ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 9, Issue, 04, pp.48582-48585, April, 2017

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

RESEARCH ARTICLE

THE COMPARATIVE STUDY OF *MASANUMASIK AAHARA* AND MODERN ANC DIET W.S.R. FIRST TRIMESTER ANOMALIES

***Vd. Ashlesha A. Nagrale, Dr. M. B. Nikumbh, Dr. M. K. Dawre and Dr. Sanjay Rathod**

Department of Rachana Sharir, Govt. Ayurved College Osmanabad, Maharashtra

ARTICLE INFO

Article History:
Received 13th January, 2017
Received in revised form
18th February, 2017
Accepted 22nd March, 2017
Published online 20th April, 2017

Key words:

First trimester,
Nutrition,
Congenital anomalies and
Masanumasikaahar.

ABSTRACT

First trimester diet is most important because in first few weeks the fetus relies on simple diffusion of oxygen & nutrients from the mother's blood. From about 12 weeks the placenta controls all. Essential nutrients (Wendy Martinez *et al*., 2006) - thiamine, riboflavin, folate/folic acid, vit. A,C&D, calcium, phosphorus, magnesium, zinc, copper, selenium, iodine, omega 3 fatty acids etc. But important is folate/ folic acid & vit.D. Supplementary folic acid is needed prior to conception & up until 12 weeks gestation to lower the risk of neural tube defects. Therefore due to nutritional deficiency congenital fetus anomalies are found and for early detection of all these anomalies for healthy population it is most important so now a day's first trimester anomalies scan are started. So for prevention of anomalies as well as healthy population to study conceptual *Masanumasik aaahar* according to *Bruhtrayi.* Which fulfill all nutritional requirements and help to avoid such a nutritional related congenital anomalies. Prevalence (Andres *et al*., 2006) - Overall prevalence of congenital anomalies in study population was 2.6%. Out of these 64.4% were detected by first trimester anomaly scan. Detailed first trimester anomaly scan and first trimester fetal echocardiography should be performed to detect the fetal anomalies early.

Citation: Vd. Ashlesha A. Nagrale, Dr. M. B. Nikumbh, Dr. M. K. Dawre and Dr. Sanjay Rathod, 2017. "The comparative study of *Masanumasik aahara* and modern ANC diet W.S.R. first trimester anomalies", *International Journal of Current Research*, 9, (04), 48582-48585.

INTRODUCTION

Today era govt. focus on maternal health very well. For healthy generation first focus on maternal health and it simply depend on healthy or proper nutritional diet, from pre conception up to lactation which fulfill all nutrients requirements. During first trimester pregnancy the maternal diet must provide sufficient nutrients to meet the mother's usual requirements as well as those of the growing fetus and stores for use during the third trimester & lactation. Pregnancy is not a disease it is natural phenomenon so why we tackle it like diseases and so many medicine are uses for healthy baby. Go through natural things like proper diet plan. Diet is most precious factors among our day to day life. In our ancient samhitas also, it has wide range of description *Acharya Sushruta* has (Sushruta and Sushrut Samhita, 2008) mentioned the importance of diet as *Aahar*a. As well as *masanumasikaahar* was explain in details. It state that human body is predominantly made up of rasa dhatu, which is eventually formed from diet. Thus, it is important to study *masanumasikaahar* (Sushruta *et al*., 2013) in first trimester for improve better health and avoid any anomalies related to nutritional defficiency. By using USG as a diagnostic purpose, it shows of normal anatomy of fetus. In the 11–14 weeks of pregnancy is essential to detect structural anomalies. Most of congenital anomalies originate during the first trimester period. 11 weeks of gestation is the earliest gestation for diagnosis of many major fetal defects. For example, diagnosis of fetal pole presentation& exclusion of acromiaand anencephaly, it cannot be made before 11 weeks because USG assessment of ossification, the fetal skull is not reliable before this gestation. It starts in 11 weeks of gestational age. Examination of the four chamber view of the heart and main arteries is possible only after 10 weeks. At 8-10 weeks, all fetuses demonstrate herniation of midgut that is visualized as a hyperechoic mass in the base of the umbilical cord, and it is therefore unsafe to diagnose or exclude exomphalos at this gestation. Fetal bladder can be visualized in only 50% of fetuses at 10 weeks, in 80% at 11 weeks and in all cases by 12 weeks. The reasons for selecting 13 weeks and 6 days as the upper limit are firstly, to provide women with affected fetuses the option of first trimester or early second trimester rather than late second trimester examination. Some of the phenotypical expression of chromosomal abnormalities could be detected by TAS/TVS especially at 11-14 week scan.

