her resources. While all the nutrients are reaching the fetus through the intrauterine period, the demands are not squarely distributed. 2/3rd of total calcium, 3/5th of total proteins and 4/5th of total iron are drained from the mother during the last 3 months.⁴⁰As during later months of pregnancy acharya Sushruta mentioned the drugs which are rich in proteins, calcium and iron. Acharya Charaka also mentioned milk and its

products during whole garbhini paricharya (pre natal regimen) as acharya Sushruta. At 3rd month acharya Charaka advised honey and ghee. Honey is the rich source of fructose sugar, which is the rich source of energy. Ghee and honey also provide immunity. Pollens in honey triggers the macrophages and increases generalized immunity.

Table 1: Month wise dietary regimen for pregnant woman

Month	Sushruta Sharira10	Charaka Sharira 8
1	Sweet, cold and liquid diet	Non medicated milk repeatedly in desired quantity, congenial diet
2	--do--	Milk medicated with madhura group drugs
3	--do--	Milk with honey and ghrita
4	Pleasant food mixed with milk and butter and meat of wild animals	One Aksha butter or milk with butter
5	Meat of wild animal, pleasant food with milk and ghrita	Milk and ghrita
6	Ghrita or rice gruel medicated with Gokshura	Milk and butter medicated with madhur group drugs
7	Ghrita medicated with Vidarigandhadi group drugs	--do--
8	Asthanan Basti then Anuvasana Basti (enema)	Rice gruel prepared with milk and mixed with ghrita
9	Up to delivery same as 8 th month	Anuvasan Basti with oil medicated with madhur group drug

CONCLUSION

The food which was advised thousands of years ago in classical texts of Ayurveda for pregnancy is totally scientific and can be proven on scientific parameters. The foods which advised for pregnant woman is specific to fetus and mother, helps in easy delivery and also helps in lactation hence completely fulfils the objectives of PNC (pre natal care). The concept of PNC is now highlighted by modern science, which is mentioned in Ayurvedic science thousands of years ago. The month wise regimen for garbhini is unique and specific in Ayurveda. The regimen mentioned for garbhini is in the form of food not in the form of drug, so it is best because ahara (food) is satmya (congenial) to everybody, and researches shows that supplementation of essential nutrient in form of natural sources during pregnancy is better than the drugs.

REFERENCES

- Sastri KN. Charaka Samhita (Purvardha) with Vidyotini Hindi commentary. Reprint ed. Varanasi: Chaukhambha Bharati Academy; 2005. p. 575.
- Sastri KN. Charaka Samhita (Purvardha) with Vidyotini Hindi commentary. Reprint ed. Varanasi: Chaukhambha Bharati Academy; 2005. p. 929.
- Shastri AD. Susruta Samhita (Purvardha) with Ayurveda-Tatva-Sandipika Hindi commentary. Reprint ed. Varanasi: Chaukhambha Sanskrita Sansthan; 2005. p. 73.
- Tripathi B. Astanga Hridayam with Nirmala Hindi commentary. Reprint ed. Delhi: Chaukhambha Sanskrita Pratishtan; 2007. p. 345.
- Sastri KN. Charaka Samhita (Purvardha) with Vidyotini Hindi commentary. Reprint ed. Varanasi: Chaukhambha Bharati Academy; 2005. p. 905.
- Satyapala. Kashyapa. Samhita with Vidyotini Hindi commentary. Reprint ed. Varanasi: Chaukhambha Sanskrita Sansthan; 2010. p. 2.
- Katyayan Abhay. Bhela Samhita with Hindi commentary. 1st ed. Varanasi: Chaukhambha Surbharati Prakashan; 2009. p. 27.
- Sastri KN. Charaka Samhita (Purvardha) with Vidyotini Hindi commentary. Reprint ed. Varanasi: Chaukhambha Bharati Academy; 2005. p. 937.
- Shastri AD. Susruta Samhita (Purvardha) with Ayurveda-Tatva-Sandipika Hindi commentary. Reprint ed. Varanasi: Chaukhambha Sanskrita Sansthan; 2005. p. 73.
- Shastri AD. Susruta Samhita (Purvardha) with Ayurveda-Tatva-Sandipika Hindi commentary. Reprint ed. Varanasi: Chaukhambha Sanskrita Sansthan; 2005. p. 73.
- Dutta DC. Text Book of Obstetrics. 6th Reprint ed. New Delhi: New Central Book agency (P) Ltd; 2006. p. 64.

