ISSN: 2322 - 0902 (P)
ISSN: 2322 - 0910 (O)

International Journal of Ayurveda and Pharma Research

Review Article

A CRITICAL ANALYSIS OF *SOUMANASYAM GARBHADHARANANAM SHRESTAM*

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ABSTRACT

World Health Organization defines the health as a 'State of physical, psychological, social and spiritual wellbeing, not merely the absence of disease, the same thought of holistic approach of health conceived some centuries ago by the oriental intellectuals especially Ayurvedic classics with the beautiful definition : '*Samadosha samagnicha samadhatu malakriya, Prasannathmendriya mana: swasthaithiabhidheeyate"* which shows the in depth foresight towards physiological as well as psychological state in maintaining the positive health. The mental equilibrium is also needed for conception (*Garbhavakranti*), development of the foetus (*Garbhavridhi*).

The present paper attempts to analyze and establish the role of *Mano samyata* in *Garbhavakranti* (conception), *Garbhinicharya* (antenatal care) and *Garbhavridhi* (fetal development) through the immune – Nervous –Endocrine orchestra.

KEYWORDS: *Soumanasyam Garbhadharananam Shrestam, Garbhavridhi, Garbhavakranti.*

INTRODUCTION

To build a strong and healthy nation, physiological as well as psychological healthy citizens are necessary. This fact is first recognized by ancient Ayurvedic scholars and described the holistic concept of health as *"Samadosa samagnischa samadhatu malakriyah prassannathmendriya manah swasthya ithi abhidheeyathe"* - means health is a harmonious interplay between the body, mind, soul and the external social and natural environment. This concept is extended to the pregnant women also, indeed, mental health is considered more important than the physical well being and described '*Soumanasyam garbhadharananam sreshtam'*. In fact, *Saumanasyam* is considered as one of the most essential factors for achievement of conception.

According to modern medical science also, nutrition and mental equilibrium are the important basic needs in the maintenance of positive health of mother and fetus. There is scientific evidence that perinatal psychology of mother has profound and persistent influence on physical growth, neurological development, immune-competency etc, and also affects health of child in later life by metabolic imprinting in-utero. This present article aims to establish the above concept in the light of research carried out on this particular subject.

Psycho-normalcy – conception:

During the formation of *Garbha*, first union of *Sukra, Sonita* takes place followed by decent of *Atma*. After the union of *Atma* with *Sukra, Sonita*, the formed mass is called as *Garbha*. Then only life/ *Chetana* is initiated in the *Garbha*. The process of decent (*Sammurchana*) of *Atma* in to the *Sukra, Sonita* is facilitated by *Manas*, hence it is an important instrument and this entire process is called as *Garbhavakranthi*. Caraka considered first and foremost important factor for conception is the *Manosamyata*, as explained *in Agraoushadhi prakarana "Saumanasyam Garbhadharananam sreshtam*".

The entry of *Satva/Manas* in to the uterus cannot be seen, but can be accepted due to its effects, as rays emanating from sun or fire being emitted from *Spatikamani* (quartz), reaching wood are not actually seen, but are accepted because of their results, likewise *Satva/Manas* is playing an essential role invisibly in the descent of *Atma*.[1]

Above said concepts shows the importance of mental equilibrium during perinatal period and explaining the necessity of *Manosamyata* for conception.

The entire cycle of menstruation is governed by Hypothalamus, the hierarchy of endocrinal orchestra and this is the part of central nervous system, which responds to the psychological stress immediately and causes disturbance in the normal rhythm of pituitary –ovarian hormones. If stress is there during that particular period of menstruation, that will cause the release of stress related hormones, that in turn causes disturbance in reproductive hormonal pattern. It is also possible that, psychogenic shock, stress, anorexia nervosa and pseudocysis can cause the secondary amenorrhoea by influencing the Hypothalamus. These factors inhibit the release of GnRh and cause the low –level Estrogen and leutinizing hormone secretion, ultimately results in to secondary amenorrhoea.

