

Scientific Review On Garbhini Paricharya According To Ayurveda Classics

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Abstract- Antenatal care is a preventive health care system that is mentioned in Ayurveda as *Garbhini Paricharya*. *Acharyas* have advised *Garbhini Paricharya* in classical texts of Ayurveda for pregnant women more than thousands of years ago. This study was aimed to analyze the *Masanumasika Garbhini Paricharya*, to understand its clinical importance and to promote the health of mother with fetus. Literature review was carried out in *Brihatrayee (Charak Samhita, Susruta Samhita and Ashtanga Hridaya Samhita)* and important Ayurveda classics for *Prasuti Tantra (Kashyapa Samhita, Harita Samhita and Ayurveda Prasuti Tantra and Stree Roga)*. Searched keywords were *Garbhini Paricharya, Masanumasika Pathya, Garbhopaghatakara Bhavas* and *Garbhashthapaka Dravyas*. These data were categorized and analyzed under the diet management (*Ahara*), behavioral management (*Viharana*), clinical importance of psychological support, clinical importance of *Garbhini Paricharya* and prevention of *Garbha Vikriti* through *Garbhini Paricharya*. Thus, it was concluded that *Garbhini Paricharya* which described thousands of years ago in classical texts of Ayurveda for pregnancy is totally scientific and has the clinical importance for maintain the health of the mother and healthy growth and development of fetus. Further researches are necessary with application of these *Garbhini Paricharya* in the clinical practices.

Index Terms- *Garbhini paricharya; Pathya; Apathya; Ayurveda*

I. INTRODUCTION

Pregnancy is one of the most important normal physiological processes in the lives of women. Globally, complications during pregnancy, childbirth and the postnatal period have been the leading causes of death and disability among reproductive age women (Ashra et al., 2017). As a result, 10.7 million maternal deaths are reported to occur before the age of 25 years globally. Factors responsible for high prevalence of maternal deaths are hemorrhage, complication of unsafe abortions, pregnancy induced hypertension, infection and obstructed labor (Unicef, 2011). Thus, 2.7 million neonatal deaths and 2.6 million stillbirths were reported in the world from 1990 to 2015 (WHO, 2016). Additionally, near 99 % of the maternal deaths occurred in low and middle-income countries, particularly in South Asia and Sub-Saharan Africa (Demographic SA: health survey, 2016). Maternal deaths can be reduced, if women can access quality medical care during pregnancy, childbirth, and postpartum (WHO, 2016).

Pregnancy is a period of transition with important physical and emotional changes. Even in uncomplicated pregnancies, these changes can affect the quality of life in pregnant women and affect both maternal and infant health (pregnancy monitoring, pregnancy outcomes, maternal postpartum health, and the psychomotor development of the infant) (Costa et al., 2000; Diego et al., 2004). Though, *Swasthya* (protect the health of healthy individual) of pregnant women is very important. In pregnancy, mother's body undergoes numerous changes to create and support the development of the fetus. Fetus is dependent on mother for its oxygen and nourishment (Dutta, 2006). Since the health of a baby completely depends on mother, caring of the mother before, during and after pregnancy is very much important.

According to Ayurveda, health of pregnant women was maintained through proper *Garbhini Paricharya*. It is maintained from conception till delivery. These *Garbhini Paricharya* were broadly discussed as *Masanumasika Pathya* (month wise dietary regimen), *Garbhopaghatakara Bhavas* (activities and substances which are harmful to fetus) and *Garbhashthapaka Dravyas* (substances beneficial for maintenance of pregnancy). Specific *Ahara* (nutrition), *Viharana* (regimen) with *Pathya* (do) and *Apathya* (don't), *Aushadha* (medicines), Yoga and Meditation were mentioned in it for the pregnant mother to carry out.

This study was mainly focused on the details about healthy maintains of pregnant mother in month wise to promote the healthy growth and development of fetus according to *Garbhini Paricharya* that mentioned in Ayurveda.

II. OBJECTIVES

- To collect and analyze the *Masanumasika Garbhini Paricharya*.
- To understand the clinical importance of *Garbhini Paricharya*.

III. METHODOLOGY

For the authentic data in Ayurveda literature, seven ancient Ayurveda texts were selected and searched. Literature review was carried out in *Brihatrayee (Charak Samhita, Susruta Samhita and Ashtanga Hridaya Samhita)* and important Ayurveda classics for *Prasuti Tantra (Kashyapa Samhita, Harita Samhita and Ayurveda Prasuti Tantra and Stree Roga)*. Searched keywords were *Garbhini Paricharya, Masanumasika Pathya,*

Garbhopaghatakara Bhavas and *Garbhasthapaka Dravyas*. These data were categorized under the diet management (*Ahara*), behavioral management (*Viharana*), clinical importance of psychological support, clinical importance of *Garbhini Paricharya* and prevention of *Garbha Vikriti* through *Garbhini Paricharya*. Those findings were analyzed and discussed the clinical importance of *Garbhini paricharya* to maintain the health of mother and to facilitate healthy growth and development of the fetus.

IV. RESULTS

All these seven books were contained literature on *Garbhini Paricharya*. Five chapters Ch./sha./8, 10, 6^l, 4 & Ch./su./4 of *Charaka Samhita*, two chapters, Su./sha./10, 3 of *Susruta Samhita*, two chapters A.S./sha./3, 2 in *Ashtanga Samgraha*, one chapter A.Hr./sha./1 in *Astanga hrdaya Samhita*, one chapter Ha/tri./49 in *Harita Samhita*, one chapter Ka/sha./8 in *Kashyapa Samhita* and one chapter in *Ayurveda Prasuti Tantra* and *Stree Roga* were identified in the review on *Garbhini Paricharya*. Fifteen web-based publications were identified on the systemic review.

Table 1 – Studies and References on Management of *Masanumasika Garbhini Paricharya* and Clinical Importance of *Garbhini Paricharya*

<i>Garbhini Paricharya</i>	Studies and References
<ul style="list-style-type: none"> Diet Management (<i>Ahara</i>) 	(Dutta, 2006), (Sharma, 1998), (Murthy, 2002), (Shashri et al., 2007), (Murthy, 1995), (Ramavalamba, 1985), (Murthy, 2010) (Tiwari, 2002), (Polańska et al., 2015), (Wikipedia, 2013), (Livestrong, 2013), (Lundberg, 2013), (Fatsecret, 2013), (Sharma 1998), (Yourhealthybody.Jillianmichaels, 2013), (Tiwari, 1999)
<ul style="list-style-type: none"> Behavioral Management (<i>Viharana</i>) 	(Dutta, 2006), (Murthy, 2002), (Sharma, 1998), (Murthy, 2010), (Tiwari, 2002) (Polańska et al., 2015), (Yang et al., 2020), (Tiwari, 1999)
<ul style="list-style-type: none"> Clinical Importance of Psychological Support 	(Dutta, 2006), (Sharma, 1998), (Murthy, 2002), (Murthy, 2010), (Farine et al., 2007), (Suzuki et al., 2003)
<ul style="list-style-type: none"> Clinical importance of <i>Garbhini Paricharya</i> 	(Murthy, 2002), (Sharma, 1998), (Murthy, 1995) (Ramavalamba, 1985), (Murthy 2010)
<ul style="list-style-type: none"> Prevention of <i>Garbha Vikriti</i> through <i>Garbhini Paricharya</i> 	(Sharma, 1998), (Murthy, 2002), (Murthy 1995), (Tiwari, 1999)

Diet (*Ahara*) Management

Diet (*Ahara*) affects the expectant mother and the growing fetus in physical, behavioral and psychological setup. Detailed description given by *Acharyas*, regarding month wise diet as well as drug for pregnant women were identified and tabled as below.