Aim

The comparative study of *Masanumasik aahara* and modern ANC diet with special reference to first trimester anomalies.

Corresponding author:* **Vd. Ashlesha A. Nagrale,
Department of Rachana Sharir, Govt. Ayurved College Osmanabad, Maharashtra

Objective

To study of *Masanumasik aaahar* in first trimester according to *bruhatrayi* (Charaka, 2004). An evaluate total nutrient requirement in first trimester and evaluate which is fulfill by first trimester *Aahara*.

MATERIALS AND METHODS

Collect information from ancient literatures like *Bruhattrayi.* Various research articles, papers by net.

Textbook of obstratics and gynecology

Nutritional requirement in first trimester

Components	Functions	Daily requirements	Source
Folic acid/ foliate	Help to formation of red blood cells.	0.4mg/day 5mg/day (if previous history of NT anomalies)	Liver, fortified breakfast cereals, cooked dry beans, kidney beans, Spinach, fresh beats, rice- half cup-gives 100mcg.
Calcium	Building bones &teeth.	1200mg/day	Milk-1cup-290-300mg. Yogut-1cup-240-400mg. Ice-crem&spinach-1cup-180-200mg. Egg-1item-55mg.
Iron (imp. During last trimester)		30mg/day	Liver, chicken, raisins,-half cup-2.9mg. Almond-1/4 cup-1.7mg. Walnut-1/4cup-1.9mg.Beans (any)-1/2cup-2.5mg. Cooked spinach-1/2cup.
Vitamin-C	For collagen & protein that provide structure of baby bones, muscles, blood vessels.	65mg/day	65mg in 3 nag of orange,2-3 cup of cooked cauliflower, 4 large tomatoes, 1-2 lemon.
Proteins		60mg/day	60mg gives from 9oz cooked meal, 24oz skim milk & 3 nag of eggs.
Carbohydrates			Whole grains & certain vegetables. For one day requirement 9slice of whole wheat bread, 9 medium potato,5 cup of corn, 4 cup of cooked pasta or rice.
Fat	Important source of energy& help to metabolize vit. A,D,E,&K.		For one day requirement-8 oz. cheese,4 egg ,8tsp peanut butter,4tsp butter.
Vitamin A (Note- Excessive level of it over 10000 IU can be harmful to mother as well as baby; so don't overdo it.)	This nutrient vital to healthy skin, bone, eyes. Help to create the cells that will make up internal organs of baby.	800mg/day	8 Oz milk, 5/4 cup of veg. juice.
Vitamins D	Build bone, tissue, teeth.	10 mg/day	For one day requirements 10oz of skim milk, egg yolk, sunshine-little-helps your skin manufacture it.
Zinc		20mg/day	Whole grains, meat, milk, seafood.
Fluid	Essential for developing new cells, maintaining blood volume & processing other nutrients.	8oz	8 oz. glasses/day included milk, juice, and tea.

First trimester diet according to *bruhatrayi*

Month	*Sushrutsamhita*	*Charaksamhita*	*Ashtaighrudaya*
First trimester	Sweet and cool milk are indicated.	Only cool milk.	_
Second trimester	Sweet and cool milk are indicated.	It is suggested to take milk medicated with sweet herbs like shatavari, bala, etc.	_
Third trimester	Mostly take brown rice in diet.	Adding honey and ghee to milk	

*One should keep in mind that honey should never be subjected to heat hence milk should be in room temp. Another is honey and never take together in equal quantiy.