Psychonormalcy-Fetal growth and development

Not only for the achievement of conception, but for the development of fetus also *Manosamyata* role is emphasized in Ayurveda. *Manas* is considered as one of the *Shatbhavas* (six factors) in the formation of *Garbha* and said that ''the *Satva* being constantly associated with *Jeeva,*

establishes link with body and because of *Manas*, fetus is live". *Atma* takes birth due to association of *Manas* only: when *manas* gets dissociated *Atma* attains salvation.

Manosamyata plays an important role in the development of embryo, and Caraka mentioned that the fetus grows steadily with the help of reproductive element, the five proto-elements namely *Prithvi, Ap, Tejo, Vayu* and *Akasa* the *Satva* (subtle mind) and *Ahararasa* (sap of the food) taken by the mother

This is proved scientifically on different studies carried out by different scholars belongs to various disciplines worldwide. The consequences of prenatal stress for development of child were examined in 125 full-term infants at 3, 6, and 12 months of age. Levels of cortisol and psychological state were evaluated in the mother five times during pregnancy. This study revealed that exposure to elevated concentrations of cortisol early in gestation was associated with a slower rate of development during first year of infancy and lower mental development scores at 12 months age. Data of this study suggests that maternal cortisol and preganancy-specific anxiety have programming influences on the development of fetus. [2]

Psycho-normalcy is also found essential for the normal neuro-motor development of fetus on a prospective study carried out on primates (rhesus monkeys) by Mary L. Schneider et al.[3] This prospective study carried out on twenty-eight rhesus monkey infants born to mothers in three groups, with the object of whether periods of vulnerability exist for neurobehavioral impairments associated with prenatal stress, using a nonhuman primate model. First group – early gestation stress involving mild psychological stress from gestational days 45-90; second group – mid-late gestation stress from days 90-145; third group – undisturbed controls. The study revealed that – 1). Infants from early gestation stress condition weighed less than infants from mothers stressed during mid-late gestation, 2). Both first and second groups scored lower than controls on measures of attention and neuromotor maturity. This study concluded that early gestation stress was associated with more pronounced and more pervasive motor impairments than mid-late gestation stress.

Many prospective studies have shown a link between antenatal maternal anxiety/stress and cognitive, behavioural and emotional problems in the child. Several gestational ages have been reported to be vulnerable to the long-term effects of antenatal anxiety/stress and different mechanisms are likely operate at different stages. A direct link between antenatal maternal mood and fetal behavior is well established by by Bea R.H. Van den Bergh et al[4] on observing ultrasound from 27 to 28 weeks of gestation onwards. They have concluded that the cortisol appears to cross the placenta and thus may affect the fetus and disturb ongoing developmental processes. They found that the development of the H-P-A axis, limbic system, and the prefrontal cortex are likely to be affected by antenatal maternal stress and anxiety. The magnitude of the long-term effects of antenatal maternal anxiety/stress on the child is found substantial.

In another prospective cohort study, Avon Longitudinal study of parents and children carried on pregnant women to test the hypothesis that antenatal depression has an adverse impact on early childhood development. Data were collected antenatally at 18 and 32 weeks of gestation and at 8 weeks and 8 months postnatally and applied a modified Denver Developmental Screening Test to measure child development and to identify cognitive and behavioural problems at 18 months. The study found an association between persistent depression during pregnancy and developmental delay with a 50% increase in the odds of developmental delay associated with persistent antenatal depression. [5]

Dauhrida **fulfillment**

Another concept is fulfillment of *Dauhrida*. *Dauhridi* is a unique concept, contributed by Ayurveda, it stands for the women, who is having two hearts and *Dauhrida* means longings of fetus expressed through the mother. It is advocated to fulfill these desires, otherwise that mother gives birth to *Kubja* (hump-backed), *Kuni* (crooked armed), *Khanja* (crooked legged), *Jada* (mentally retarded), *Vamana* (dwarf), and *Vikrutaksha* (dis-shaped eyed) baby.[6]

Caraka had also described the ill effects of psychological disturbances during pregnancy like anger, grief, calumniation or discontent, jealousy, fear, terror, cause abortion.[7] While giving the description of *Garbhini* paricarya i.e. do's and don'ts of antenatal period. First importance has given to *Prasanna cittata*, the tranquility of mind, shows the advanced scientific outlook of the great Ayurvedic scholars.