Table 2: Monthly Dietary Regimen (*Pathya Ahara*) mentioned in Ayurveda classics

Month	<i>Charaka samhita</i>	<i>Susruta samhita</i>	<i>Astang sangraha</i>	<i>Haarita</i>
1	Non medicated milk in desired quantity	Sweet, cold and liquid diet	Medicated milk	<i>Yashtimadhu</i> , <i>Parushaka</i> , <i>Madhupushpa</i> , <i>Navaneeta</i> with the sweeten milk

2	Milk medicated with <i>Madhura Rasa</i> drugs	Sweet, cold and liquid diet	Milk medicated with <i>Madhura Rasa</i> drugs	<i>Kakoli Siddha Ghrita</i>
3	Milk with honey and <i>Ghrita</i>	Sweet, cold, liquid diet, <i>Shashti</i> rice cooked with milk	Milk with honey and <i>Ghrita</i>	Milk
4	<i>Navneeta</i> (Butter) extracted from milk or Milk with butter	<i>Shashti</i> rice with curd, Pleasant food mixed with milk and butter, <i>Mansa</i> (meat)	Milk with one <i>tola</i> of butter.	<i>Swasthika odana</i>
5	<i>Ghrita</i> with butter extracted from milk	<i>Shashti</i> rice with milk, Pleasant food mixed with milk and <i>Ghrita</i> , Meat of wild animals	<i>Ghrita</i> prepared with butter extracted from milk	<i>Payaasa</i>
6	<i>Ghrita</i> take from milk, medicated with the <i>Madhur</i> drugs	<i>Ghrita</i> or rice gruel medicated with the <i>Gokshura</i>	<i>Ghrita</i> prepared from milk medicated with <i>Madhura</i> drugs	<i>Madhura Dadhi</i>
7	<i>Ghrita</i> take from milk, medicated with <i>Madhura</i> drugs	<i>Ghrita</i> medicated with <i>Prithakparnyadi</i> group of drugs	<i>Ghrita</i> prepared from milk medicated with <i>Madhura</i> drugs	<i>Ghrita Khanda</i>
8	<i>Yavagu</i> prepared with milk and mixed with ghee		<i>Yavagu</i> prepared with <i>Dugdha</i> mixed with <i>Ghrita</i>	<i>Ghritapurana</i>
9		Unctuous gruels and meat soup of wild animals		<i>Vividha Anna</i>

Table 3: Data Analysis of Monthly Dietary Regimen (*Pathya Ahara*) mentioned in Ayurveda classics

Month	Diet	(%)
1	• Medicated milk	50%
	• Non medicated milk	25%
	• Sweet, cold and liquid diet	25%
	Milk	75%
2	• Milk medicated with <i>Madhura Rasa</i> drugs	50%
	• Sweet, cold and liquid diet	25%
	• <i>Kakoli Siddha Ghrita</i>	25%
3	• Milk with honey and <i>Ghrita</i>	40%
	• Milk	20%
	• <i>Shashti</i> rice cooked with milk	20%
	• Sweet, cold, liquid diet	20%
4	• Milk with butter	33.3%

	<ul style="list-style-type: none"> • <i>Shashti</i> rice with curd / <i>Swasthika Odana</i> • Pleasant food mixed with milk and butter • <i>Mansa</i> (meat) 	33.3%		
5	<ul style="list-style-type: none"> • <i>Ghrita</i> with butter extracted from milk • <i>Shashti</i> rice with milk/ <i>Payaasa</i> • Pleasant food mixed with milk and <i>Ghrita</i> • Meat of wild animals 	33.3%		
6	<ul style="list-style-type: none"> • <i>Ghrita</i> prepared from milk medicated with <i>Madhura</i> drugs • <i>Ghrita</i> or rice gruel medicated with the <i>Gokshura</i> • <i>Madhura Dadhi</i> 	50%		
7	<ul style="list-style-type: none"> • <i>Ghrita</i> take from milk, medicated with <i>Madhura</i> drugs 	50%	} <i>Ghrita</i>	} 100%
	<ul style="list-style-type: none"> • <i>Ghrita</i> medicated with <i>Prithakparnyadi</i> group of drugs 	25%		
	<ul style="list-style-type: none"> • <i>Ghrita Khanda</i> 	25%		
8	<ul style="list-style-type: none"> • <i>Yavagu</i> prepared with milk and mixed with <i>Ghrita</i> • <i>Ghritapurana</i> 	66.7%		
9	<ul style="list-style-type: none"> • Unctuous gruels and meat soup of wild animals • <i>Vividha anna</i> 	50%		

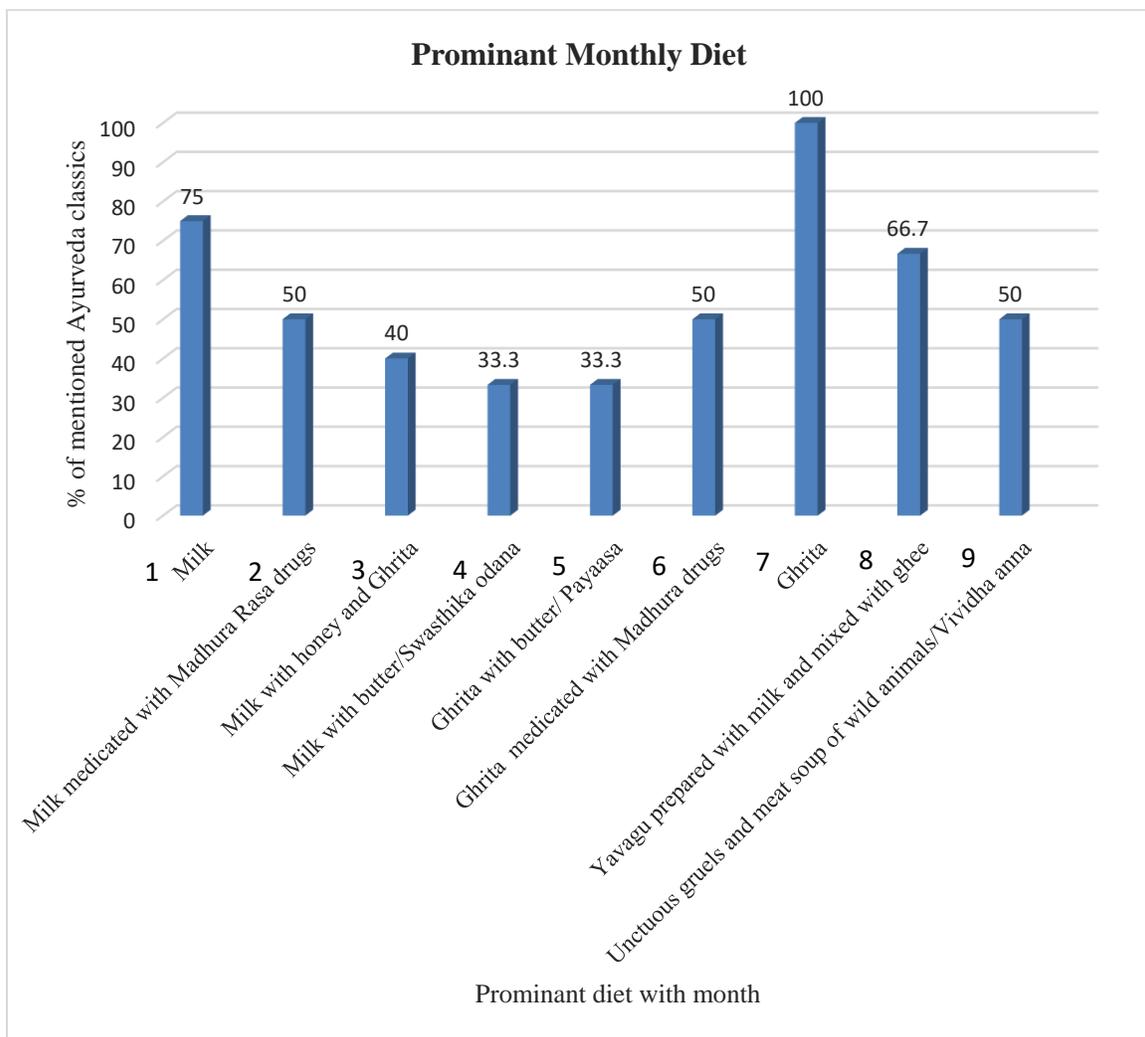


Figure 1: Prominant Monthly Dietary Regimen mentioned in Ayurveda classics

- Substances that harmful to the fetus were explained in *Garbhopaghatakara Bhavas* according to the Ayurveda.