- Dutta DC. Text Book of Obstetrics. 6th Reprint ed. New Delhi: New Central Book agency (P) Ltd; 2006. p. 41.
- Dutta AK. Essentials of Human Embryology. 6th ed. Kolkata: Current Books International; 2010. p. 31.
- Tripathi B. Astanga Hridayam with Nirmala Hindi commentary. Reprint ed. Delhi: Chaukhambha Sanskrita Pratishtan; 2007. p. 68.
- Shastri AD. Susruta Samhita (Purvardha) with Ayurveda-Tatva-Sandipika Hindi commentary. Reprint ed. Varanasi: Chaukhambha Sanskrita Sansthan; 2005. p. 41.
- Dutta AK. Essentials of Human Embryology. 6th ed. Kolkata: Current Books International; 2010. p. 31.
- Dutta DC. Text Book of Obstetrics. 6th Reprint ed. New Delhi: New Central Book agency (P) Ltd; 2006. p. 511.
- Cunningham Gary, Leveno Keneth, Bloom Steven, Hauth John, Rouse Dwigth, Spong Catherine. Willams Obstetrics, 23rd ed. New Delhi: Mc Graw Hill Medical; 2010. p. 315.
- Satyapala. Kashyapa. Samhita with Vidyotini Hindi commentary. Reprint ed. Varanasi: Chaukhambha Sanskrita Sansthan; 2010. p. 213.
- <http://en.wikipedia.org/wiki/Milk>; 2014.
- Shastri AD. Susruta Samhita (Purvardha) with Ayurveda-Tatva-Sandipika Hindi commentary. Reprint ed. Varanasi: Chaukhambha Sanskrita Sansthan; 2005. p. 26.
- Srivastava Shailja. Sharngdhar Samhita (Purva Khanda) with Jiwanprada Hindi commentary. 4th ed. Varanasi: Chaukhambha Orientalia; 2005. p.39.
- Dutta DC. Text Book of Obstetrics. 6th Reprint ed. New Delhi: New Central Book agency (P) Ltd; 2006. p. 42.
- Shastri AD. Susruta Samhita (Purvardha) with Ayurveda-Tatva-Sandipika Hindi commentary. Reprint ed. Varanasi: Chaukhambha Sanskrita Sansthan; 2005. p. 73.
- Dutta AK. Essentials of Human Embryology. 6th ed. Kolkata: Current Books International; 2010. p. 43.
- <http://en.wikipedia.org/wiki/Meat>; 2014.
- Shastri AD. Susruta Samhita (Purvardha) with Ayurveda-Tatva-Sandipika Hindi commentary. Reprint ed. Varanasi: Chaukhambha Sanskrita Sansthan; 2005. p. 73.
- Cunningham Gary, Leveno Keneth, Bloom Steven, Hauth John, Rouse Dwigth, Spong Catherine. Willams Obstetrics, 23rd ed. New Delhi: Mc Graw Hill Medical; 2010. p. 203.
- Shastri AD. Susruta Samhita (Purvardha) with Ayurveda-Tatva-Sandipika Hindi commentary. Reprint ed. Varanasi: Chaukhambha Sanskrita Sansthan; 2005. p. 73.
- Srivastava Shailja. Sharngdhar Samhita (Purva Khanda) with Jiwanprada Hindi commentary. 4th ed. Varanasi: Chaukhambha Orientalia; 2005. p.160.
- <http://www.ecoplanet.in/herbalextracts/Tribulusterrestris.htm>; 2014.
- Sharma PV. Dravyaguna- Vijnana (Vol-II). Reprint ed. Varanasi: Chaukhambha Bharati Academy; 2005. p. 632-34.
- Shastri AD. Susruta Samhita (Purvardha) with Ayurveda-Tatva-Sandipika Hindi commentary. Reprint ed. Varanasi: Chaukhambha Sanskrita Sansthan; 2005. p. 73.

34. Shastri AD. Susruta Samhita (Purvardha) with Ayurveda-Tatva-Sandipika Hindi commentary. Reprint ed. Varanasi: Chaukhambha Sanskrita Sansthan; 2005. p. 141.
35. Sharma PV. Dravyaguna- Vijnana (Vol-II). Reprint ed. Varanasi: Chaukhambha Bharati Academy; 2005.
36. Shastri AD. Susruta Samhita (Purvardha) with Ayurveda-Tatva-Sandipika Hindi commentary. Reprint ed. Varanasi: Chaukhambha Sanskrita Sansthan; 2005. p. 141.
37. The Ayurvedic Pharmacopoeia of India. Part-I. Vol- II. First ed. Delhi: The Controller of Publications; 1999. p. 27.
38. Shastri AD. Susruta Samhita (Purvardha) with Ayurveda-Tatva-Sandipika Hindi commentary. Reprint ed. Varanasi: Chaukhambha Sanskrita Sansthan; 2005. p. 73.
39. Sastri KN. Charaka Samhita (Purvardha) with Vidyotini Hindi commentary. Reprint ed. Varanasi: Chaukhambha Bharati Academy; 2005. p. 937.
40. Dutta DC. Text Book of Obstetrics. 6th Reprint ed. New Delhi: New Central Book agency (P) Ltd; 2006. p. 42.

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