Review Article

Matrija Bhava: Scientific Explanation and its Research Potential

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Abstract

Though every human initiates life as single-celled; still it possesses the traits of two - mother and father. Ayurveda stands firm on principles and states that every “product of conception” is composed of Shadgarbhakara bhava that lay both anatomical and psychological genesis. Ayurveda enthralled that the Matrija Bhava not only provides shelter and nutrition to the offspring but also forms soft organs of the fetus. The intrauterine environment is a delicate phase for both mother and offspring. Actions of and around pregnant females can affect the offspring positively or negatively. These actions may be dietary, recreational, emotional, etc. This is well versed without many advanced technologies, the ancient scientists elaborated various methods to beget the healthy progeny. This lays emphasis on the importance of Pre-Natal, Ante-Natal, and Post-Natal Care for combating the teratogenetic effect and hence producing the best and fittest possible generation forward.

Keywords: Shadgarbhakara bhava, Ayurveda, Intrauterine environment, Epigenetics, Ayurveda

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Introduction

The systematic illustration of Garbha Sharir in Samhitas, is evidence of ancient science advancement. The embryogenesis described by Ayurvedacharya caters us to the knowledge that four factors i.e. ritu, kshetra, ambu and bija are the essential raw ingredients for the formation of Garbha but afterward the organogenesis and the psychosomatic development occurs with the contribution of Shadgarbhakara Bhava. The Shadgarbhakara Bhava are mentioned by Acharya Charaka¹, Acharya Sushruta² and Acharya Kashyap³ as- Matrija, Pitrija, Rasaja, Satmayaja, Atmaja and Satvaja. Each factor when combined results not only in organogenesis but also in the psychological built of the progeny. The very first glance at the somatic factors expressed by Matrija (mother) and Pitrija (father) leads to the development of soft organs and hard structures respectively. The rest forms the psyche. A mother not only provides shelter and nutrition to the offspring but also Matrija Bhava i.e., maternal factors to form soft organs of the fetus. In Ayurveda, each bhava is assigned with a particular organogenesis/ functional/ psychological phenomenon to be developed in the Garbha. A lag on any part of any of these bhavas may lead to physical, functional, or psychological abnormality, which can be contributed by the respective bhava.⁴

During intrauterine development, the fetus is susceptible to different factors especially tormented by the maternal tissues.⁵ The intrauterine environment is dependent upon maternal nutrition status.⁶ Hence, it determines not only the risk of disease occurrence but, also the time and intensity of the disease and its pathological process. This fact is well supported by contemporary science that exposure to toxins, alcohol, etc. during the antenatal period may show teratogenic effects on the embryo. Garbhopaghatakara Bhava explained in classics are nothing but the factors that can affect the Stri and Purusha Beeja leading to Seheja roga. In the present day, toxins
to which every pregnant lady exposes unavoidably can be considered as Garbhopaghatakara Bhava.

Research Potential

Healthy Progeny

According to Ayurvedic principles, proper preparation of the parents is an essential prerequisite for a healthy progeny. Pre-conception care includes both prevention and management, emphasizing health issues that require action before conception for its maximal impact. For this, ancient text possesses abundant concepts- Ritukala Paricharya, Garbhadhana vidhi, Douhrida, Mamsanumasika garbhini paricharya, Garbha poshan etc. Proper growth and development of the fetus are dependent on all these factors and regimes. Maternal physical condition, external environment to which she is exposed, physical activities, mental status, and dietary habits may permanently affect the health of the growing child. It determines not only the risk of disease occurrence but, also the time and intensity of the disease and its pathological process.

Diseases Enumeration and Prevention

Ayurveda has thought upon the deformities occurring in Garbha during its intra-uterine life. Such as anomalous changes in respect of different body organs along with the causes precipitating the differences in sex, twins of male and female child separately and together and multiple pregnancies, etc. have been dealt with. Acharya Charaka further said that if the woman conceived when her Shonita and Garbhashaya (uterus) were not completely vitiated but simply afflicted by the circulating Doshas aggravated because of her indulgence in Dosha aggravating regimens, one or many of the organs of the Garbha (fetus) derived from the maternal source (ovum) get deformed. These vitiated Dosha may afflict the Beeja or the Beejabhaga by which the corresponding organs derived from these Beeja and Beejabhaga get deformed.