Anomalies in first trimester due to nutritional deficiency-

(A)

USG Findings	Gestation age
1)Spinal bifida	6 weeks.
2)Abnormal cephalic pole	9 weeks.
3)Anencephaly	11 to 14 weeks.
4)Anencephaly	10 weeks.
5)Acromia	12 weeks.
6)Congenital heart disease (Echocardiography)	10 to 11 weeks.

(B)

Maternal serum biochemical markers-	Gestational age
For - 1) Down syndrome	10 to 14 weeks.
2) Patue syndrome	10 to 14 weeks.
3) Edward syndrome	10 to 14 weeks.

Nutrients ingredients in above mentioned *Aahara* (www. nutrition-and-you.com)

1)Cow Milk-

Constituents	Cow whole milk (1 cup, 8 OZ)
Fat	7.93gm.
Lactose	12.83 gm.
Phosphorus	222 mg.
Chloride	1 gm
Calcium	276 gm.
Vitamin A	68 µg.
Thiamin (Vitamin B1)	0.107 mg.
Riboflavin (Vitamin B2)	0.447 mg.
Niacin (Vitamin B3)	0.261 mg.
Pantothenic Acid (Vitamin B5)	0.883 mg.
Pyridoxine (Vitamin B6)	0.088 mg.
Cobalamin (Vitamin B12)	1.07 µg.
Vitamin E	0.15 mg.
Vitamin K	0.5 µg.
Copper	0.027 mg.
Iron	0.07 mg.
Vitamin D	98 IU
Energy	146 kcal.
Protein	7.86 gm.
Water	215.50 gm.
Folate	12µg.

2)Cow Ghee

Nutrition facts	Pure Cow Ghee (1tsp = 5 gm.)
Calories	418 kcal.
Total fat	20gm.
Saturated fat	6gm.
Polyunsaturated fat	2gm.
Monounsaturated fat	1gm.
Trans fat	0 gm.
Cholesterol	56mg.
Sodium	1,118mg.
Potassium	1,355mg.
Total carbs	37gm.
Dietary fibers	4gm.
Sugars	12gm.
Proteins	22gm.
Vitamin A	15%
Vitamin C	2%
Iron	10%
Calcium	0%

3)Brown rice

Constituents	Brown rice (one cup)
Calories	232
Proteins	4.88g
Carbohydrate	49.7g
Fat	1.17g
Dietary fiber	3.32g
Thiamin (B1)	0.176g
Riboflavin (B2)	0.039mg
Niacin (B3)	2.730mg
Vitamin B6	0.294mg
Folat	10 mcg
Vitamin E	1.4mg
Magnesium	72.2mg
Phosphorus	142mg
Potassium	137mg
Selenium	26mg
Zinc	1.05mg

4)Honey

Nutritional value	Honey (20 gm.)
Calories	60 kcal.
Fat/ lipids	0 gm.
Carbohydrates	17 gm.
Sugars	16 gm.
Protein	0 gm.

The most common nutrients found in honey are Vitamin B6, niacin, thiamine, pantothenic acid, & riboflavin. But amount vary according to the floral type of honey. Also content minerals such as copper, calcium, iron, magnesium, potassium, phosphorus, sodium, zinc. Various phenolic acid and flavonoids which are certain type of antioxidants.

5) *Madhurskandha* (Vagbhata, 2009)

Madhurskandha is briefly explained in *Ashtang Hriday Samhita*by *Vghbatacharya*. He described properties of *Madhur Skandha* and mentioned group of drugs. All drugs are *Madhur Rasa, MadhurVipaka*and *Shit Virya.* Which are *Snigdhha, Guru Guna & KafaVardhankara.* These are help to improve *Oja, Bala, Saptadhatuvardhana* & mentioned unique property *Surshtamalamutravata.* These all properties of *MadhurSkandha* help in first trimester pregnancy so *Aacharya* mentioned it is in first trimester *Aahara.* In *Madhur Skandha* much more drugs are mentioned. But this study we randomly select 10 herbal drug which are commonly found and more helpful in first trimester pregnancy.