Table 4: *Garbhopaghatakara Bhavas* related to unsuitable diet mentioned in Ayurveda classics

<i>Acharya matha</i> (concepts of <i>Acharyas</i>)	<i>Garbhopaghatakara Bhavas</i> related to unsuitable diet
<i>Charka Samhita</i>	Pungent drugs, <i>Vishtambhi Ahara</i> (hard to digest)
<i>Astanga Sangraha</i>	Pungent drugs
<i>Astanga Hrdaya</i>	Use of pungent, hot, heavy food, use of wine and meat
<i>Kashyapa Samhita</i>	Cold water, garlic

Table 5: Data Analysis of *Garbhopaghatakara Bhavas* related to unsuitable diet mentioned in Ayurveda classics

<i>Garbhopaghatakara Bhavas</i> related to unsuitable diet	%
Pungent drugs	75%
<i>Vishtambhi Ahara</i>	25%
Hot food	25%
Heavy food	25%
Garlic	25%
Wine and Meat	25%
Cold water	25%

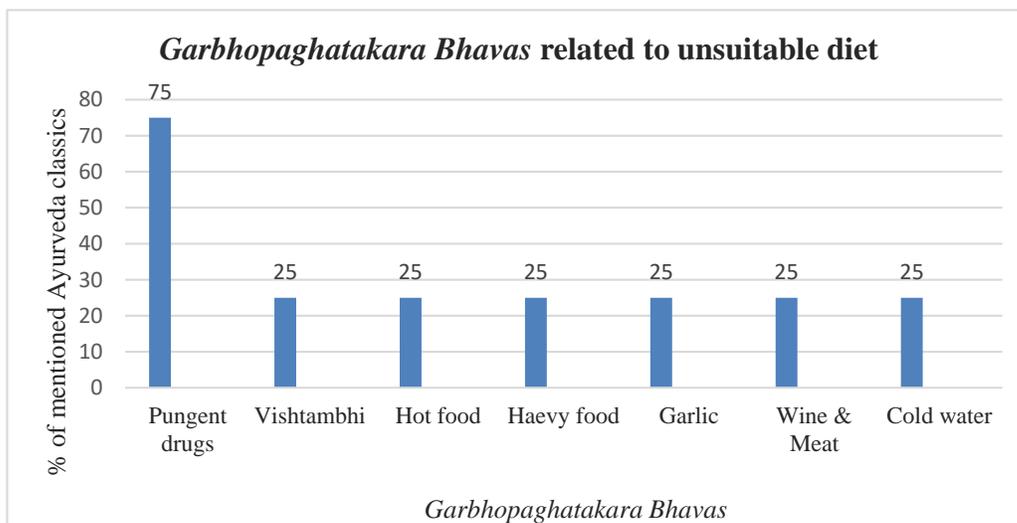


Figure 2: Prominent *Garbhopaghatakara Bhavas* related to unsuitable diet mentioned in Ayurveda classics

- Substances that are beneficial for maintenance of pregnancy were named as *Garbhashtapaka Dravyas*.

Table 6: *Garbhashtapak Dravyas* mentioned in Ayurveda classics

<i>Charka Samhita</i>	<i>Astanga Sangraha</i>	<i>Kashyapa Samhita</i>
<i>Aindri (Bacopa monieri)</i>	<i>Aindri</i>	<i>Bahaputra</i>
<i>Brahmi (Centella asiatica)</i>	<i>Brahmi</i>	<i>Brahmi</i>
<i>Satavirya (Asparagus recemosus)</i>	<i>Satavirya</i>	<i>Satavirya</i>
<i>Sahasravirya (Cynodon dactylon)</i>	<i>Sahasravirya</i>	<i>Sahasravirya</i>
<i>Amogha (Stereospermum suaveolens)</i>	<i>Amogha</i>	<i>Ishwari</i>
<i>Avyatha (Tinospora cordifolia)</i>	<i>Avyatha</i>	<i>Mudita</i>
<i>Shiva (Terminalia chebula)</i>	<i>Shiva</i>	<i>Sahdeva</i>
<i>Arista (Picrorhiza kurroa)</i>	<i>Arista</i>	<i>Arista</i>
<i>Vatyapuspi (Sida cordifolia)</i>	<i>Vatyapuspi</i>	<i>Indravaruni</i>

Vishwasenkanta (Callicarpa macrophylla) *Vishwasenkanta* *Jivaka*
Rushabhaka
Bharangi
Samanga
Rohapada
Vatashruna
Atmagupta
Putana
Keshi

Table 7: Data Analysis of Garbhasthapak Dravyas mentioned in Ayurveda classics

<i>Garbhasthapak Dravyas</i>	%
<i>Brahmi</i>	100%
<i>Satavirya</i>	100%
<i>Sahasravirya</i>	100%
<i>Arista</i>	100%
<i>Aindri</i>	66.7%
<i>Amogha</i>	66.7%
<i>Avyatha</i>	66.7%
<i>Shiva</i>	66.7%
<i>Arista</i>	66.7%
<i>Vatyapuspi</i>	66.7%
<i>Vishwasenkanta</i>	66.7%

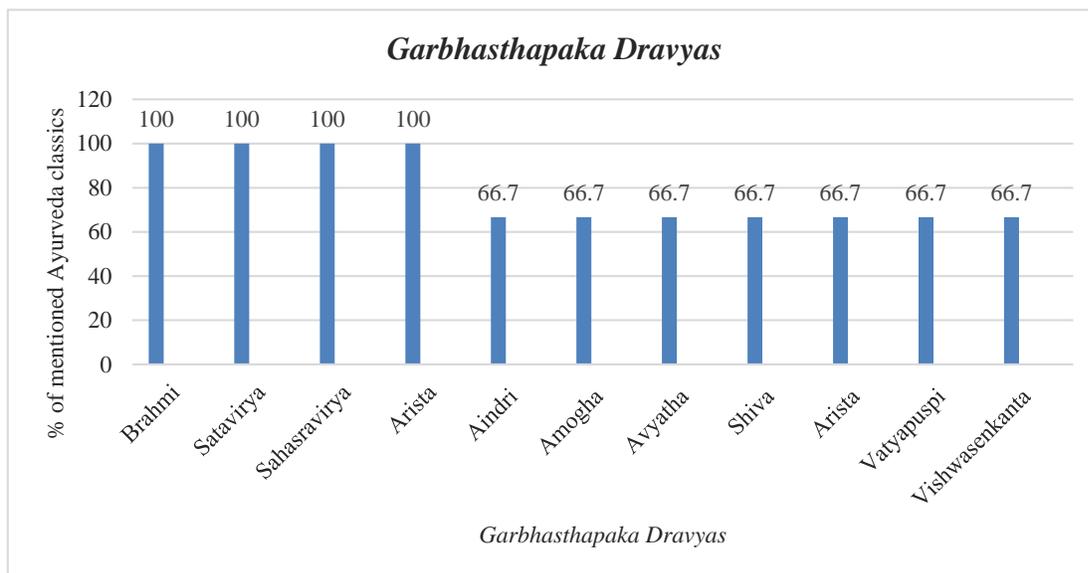


Figure 3: Prominent Garbhasthapak Dravyas mentioned in Ayurveda classics

• **Behavioral Management (Viharana)**

According to Ayurveda, there are special guidelines to mother for daily activities which make pregnancy period more comfortable. *Acharyas* have mentioned that mother’s behavioral pattern mainly promotes the physical and psychological development of the fetus.

Table 8: Good Behaviors (Pathya Viharana) mentioned in Ayurveda classics

<i>Acharya Matha</i> (concepts of <i>Pathya Viharana</i> (good behaviors) <i>Acharyas</i>)	<i>Hitha Viharana</i> (Good and suitable behavioral pattern)
<i>Charaka Samhita</i>	Wear clean and comfortable garments, wear white cloths, unbroken ornaments and flat heeled shoes, good behavioral pattern, use of smooth clean bead cloths.
<i>Susruta Samhita</i>	

Astanga Hridaya Samhita
Kashyapa Samhita

Suitable and desire behaviors of pregnant women.
Wear light cloths, use music instruments.