As per Acharya Vagbhata I when the Doshas vitiate the Shonita and the Garbhashaya (uterus) of the woman slightly, the Garbha (fetus) that formed will be having disorders in those Avayavya (organs) which are Matrija (maternal) in origin. This is due to the (effects of the abnormal) Doshas causing Prakopa (vitiation) of the Beeja or Beejamasha (seed or parts) of it, which produce such Avayavya (organs). Acharya Bhela has enumerated Beeja -Dosha of mother and father, absence of use of Pathya Rasa, suppression of Vega and Yoni-Dosha as causative factors for both infertility and Vikrita Garbha. The woman not using Samyoga Rasa during Ritukala delivers Vikrita child.

Acharya Sushruta has described that any disease may be produced by anyone or combined with the following seven causes like Adibala Pravritta, Jannabala Pravritta, Doshabala Pravritta, Samghatabala Pravritta, Kalabala Pravritta, Daivabala Pravritta, and Svabhavabala Pravritta. Out of these, congenital malformations are caused by Adibala Pravritta and Janmabala Pravritta factors. Shwitra, Apasrama, Madhumeha, Vatarakta and Arbuda are congenital as per traditional and modern world.

The previously enumerated Matrija, Pitrija, and Atmaja Bhava cannot be changed as they derived from the parents and Poorvajanma Sanskaras (as a result of the code of conduct) respectively. However, the remaining three Bhava, namely, Satmyaja, Rasaja, and Satvaja Bhava, when practiced judiciously can modify the intrauterine environment and psychosomatic health of the pregnant woman, thereby, generating a healthy impact on the Garbha.

Epigenetic Study

It is a familiar fact now that environmental factors can influence the genome. The genetic constitution of the developing fetus, nutritional status of the mother, placental status, uterine capacity, exposure to infections, and toxic factors affect the in-utero growth of the fetus. It has been cautioned that fetal vulnerability to negative intrauterine surroundings can appear as invariable changes of the developing fetus, conceivably related to changed tissue physiology, hormone secretion, and glucose and lipid metabolism. The molecular mechanisms...
liable for this method are in general hypothetical. Permanent epigenetic alteration is regarded as a key candidate for the environmentally provoked molecular changes responsible for fetal programming. Constraining evidence connecting epigenetic variant to the beginning of health disorders is compelling.\textsuperscript{19, 20} Eventually, the useful significance of particular epigenetic modifications needs to be established. The fetus differentiates swiftly at some stage in the early length of pregnancy. Multiple divisions that arise at some stage in this early time (referred to as crucial developmental periods) seem to make contributions to immense molecular sensibility to the effect of environmental elements. Amplitude to which pregnant female may be uncovered lie beyond our influence, i.e., surroundings pollution, location of residence, and fitness status. Despite various mechanisms, intrauterine programming arising beneath the situations of undernutrition or an immoderate supply of vitamins to the embryo results in the improvement of the individual tendency for metabolic syndrome, Type-2 diabetes, obesity, and cardiovascular diseases\textsuperscript{21}.

Different kind of prenatal stress affects different organs in varied ways. However, a decrease in cell number is often present\textsuperscript{22}. But, it is interesting to note that prenatal stress and the resulting reprogramming decrease insulin sensitivity of pancreas, liver, muscle, and fat tissue, increase cardiovascular reaction, and increase HPA responses to stress in adult life.

Epigenetic links early environmental exposures during pregnancy with programmed changes in gene expression that actually alter the growth and development of the offspring. Environmental cues trigger changes to epigenetic tags on our genome, which shape the way genes are expressed. These tags on the genome can be carried through from cell to cell as we replace damaged body tissue. When such changes occur inside the egg or sperm cells, they can pass through to the next generation.

**Discussion**

*Matrija Bhava* leads to the formation of four *dhatu* and major organs of the body. The *dhatu* forming these organs are the ones that are enumerated in *Matrija Bhava*. Hence, there is a need to promote a healthy environment to build strong *bhava* that are to be “passed on” to the progeny so that healthy genes are transmitted and the occurrence of disorders can be prevented. The present knowledge on embryology including its entire aspects, gross as well as at the electron microscopic level, deserves a great sense of appraisal and it is a result of deep devotions of the scientists, in the field. The treasure of knowledge of embryology, present in the ancient literature, though retaining behind the roots of its all the branches, could not have the attraction of the deserved workers and was left neglected so far. It is high time when the hidden truths in these classics may get explored and proved with the advance and highly sophisticated technology of the present era.

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