Name of drug	*Rasa*	*Virya*	*Vipaka*	*Guna*
Shatavari (Asparagus racernosus)	*Madhur*	*Shita*	*Madhur*	*Guru, Snigdha, Mrudu.*
Jeshtamadh	*Madhur*	*Shita*	*Madhur*	*Guru, Snigdha.*
Bala	*Madhur*	*Shita*	*Madhur*	*Laghu, Snigdha, Pichhila.*
Mrudvika (Vitis vinifera)	*Madhur*	*Shita*	*Madhur*	*Snigdha,Mrudu.*
Narikel (Cocos nucifera)	*Madhur*	*Shita*	*Madhur*	*Guru, Snigdha.*
Kadali (Musa paradisiaca)	*Madhur, Kashay.*	*Shita*	*Madhur*	*Guru, Snigdha.*
Ekshu(Sugarcane)	*Madhur*	*Shita*	*Madhur*	*Guru, Snigdha.*
Gruta (ghee)	*Madhur*	*Shita*	*Madhur*	*Guru, Snigdha.*
Dudha (milk)	*Madhur*	*Shita*	*Madhur*	*Guru, Snigdha.*
Madhu (Honey)	*Madhur, Kashay.*	*Shita*	*Madhur*	*Snigdha, Laghu.*

All are considered life-building herbs that can be taken with milk& ghee. Which help to mother as well as fetus for good development & reduced prevalence rate of structural anomalies. It acts as a full nutritional diet.

Product	Nutrient	For a Day
Cow Ghee	Iron	˜50 gm

Product	Nutrient	For a Day
Cow Milk	Calcium	˜ 9 lit.
	Iron	˜ 10 lit.
	Folic acid	˜ 6 lit.

Product	Nutrient	For a Day
Brown Rice	Folic acid	˜40 cup

Conclusion

From the present study it could concluded that, First trimester *Masanumasik Aahara* according to *Bruhatrahi* fulfill the nutrition requirement to *Garbhini* as well fetus. But a care should be taken to plan & administer the *Aahara.* In modern medical science a pregnant women should have nutrition with folic acid, vitamin, iron etc. but here *Aayuvedacharya's* emphasized on the milk, ghee etc. for *Gharbhini Masanumasik Aahara* in respect to modern nutrients. Here table showing this comparison. Only most important nutrients in first trimester are compared here.

But quantities are much more, so practically impossible to follow therefore *Aacharya* give such wonderful reference of *Madhur Aaushadhi Siddha Kshir / Ghruta.* Combination of it help to enhance potential of milk, ghee etc.

REFERENCES

Andres J, Evans J, Royle C. 2006. Prevalence of congenital anomalies. Canadian

Charaka, Charak Samhita (Vaidyamanorama, Hindi Commentary), Vol I, Acharya Vidyadharshulka, Prof. Ravidatta Tripathi, Chaukhambha Sanskrut Prakashan; 2004, Sharirasthana 8/32, p.

Perinatal Health Report, 2008 ed. Ottawa: Public Health Agency of Canada; 2008:158–63.

Sushruta, Sushrut Samhita: (Susrutavimarsin Hindi commentary), Vol I, Vd. Anantram Sharma, Chaukhambha Surbharati prakashan; Varanasi: 2008, Sutrasthan 14/12, p.

Sushruta, Sushrut Samhita: Sarirasthanam, (Sanskrit text with Ayurvedarahasyadipika Hindi commentary), Dr. Bhaskar Govind Ghanekar, Meharchand Lachhmandas Publications; Daryaganj, New Delhi: Dec. 2013, (Reprint), Sharirasthana 10/3, p.248.

Vagbhata, Sartha Vaghbhat: (Vaghbhatkrut Ashtanghridaya, Marathi translation), Vd. Ganesh Krushna Garde, Rajesh Publication; Kothrud, Pune: 2009, sutrasthan 10/22-25, p.50.

Wendy Martinez, Donna D'Elia, Jonel IDershem, Paula Jasionowski, Anne Salomone, 2006. First trimester information, advocarewomensgroupobgyn.com.

www.nutrition-and-you.com.

****