Table 9: Data Analysis of Good Behaviors (*Pathya Viharana*) mentioned in Ayurveda classics

Good Behaviors (<i>Pathya Viharana</i>)	%
<i>Hitha Viharana</i>	75%
Use of clean, comfortable & light garments	50%
Desire behaviors	25%
Use of music instruments	25%
Use of unsuitable ornaments and flat heeled shoes	25%

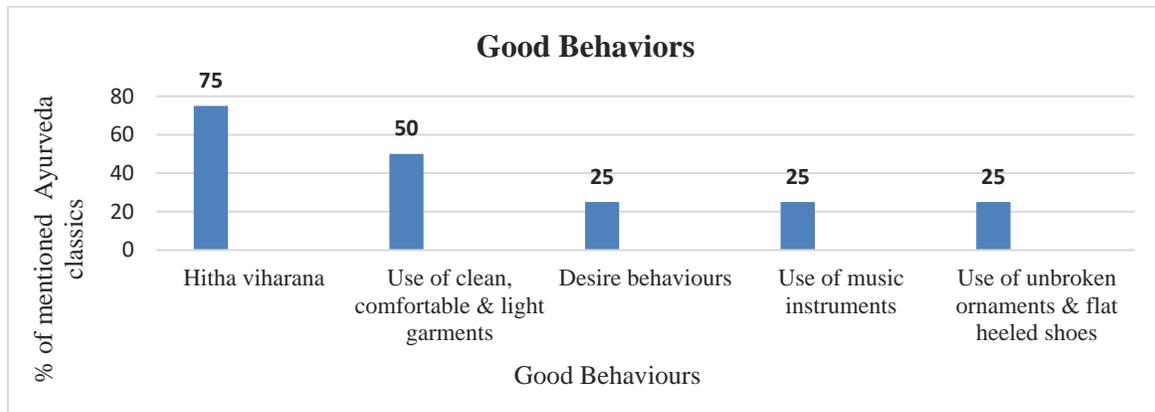


Figure 4: Prominent good behaviors (*Pathya Viharana*) mentioned in Ayurveda classics

Table 10: *Garbhpaghatakara Bhavas* related to unsuitable behavioral pattern (*Apathya Viharana*) that mentioned in Ayurveda classics

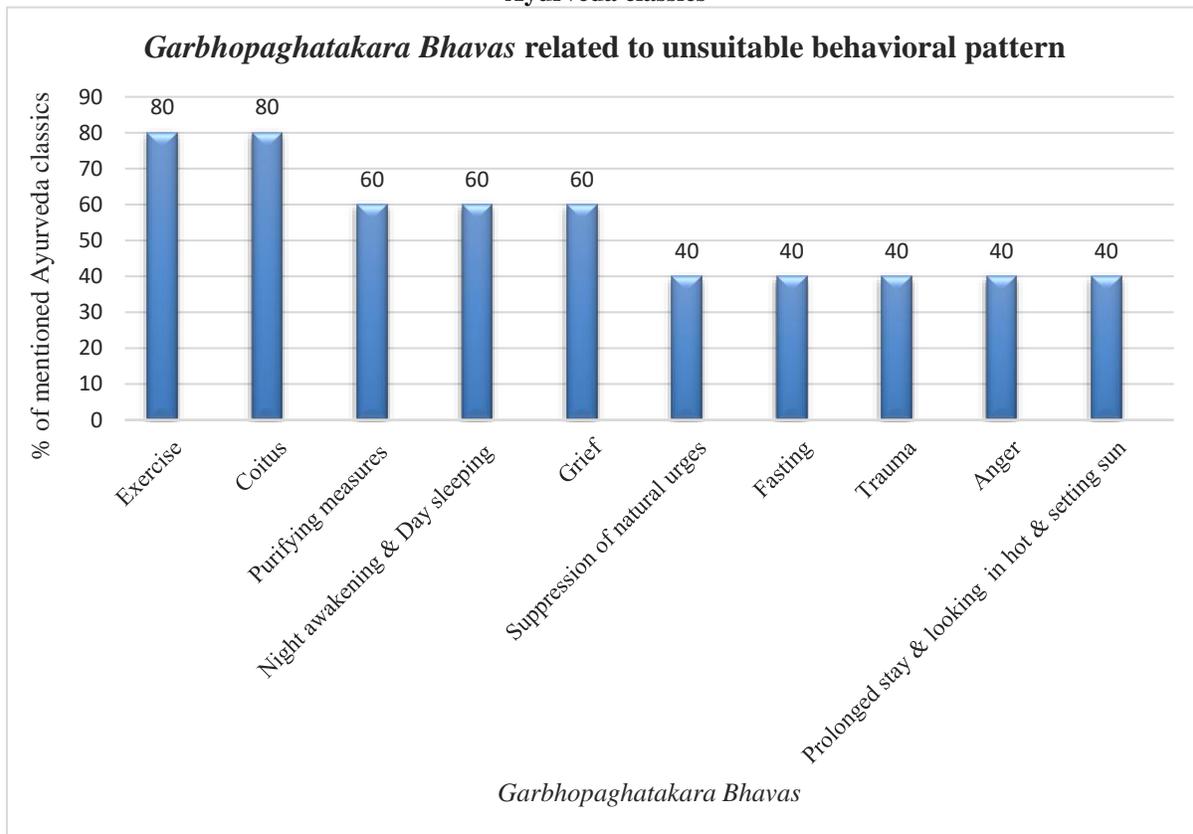
Acharya Matha (concepts of Acharyas)	<i>Garbhpaghatakara Bhavas</i> related to unsuitable behavioral pattern
<i>Charka Samhita</i> <i>Sushruta Samhita</i>	exercise, coitus Coitus, exercise, excessive satiation, excessive emaciation, sleeping in day and awakening in night, grief, riding on vehicle, fear, squatting, blood-letting, suppression of natural urges
<i>Astanga Hridaya</i>	Excessive coitus, exercise, carrying heavy weight, untimely sleep, anger, grief squatting, excitement, fasting, use of red garment, sleeping in supine position, blood-letting, purifying measures and enemas
<i>Astanga Sangraha</i>	exercise, coitus, emaciation, trauma, conveyance causing excessive jerks, night awakening, day sleeping, suppression of natural urges, indigestion, prolonged stay in hot sun or near fire, anger, grief, fear, terror, fasting, squatting, looking or hearing disliked things
<i>Kashyapa Samhita</i>	Erect or flexed posture for long, shaking, excessive laughing, trauma, looking declining moon, setting sun, seeing solar or lunar eclipse

Table 11: Data Analysis of *Garbhpaghatakara Bhavas* related to unsuitable behavioral pattern (*Apathya Viharana*) that mentioned in Ayurveda classics

<i>Garbhpaghatakara Bhavas</i> related to unsuitable behavioral pattern	%
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<i>(Apathya Viharana)</i>	
Exercise	80%
Coitus	80%
Purifying measures	60%
Night awakening & day sleeping	60%
Grief	60%
Suppression of natural urges	40%
Fasting	40%
Trauma	40%
Anger	40%
Prolonged stay & looking in hot & setting sun	40%

Figure 5: Prominent Garbhopaghatakara Bhavas related to unsuitable behavioral pattern (Apathya Viharana) mentioned in Ayurveda classics



• **Clinical Importance of Psychological Support**

The psychological condition and emotional activities are also responsible for healthy mother with the physical and mental development of the fetus. A pregnant woman should live in a happy and pleasing environment with positive thinking. Pregnant lady should perform religious rites with the medications. Mental stress, fear and anxiety like conditions should be avoided. Also, cleanliness with bathing will not only refresh and relax, but also helps to prevent infections (Murthy, 2002). Behaviors of husband and other family members should be loving and caring (Murthy, 2010). Mental stress of a pregnant woman can reduce through listening to charm music (Tiwari, 2001).

Rest is especially needed in the first two and last two months of pregnancy. Adequate rest with foot in the elevation position and left lateral position is more beneficial (Farine and Seaward, 2007). It is also very needful in gestational hypertension, placenta previa, preeclampsia and eclampsia like complicated conditions (Dutta, 2006). Proper sleeping is very important in a pregnant lady. Insufficient sleeping duration is defined as sleeping of less than 7 hours per day. Excessive sleep duration is defined as sleeping of more than 9 hours per day (Suzuki et al., 2003).

• **Clinical Importance of Garbhini Paricharya**

The abdominal skin gets stretched due to growing fetus during the seventh month. That produces itching with striations on abdomen and breast which known as 'Kikkisa'. This should be treated by local application of the pulp of sandalwood (*Santalum album*), lotus (*Nelumbo nucifera*), neem (*Azadirachta indica*), basil (*Ocimum basilicum*) and *Manjishtha* (*Rubia cordifolia*) medicated oil or butter.