The hypothesis of a causal relationship between stress and pregnancy loss has also been postulated by the great father of medicine, Hippocrates, he has also advised that, pregnant women to beware of unnecessary psychic stress.

With the data of experimental studies it is known that, stress have a negative effect on pregnancy especially in the first trimester. The relation between stress and pregnancy is reciprocally adversarial. Simon et al. reported that 20 out of 32 women with one or more abortions appeared to have psychiatric diagnosis after one or more years.[8] Grimm et al. used several psychological tests on 61 recent aborters and 35 controles. Ten percent showed significant psychopathology in the aborters compared to controlled group. [9] Polishuk et al. achieved a 90% success rate in treating 20 patients who had three or more abortions, with cyproheptidine –HCL, an anti-serotonin drug. All of these women had 'emotionally disturbed personalities' with an increased excretion of 5 hydroxy-indole-acetic acid and serotonin. [10]

Barnea et al. have highlighted the role of stress factors in early pregnancy loss. They report their findings of the role of stress factors in controlling placental, hormonal secretion in human's in vitro using static culture techniques of placental hormonal secretion as reflected by hcG, progesterone and estradiol (E2) secretion. [11] (Ref. Tab.1)

A number of these stress related hormones have been shown to be produced in-situ (Ref. Tab. II). This indicates that these stress related hormones could have also a paracrine /autocrine role, in addition to their endocrine role. These stress factors from the mother may

affect uterine circulation and decreases blood flow reaching the decidua. Consequently stress factors may affect the implantation site, impair the metabolism of the decidua through direct humoral factors and finally either directly or indirectly modify placental function.

Table 1: Known effects of stress related hormones on placental function –in vitro

	HCG	progesterone	Estradiol
Prolactin	Decreased	Increased	Decreased
Insulin	Decreased	Increased	Increased
Growth hormone	?	Increased	Increased
ACTH	?	Increased	Increased
Opiates	Decreased	Increased	Increased
Oxytocin	Increased	Decreased	Increased
Arginine vasopressin	Increased	Remains same	Increased
Catacholamines	Increased	Increased	Increased
Corticoids	Increased	?	?
Androgens	Remains same	?	increased

Table 2: Sources of stress related hormones that have been shown to affect placental function in-vitro

	Maternal	Fetal	Placental
Prolactin	+	+	+
Insulin	+	+	-
Growth hormone	+	+	+
ACTH	+	+	+
Opiates	+	+	+
Oxytocin	+	+	_
Arginine vasopression	+	+	_
Catecholamines	+	+	+
Corticoids	+	+	+
Androgens	+	+	+

CONCLUSION

- To conclude, Ayurveda has considerations towards the physiological as well as psychological care of mother during antenatal period. The need of *Manosamyata* is emphasized for conception (*Garbhavakranthi*) as well as fetal development (*Garbha vriddhi*).
- These concepts of Ayurveda hypothesize the causal relationship between *Manosamyata* and pregnancy has been postulated from ancient times found valid with recent data.
- Early gestation stress and anxiety of mother found to cause motor impairments, cognitive, behavioral, emotional problems in child.
- Psychic stress during pregnancy causes the decrease of placental blood flow and its consequences like early pregnancy loss and intrauterine growth retardation.
- Psychic stress during pregnancy causes release of various stress related hormones and that effects the secretion of HCG and progesterone and estradiol. Stress factors may affect implantation also, due to decrease in the blood flow reaching to the decidua.
- Ultimately Ayurvedic concepts of holistic approach prove the need of harmony of psycho with soma, to lead happy life and to produce healthy offspring's.

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Cite this article as:
Bharathi K, Pushpalatha, B Sushilasharma, A Critical Analysis of Soumanasyam Garbhadharananam Shrestam. International Journal of Ayurveda and Pharma Research. 2016;4(5):1-3.

Source of support: Nil, Conflict of interest: None Declared

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