Irrigation of abdomen and breasts should be done with decoction of *Patola* (*Trichosanthes cucumerina*), *Nimba* and *Manjishtha* for cleansing and anti-itching action (Murthy, 2010).

Asthapana Vasti has been advised by *Acharya Susruta* in the eighth month of pregnancy. *Asthapana Vasti* means administration of drugs decoction through anus. Most women feel constipation due to the pressure of gravid uterus over the bowel and as an effect of high progesterone level in third trimester of pregnancy. Though it used for cleaning of the retained faeces due to prolonged constipation through *Anulomana* action of *Apana Vata*. Also, *Asthapana Vasti* helps to balance the *Apana Vata* which maintaining the pregnancy as well as smooth delivery of the baby at the time of labor. Decoction of *Badri* (*Ziziphus mauritiana*) mixed with *Bala* (*Sida cordifolia*), *Atibala* (*Abutilon indicum*), *Shatapushpa* (*Pimpinella anisum*), *Palala*, (pebble sesame seeds), milk, curd, *Mastu* (sour butter), oil, salt, *Madanphala*, honey and *Ghrta* should be given in *Asthapana Vasti* (Murthy, 2002).

Acharyas explained the use of *Anuvasana Vasti* (unctuous enema) in eighth and ninth month of pregnancy through anal route. *Acharya Susruta* advised using *Anuvasana Vasti* which is prepared from medicated oils in eight month (Murthy, 2002). *Anuvasana Vasti* with oil prepared from *Madhura* drugs were advised to use in ninth month (Sharma, 1998; Murthy, 1995). This procedure also balances *Apana Vata*. The body of a pregnant woman thus treated becomes unctuous and she gains strength and delivers vaginally without complications.

Vaginal tamponing with medicated oil like *Bala Taila*, *Ksheerabala Taila*, and *Kadammasha Taila* should be given in ninth month (Sharma, 1998; Murthy, 1995). Vaginal tampon of this oil should be given for lubrication of *Garbha-Sthana* and *Garbha-Marga* (uterus, vaginal canal and perineum). Also, it is advised to the women having repeated still birth or abortion, should take *Phala Grita* (Murthy, 1995). She should take bath in *Vata Nasaka Dravya* contain (medicated) water like *Dashamula* (Murthy, 2010).

• **Prevention of *Garbha Vikriti* through *Garbhini Paricharya* (*Matru Ahara* and *Vihara*)**

Causes for having *Garbha Vikriti* or abnormal children were well described in Ayurveda. They were mentioned as *Vikruta Vayu*, *Beeja Dosha* (defective sperm and ovum – genetic or chromosomal abnormalities), *Atma Karma* (bad past or present action), *Ashaya Dosha* (diseased or abnormal reproductive organs), *Kala Dosha* (conception or coitus occurs during *akala*, mid-day, evening, excess heat or cold), *Matru Ahara* and *Vihara*, *Douhrida Avamanana*, *Garbhopaghatakara Bhavas*, Iatrogenic (teratogenic substances given by physician) and predominance of *Mahabhuta* and others in determining body complex. *Vayu* is responsible for cell division and provides shape to various body organs. If *Vayu* is vitiated, the organ which is affected by *Vayu* become abnormal. The fetus may die or have congenital anomalies or remain in uterus for more than 40 weeks as told by *Acharya Charaka*. Also, the effects of various *Matru Ahara* and *Vihara* on child were mentioned as below in Ayurveda (Sharma, 1998; Murthy, 1995).

Table 12: Effect of various *Matru ahara* and *vihara* on child mentioned in Ayurveda classics

Diet and mode of life by mother	Effect of children
1. Abnormal position of sitting and sleeping.	I.U.D. premature delivery, abortion
2. Trauma, compression, falls, riding in jerky vehicle, listening unpleasant word.	Premature delivery, abortion
3. Sleeping in supine position with trenced extremities.	Cord around the neck
4. Sleeping uncovered in open place (<i>Vibruta Sayini</i>) or night walking (<i>naktacharini</i>)	Insane or <i>Unmatta</i>
5. <i>Kali Kalaha Shila</i>	
6. <i>Vyavaya Shila</i>	<i>Apasmara</i>
7. <i>Shoka Nitya</i>	Wife dominated, lazy
8. <i>Swapna Nitya</i>	<i>Bhita</i> (fearful), <i>Alpagni</i> , <i>Alpayusha</i>
9. <i>Mada Nitya</i>	<i>Nidralu</i> , <i>Alpagni</i> , <i>Abudha</i> (fool)
10. <i>Matsya Mamsa Nitya</i>	<i>Pipasa</i> , <i>Alpa Smruti</i> , <i>Anavasthita Chitta</i>
11. <i>Madhura Nitya</i>	<i>Stabdhaksha</i> (fixed eye dropping of eyelids)
12. <i>Amla Nitya</i>	<i>Prameha</i> , <i>Muka</i> , <i>Atisthula</i>
13. <i>Lavana Nitya</i>	<i>Rakta Pitta</i> , <i>Twak</i> and <i>Akshi Roga</i>
14. <i>Katu Nitya</i>	<i>Vali</i> , <i>Palita</i> , <i>Khalitya</i>
15. <i>Tikta Nitya</i>	<i>Durbala</i> , <i>Alpa Shoka</i> , <i>Anapathya</i>
16. <i>Kashaya Nitya</i>	<i>Shosha</i> , <i>Alpa Bala</i> , <i>Alpagni</i> <i>Shyava</i> , <i>Anaha</i> , <i>Udavarta</i>

Non-fulfillment of *Douhrida* may leads to IUFD (Intrauterine Fetal Death) or congenital anomalies. If the desire of women towards harmful substances is more, it is to be given in small quantity along with beneficial substances. Unless if desire is suppressed, the *Vayu* gets vitiated to cause IUFD or congenital anomalies. If the desire of *Dauhrida* is unfulfilled then the born child will be *Kubja*, *Kuni* (one eyed), *Khanja* (lame), *Jada* (mentally retired), *Vamana* (dwarf), *Vikrutaksha* (eye diseases), blind etc. Desires come and are satisfied through *Indriya*. If a *Douhridini* wants to hear a particular song and could not able to hear, this will lead to abnormal hearing or *Dadhira*. Also, diet and mode of life (*Ahara* and *Vihara*) maintained by the mother are likely to affect the fetus (Murthy, 2002). If women take *Ahara* predominant of milk with *Madhura* substances and engaged in swimming, the baby will become fair. If she takes *Ahara* predominant of *Tila* (black colored substance) and *Vidahi* substances she will likely to deliver a baby with dark color. But mostly the color of child is controlled by *Desha*, *Kula*, *Vrutti* etc.

V. DISCUSSION

Garbhini Parichrya, which contains dietetic and other regimens advocated in *Samhitas* for pregnant women, are of great significance. These *Garbhini Paricharya* were broadly discussed as *Masanumasika Pathya* (month wise dietary regimen), *Garbhopaghatakara Bhavas* (activities and substances which are harmful to fetus) and *Garbhashthapaka Dravyas* (substances beneficial for maintenance of pregnancy) in Ayurveda classics. Data were collected from *Brihatrayee* (*Charak Samhita*, *Susruta Samhita* and *Ashtanga Hridaya Samhita*) and important Ayurveda classics for *Prasuti Tantra* (*Kashyapa Samhita*, *Harita Samhita* and *Ayurveda Prasuti Tantra* and *Stree Roga*). These data were categorized under the diet management (*Ahara*), behavioral management (*Viharana*), clinical importance of psychological support, clinical importance of *Garbhini Paricharya* and prevention of *Garbha Vikriti* through *Garbhini Paricharya*.

The woman by her nature is delicate and soft. During pregnancy her conditions become more delicate. *Acharya Charaka* compared this condition as a pot filled with oil; slightest disturbance in handling cause spilling of oil (premature delivery). The women who desire a healthy and beautiful child (*Praja Sampat*) should take *Ahara* and *Vihara* (Sharma, 1998). According to *Acharya Susruta*, from very first day of pregnancy women should remain happy (*Prahrishta*), clean (*Suchi*), wear ornaments (*Alankara*), white dressed (*Shukla Vasana*), peaceful (*Shanti*) engaged in auspicious activities (*Mangala*), worshipping *Guru*, *Devata* and *Brahmanas*. She should take *Ahara* having tasty (*Hridya*), liquid (*Drava*), sweet (*Madhura*), *Snigdha* and *Deepaniya* (Murthy, 2002).

Monthly Dietary Regimen (*Pathya Ahara*) mentioned by *Charaka Samhita*, *Susruta Samhita*, *Astang Sangraha* and *Haarita* were analyzed and identified prominently mentioned monthly dietary regimen in month wise. *Rasa Dathu*, which formed from the diet of pregnant women, helps to nourishment of the mother, nourishment to the fetus and formation of milk (Sharma, 1998). A proper nutrition is essential for the achievement of full-term healthy baby. Improper, inadequate diet and life routine may lead to any defect or even death of the implanted fetus. The diet of pregnant women should be balanced in terms of all essential food

factors like calories, minerals, vitamins and others (Dutta, 2006). Mother's diet should contain all six rasas which give strength and good complexion to the fetus. In Ayurveda, it has been said that whatever diet a pregnant woman takes becomes congenial to the fetus (Sharma, 1998). So, she should always take healthy diet.

In the first month of pregnancy known as *Kalalaavastha*, the embryo becomes *Kalala*. In this month milk was most prominently mentioned dietary regimen by *Acharyas*. Ayurveda properties of milk are *Jathisathmya* (good for all living beings) *Swadupaka* (sweet in taste), *Dhatu vardhaka* (nourishes the body tissues), *Ojo-vardhaka* (consider as improves immunity of body), *Bala-Shukra-Ayush vardhaka* and it relieves tiredness, excessive thirst, hunger and dizziness (Sharma, 1998). Milk provides strength immediately, makes *Indriya* strong quickly, retains longevity, disease free state, pleasure and *Rasayana* (rejuvenating). The fetus obtains nutrition and strength with stability (Tiwari, 2002). Medicated milk was mainly advised which helps to relieve vomiting, dehydration, anemia that arises in first month. *Garbhini Paricharya* considers milk as an ideal element of diet for pregnant woman as it is a rich source of proteins and vitamins. Proteins provide building and maintaining of tissues such as muscles. Also, it contains of vitamin A, D, B₁, B₂, B₆, B₁₁ and B₁₂, lactose, calcium, phosphorus, minerals and zinc (Wikipedia, 2013). Also, use of sweet, cold and liquid diet will prevent dehydration and supply required nourishment.

The second month of pregnancy is called as *Garbhavastha* that has various shapes of the solid mass in globular form. Milk medicated with *Madhura Rasa* drugs was mainly advised to use in this month. *Madhura rasa* prevents dehydration, supply required nourishment. Also, it has excellent performance in the formation of *Dhatu*s and maintains the good health of mother as well as fetus which advised in the first Trimester of Pregnancy (Tiwari, 2002). Third month of pregnancy is known as *Gathrapanchaka Vyaktavasta* that forms all sense and motor organs of fetus. In this month milk with honey and *Ghrta* was mainly advised by the *Acharyas*. Ayurveda properties of honey are *Madhura* and *Kashaya Rasa*, *Madhura Vipaka*, reduce vomiting and diarrhea. *Vata* is important for the formation of all sense and motor organs of fetus. So, honey is important in *Vatashamaka* effect and for the nourishment in this month. *Ghrta* has Ayurveda properties of *Saumya*, *Sheeta veerya*, *Mrudu*, *Madhura Rasa*, *Sneha Guna*, and *Guru Guna* (Sharma, 1998). Protein content of *Ghrta* is 0.04 g/tbsp which includes 17 amino acids that are essential for good health. Also, it contains 112 calories/tbsp., 33 mg of cholesterol and 12.7 g of total fat content. 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. It also contains vitamin A, D, E, K, calcium, potassium and small amount of riboflavin and pantothenic acid (Livestrong, 2013). Also, *Shashti Shali* (rice) was mentioned to use after cooking with milk (Murthy, 2002). Ayurveda properties of *Shashti* are *Madhura Rasa*, *Vata* and *Pitta Shamaka*, *Vrunhana*, *Kapha* and *Shukra Vardhaka*. *Shali Dhanya* has *Madhura Rasa*, *Sheeta Veerya*, *Laghupaka*, *Balakaraka* and *Pittanashaka* properties (Sharma, 1998). It is rich in carbohydrates, provides fuel for body, excellent source of niacin, vitamin D, fiber, iron, calcium, thiamine and riboflavin (Lundberg, 2013). Use of cold, sweet, liquid rich diet and milk prevent the dehydration and helps to supply required nutrition in

first trimester (Murthy, 2002). Honey is also important in nourishment, immunity of fetus and supplying of energy as 64 calories in 1 tbsp (Fatsecret, 2013).

The most important event during first trimester is embryogenesis. Mammalian embryo requires an increasing amount of energy. *Kshira*, *Ghrita* and *Krishara* were advised during embryonic and fetal stages for nourishment, to reduce hunger and vomiting. Women suffering with nausea and vomiting may result in dehydration and loss of nutrients in this period. Hence, the dietary regimen suggested by most of the ancient *Acharyas* during this period is in liquid state of *Madhura Rasa* and having high nutritional value which helps to replenish the nutrients and corrects the dehydration. *Vata* is responsible for cell division during embryogenesis and the imbalance in *Vata Dosha* may disturb its normal functions and process of cell division. During first trimester *Vata Dosha* is alleviated in pregnant woman. In dietary regimen milk, *Ghrita*, *Madhura Dravyas*, medicated *Kakoli* (*Roscaea procera*) *Siddha Ghrita* are suggested which are well known for their *Vatashamaka* properties (Murthy, 1995; Ramavalamba, 1985; Sharma, 1998). In embryonic period no drug should be given because drug can disturb the organogenesis and may lead to teratogenicity. *Acharya Kashyapa* explained that no medicine should be given to the fetus before four months due to the instability of the fetus during this period. Progesterone hormone which is essential to continuation for pregnancy and milk is external source for this (Dutta, 2006). Milk is helpful due to the nourishment for fetus till *Vyaktagarbha* supplied from *Rasa* by *Upasneha* and *Upasweda*. According to *Acharya Charaka* the *Rasa* of the pregnant woman serves three purposes as *Swa-Shareera Pushti* (nourishment of her own body), *Stanyaaya* (lactation) and *Garbhavidhi* (growth of fetus) (Sharma, 1998).

Acharyas had mentioned the fourth month of pregnancy as *Dauhridavastha* in which the heart of fetus starts beating. When the *Chetna* (consciousness) enters, it starts having own individual desires. Use of milk with butter was mostly mentioned by *Acharyas* in this month. Newly prepared butter is smooth, light, cold, *Hridya* and reduces hunger. Butter with milk has sweet, cold, heavy, *Sangrahi*, *Chakshushya* and *Sukumara* properties (Sharma, 1998). Butter contains a high amount of saturated fat and provides 7 % of recommended dietary allowance of vitamin A which is important to vision health (Yourhealthybody. Jillianmichaels, 2013). Also, *Shashti* rice with curd, *Swasthika odana* or mother's desired foods were advised to use by some of *Acharyas* in this month (Murthy, 2002; Murthy, 1995; Ramavalamba, 1985). Fourth month onwards, pregnant woman requires more nutrition and energy due to the organs formation of fetus which may be supplied by using meat soup. The fifth month is known as *Mana Prabuddhavastha*, during which time, mental development of the fetus occurs. *Ghrita* with butter extracted from milk or *Shashti* rice with milk/ *Payaasa* were most prominently mentioned by *Acharyas* in this month. Soup made with different cereals for vegetarians and soup made from wild animal's meat give *Bala Vardhaka*, *Mansha Vardhaka*, *Vrunhana* and *Vatashamaka* effects (Sharma, 1998). *Acharyas* have mentioned the sixth month as *Praduddhavastha* and *Snayu*, *Sira* and *Romadi Vyaktavastha*. In this month mother's diet mainly helps to promote *Buddhi-Bala-Ojo-Asthi Vardhana* and *Varna-Prasadana* effects. Mother is advised to use *Ghrita* prepared from milk medicated with *Madhura* drugs and *Ghrita* or rice gruel medicated with *Gokshura*

(*Tribulus terrestris*) in this month (Murthy, 2002). Use of *Gokshura* in sixth month of pregnancy is very important in *Ojo-vardhaka* and *Muthrakaraka* properties (Sharma, 1998). It also prevents water retention as well as pregnancy induced hypertension and other related complications. In second trimester, muscular tissue of fetus grows sufficiently through cellular hyperplasia and cellular hypertrophy (Dutta, 2006). Therefore, it requires more protein which can be supplied from animal sources such as meat, milk, cheese, butter as furnish amino acids in optimal combinations (Tiwari, 1999). Milk and dairy products have long been considered nearly ideal sources of nutrients, especially protein and calcium for pregnant women. Meat helps in maintenance of pregnancy, provides nourishment to fetus and suppresses alleviated *Vata* of pregnant women. Cooked *Shashti Shali* rice advised in *Garbhini Paricharya* is rich in carbohydrates and provides energy to the body (Lundberg, 2013).

Seventh month of pregnancy is named as *Sarvanga Prathyanga Vyaktavastha*. In this month all *Acharyas* were advised to use *Ghrita preparations* as medicated with *Madhura* drugs, medicated with *Prithakparnyadi* group of drugs and *Ghrita Khanda*. *Ghrita* improves *Smruti*, *Buddhi*, *Medha*, *Kanthi*, *Swara*, *Sukumarahwa*, *Ojas*, *Tejas* and *Bala* (Sharma, 1998). Eighth month of pregnancy is known as *Sancharanavastha* where the energy dominants in the mother at sometimes and its dominants in the fetus at other times. Use of *Yavagu* prepared with milk and mixed with *Ghrita* was mainly advised in eighth month of pregnancy. Rice gruel being light, does not produce burning sensation, if used hot it produces movements of *Doshas* in proper directions, suppresses the *Pitta* by its sweet property (Tiwari, 2002). Use of dried grapes, soaked almonds, and *Khajoor* (*Phoenix dactylifera*) with milk is also beneficial in third trimester. Ninth and Tenth months are known as *Prasavavastha*. Use of unctuous gruels, meat soup of wild animals and *Vividha Anna* were prescribed by *Acharyas* in this month for the nourishment of the mother and the fetus.

Substances that harmful to the fetus were explained under the *Garbhopaghatakara Bhavas* according to the *Ayurveda*. It was described in *Charka Samhita*, *Astanga Sangraha*, *Astanga Hridaya* and *Kashyapa Samhita*. After analyzing of *Acharya Mathas*, *Pungent drugs* were identified as main *Garbhopaghatakara Bhava* which related to diet. Also, *Vishtambhi-hot-heavy food*, *wine*, *meat*, *garlic* and cold water were mentioned as *Garbhopaghatakara Bhavas*.

Further, *Garbhasthapaka dravyas* are helpful for maintenance of pregnancy and help in prevention of abortion. Various types of *Garbhasthapaka dravyas* are prescribed during pregnancy for proper development of the fetus. *Charka Samhita*, *Astanga Sangraha* and *Kashyapa Samhita* were mentioned about these drugs. *Brahmi*, *Satavirya*, *Sahasravirya* and *Arista* were identified as prominent *Garbhasthapaka dravyas* that mentioned by *Acharyas*. *Aindri*, *Amogha*, *Avyatha*, *Shiva*, *Vatyapuspi* and *Vishwasenkanta* were the other main drugs having *Garbhasthapaka* effects.

Acharyas have mentioned that mother's behavioral pattern mainly promotes the physical and psychological development of the fetus. Good Behaviors (*Pathya Viharana*) were mainly mentioned in *Charaka Samhita*, *Susruta Samhita*, *Astanga Hridaya Samhita* and *Kashyapa Samhita*. Most of *Acharyas* explained about *Hitha Viharana* (*Good and suitable behavioral*

pattern). Although, wear clean, light, comfortable garments, white cloths, use of unbroken ornaments, flat heeled shoes, use of smooth, clean bead cloths, use music instruments and doing desire behaviors of pregnant women were interpret as other good behaviors.

Activities (*Apathya Viharana*) that are harmful to the fetus were explained under the *Garbhopaghatakara Bhavas*. These were described in *Charka Samhita*, *Sushruta Samhita*, *Astanga Hrdaya*, *Astanga Sangraha* and *Kashyapa Samhita*. Exercise and coitus were mainly identified *Garbhopaghatakara Bhavas* related to bad behaviors. Other than that, purifying measures, night awakening, day sleeping, grief, suppression of natural urges, fasting, trauma, anger, prolonged stay in hot sun and looking at setting sun were mentioned by some of *Acharyas*. Smoking and tobacco chewing either before or during pregnancy is associated with an increases risk of pregnancy complications, poor pregnancy outcomes with the more defects to the growing fetus. When a pregnant woman drinks alcohol, it also enters the bloodstreams of the fetus and cause damaging effects on the fetus (Murthy, 2010; Polanska et al., 2015).

Day today house works, walking, indoor stationary cycling, prenatal yoga, kegel exercises and low impact aerobics are suitable activities during pregnancy. Moderate exercise can decrease fatigue, constipation, boost mood, enhance the energy level, induce sleep and improve muscle strength (Yang et al., 2020). These are safe to perform in uncomplicated pregnancies while rule outing of pre aborted mother, hypertension and placenta previa etc (Dutta, 2006). Over exercising is not suitable and can do them as long as she feels comfortable (Murthy, 2002). *Acharya Charaka* had mentioned *Maatruja Aahara-Vihara Dosa* that referred to improper diet and regimens of mother during *Garbhadana Kala* (pregnancy) as one of the contributing factors for *Garbha Vikruti* (fetal deformities) and *Anuvamshika Vyadhi* (congenital disorders) (Sharma, 1998).

Garbhopaghatakara Bhavas are the diets and mode of life which are harmful for fetus resulting in either abortion or intrauterine death of fetus and cause congenital anomalies in fetus. Those which produce psychological or physical strains such as mental stress, fear, anxiety sudden shock, grief, exercise, over weight carrying and vehicle riding may precipitate abortions or abnormalities of fetus. Due to sudden increase in intra-abdominal pressure; prolonged squatting in abnormal postures and supine position may influence placental and uterine blood flow thus cause abortion, intrauterine death of the fetus or other abnormalities (Tiwari, 1999). *Acharya Vagbhata* has mentioned if husband or servant treats the pregnant woman with the desired foods and life pattern, it will help to protect the fetus (Tiwari, 2002). Psychological or physical support from the family is very needful in the pregnancy period.

Garbhini paricharya accommodate the gradual growth of the fetus and promote the comfortable lifestyle throughout the pregnancy. Special type health care of pregnant lady helps in the elimination of major waste products of the body, the metabolic changes result in proper relaxation of genital area. Pregnant women should not get constipated, therefore mild laxatives and enema are recommended. Hence to have normal delivery it is very important to maintain the *Vata* and due to this reason, all efforts are taken to keep the *Vata* in an unvitiated state. Also, *Vata* plays an important role in the delivery of the *Garbha*. *Anuvasana Vasti*

or *Sneha Vasti* differs from *Asthapana Vasti* by the proportion of the *Kashayas* (decoctions) and *Snehas* (oils) used in preparing the enema. *Acharya Sushruta* has advised for *Asthapana Vasti* (a medicated enema with non-unctuous substances like *Kashaya*) with decoction of *Badari* (*Zizyphus jujube*) mixed with *Bala* (*Sida cardifolia*), *Athibala* (*Abutilon indicum*), *Shatapushpa* (*Foeniculum vulgare*), *Palaala* (pasted sesamum seeds), milk, curds, *Masthu* (sour buttermilk), oil, salt, *Madanaphala* (*Raundia dumetorum*) honey and *Ghrita* (Murthy, 2002). *Anuvasana Vasti* (a medicated – unctuous enema) prepared by oils medicated with milk and decoction of *Madhura* drugs. These would help in clearing the retained faeces and in *Vatanulomana* (regulation of *Vata* by its downward movement). Vaginal tampon of this oil should be given for lubrication of *Garbha-Sthana* and *Garbha-Marga* (uterus, vaginal canal and perineum) (Murthi, 1995; Ramavalamba, 1985). Regular use of vaginal tampon in ninth month till delivery might influence autonomic fibers governing myometrium and help in regulating their functions thus help in normal labor. It also destroys pathogenic bacteria of vaginal flora and thus prevents puerperal sepsis.

Further, *Acharyas* had mentioned about the benefits of *Garbhini Paricharya*. *Acharya Charaka* had mentioned that the woman can remains healthy, delivers the good healthy child with energy or strength, voice, compactness and much superior to other family members through the proper application of *Garbhini Paricharya*. Also, *Acharya Charaka* and *Vagbhata* said that, her *Garbhadharini* (fetal membranes and vaginal canal), *Kuksi* (uterus), sacral region, flanks and back become soft by the use of these regimen. Further, *Vayu* moves into right path, feces, urine can excrete and placenta can expel easily by their respective passages. Therefore, women gain strength, complexion and she deliver a healthy child easily possessing with all qualities and long life at proper time (Tiwari, 2001).

Though, Pregnant health care through Ayurveda is an important aspect in *Prasuti Tantra* as it helps in the proper development of the fetus, its delivery, the health of the mother and facilitates easy delivery and healthy post-partum period.

VI. CONCLUSION

Standing on above results it was concluded that *Garbhini Paricharya* which described thousands of years ago in classical texts of Ayurveda for pregnancy is totally scientific and has the clinical importance for maintain the health of the mother and healthy growth and development of fetus. Further researches are necessary with application of these *Garbhini Paricharya* in the clinical practices.

REFERENCES

- [1] Ashraf F., Thaver I. H., Imtiaz F. and Ayub A., Quality assessment of focused antenatal care service delivery in tertiary care health facility”, Journal of Ayub Medical College Abbottabad, 2017; 29(2): 219–224.
- [2] Da Costa D., Dritsa M., Larouche J. and Brender W., Psychosocial predictors of labor/delivery complications and infant birth weight: a prospective multivariate study. J Psychosom Obstet Gynaecol. 2000; 21:137–48.
- [3] Diego M. A., Field T., Hernandez-Reif M., Cullen C., Schanberg S. and Kuhn C., Prepartum, postpartum, and chronic depression effects on newborns, Psychiatry, 2004; 67:63–80.

- [4] Dutta D. C., Text book of Obstetrics, 6th Ed. New Delhi (India): New Central Book Agency (P) Ltd; 2006.
- [5] Farine D. and Seaward P. G. R., When it comes to pregnant women sleeping, Is left right, Journal of Obstetrics and Gynecology Canada, 2007; 29(10):841-2.
- [6] Fatsecret.com, New York: Inc.; C. All Things about Food and Diet. From <http://www.fatsecret.com/caloriesnutrition/usda/honey/>; 2013.
- [7] Livestrong.com, Santa Monica: CA 90404, Inc.; c. Healthy Living for Prevention of Diseases. From <http://www.livestrong.com/>;2013
- [8] Lundberg.com, Richvalc: CA Lundberg Family Farms, Inc.; c. From <http://www.lundberg.com/info/ricefacts.aspx/>;2013.
- [9] Murthy K. R. S., Astanga Sangraha of Vagbhata, English translation, 1st edition, Sharira Sthana, Chapter no 3, Verses no 3-14, Choukhamba Orientalia, Varanasi, 1995; 33-36.
- [10] Murthy K. R. S Astanga Hrdaya Samhita of Vagbhata, Sharira Sthana, Chapter no 1, Verse no 16, 44-47, 10th edition, Choukhamba Krishnadas Academy Pune, 2010.
- [11] Murthy K. R. S., Ashtang Hridaya by Acharya Vagbhata, English commentary, 10th edition, Shareera Sthana, Chapter no 1, Verse no 49, 10th edition, Choukhambha Orientalia, Varanasi, 2010.
- [12] Murthy K. R. S., Astanga Sangraha of Vagbhata, English translation, 1st edition, Sharira Sthana, Chapter no 2, Verses no 60-61, Choukhambha Orientalia, Varanasi, 1995.
- [13] Murthy K. R. S, Susruta Samhita of Susruta, English translation, 1st edition, Sharira Sthana, Chapter no 3, Verse no 12-14, Choukhamba Orientalia, Varanasi, 2002.
- [14] Murthy K. R. S., Sushruta Samhita, English translation, vol 2, 1st edition, Sharira Sthana, Chapter no 10, Verse no 2-5, Choukhamba Orientalia, Varanasi, 2002; 252-255.
- [15] Polańska K., Jurewicz J. and Hanke W., Smoking and Alcohol Drinking During Pregnancy as the Risk Factors for Poor Child Neurodevelopment – A Review of Epidemiological Studies. International Journal of Occupational Medicine and Environmental Health 2015; 28 (3):419 – 443.
- [16] Ramavalamba., Harita Samhita with Hindi commentary, 1st ed, Tritiya Sthana, Chapter no 49, Verse no 1-3, Prachya Prakashana, Varanasi, 1985; 404-10.
- [17] Sharma P. V., Charaka Samhita, English translation, 4th edition, Sharira Sthana, Chapter no 4, Verse no 18, Choukhamba Orientalia, Varanasi, 1998.
- [18] Sharma P. V., Charaka Samhita, English translation, 4th edition, Sharira Sthana, Chapter no 6, Verse no 23, Choukhamba Orientalia, Varanasi, 1998; 146.
- [19] Sharma P. V., Charaka Samhita, Sharira Sthana, English translation, 4th edition, Chapter no 8, Verse no 12, 21-22, Choukhamba Orientalia, Varanasi, 1998; 213-214.
- [20] Sharma P. V., Charaka Samhita, English translation, 4th edition, Sharira Sthana, Chapter no 8, Verse no 33, Choukhamba Orientalia, Varanasi, 1998; 939.
- [21] Sharma P. V., Charaka Samhita, Sharira Sthana, English translation, 4th edition, Chapter no 10, Verse no 2, Choukhamba Orientalia, Varanasi, 1998.
- [22] Sharma P. V., Charaka Samhita, English translation, 4th edition, Sutra Sthana Chapter no 4, Verse no 18, Choukhamba Orientalia, Varanasi. 1998.
- [23] South Africa Demographic and Health Survey, Demographic SA: health survey 2016: key indicator report, Statistics South Africa, National Department of health, Pretoria, South Africa, 2017.
- [24] Suzuki K., Ohida T., Sone T., Takemura S., Yokoyama E., Miyake T., Harano S., Nozaki N., Motojima S. and Suga M., An epidemiological study of sleep problems among the Japanese pregnant women, Nihon Kōshū u Eisei Zasshi, 2003; 50: 526–539.
- [25] Sharma P. V., Charaka Samhita, English translation, Suthra Sthana, Chapter no 45-46, Choukhamba Orientalia, Varanasi, 1998; 202-215.
- [26] Tiwari P. V., Kashyap Samhita, English translation, Sharir Sthana, Chapter no 8, Verse no 181, 1st edition, Choukhamba Visvabharati, Varanasi, 2002.
- [27] Tiwari P. V., Ayurvediya Prasuti Tantra and Stree Roga, 1st Part, Chapter 5, 2nd Edition, Choukhamba Orientalia, Varanasi, 1999; (Reprint) 2001; 226-233.
- [28] Unicef.org, New York: United Nation Children Emergency Fund, Inc.; c2011 preventing maternal death. From <http://www.unicef.org/>;2013.
- [29] WHO, New guidelines on antenatal care for a positive pregnancy experience, Sexual and Reproductive Health, 2016; <https://www.who.int/reproductivehealth/news/antenatal-care/en/>
- [30] Wikipedia.org, New York: Wikipedia, Inc.; c. Human Breast milk –Fore milk and Hind milk. From <http://en.m.wikipedia.org/wiki/>; 2013.
- [31] Yang S. Y., Lan S. J., Yen Y. Y., Hsieh Y. P., Kung P. T. and Lan S. H., Effects of Exercise on Sleep Quality in Pregnant Women: A Systematic Review and Meta-analysis of Randomized Controlled Trials, Asian Nursing Research, 2020; 14: 1-10.
- [32] Yourhealthybody.Jillianmichaels.com, North Adams: Inc.; C. Nutritional-Value-Butter-3724. <http://yourhealthybody.Jillianmichaels.com/>; 2013.

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