

GARBHA POSHANA-AN AYURVEDIC APPROACH TO THE FOETAL NOURISHMENT

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ABSTRACT

Nutrition during pregnancy has a profound effect on the development of foetus. This is rather a critical time for healthy foetal development as foetus relies heavily on maternal nutrient stores for optimal growth and health outcome later in life. The improper foetal nutrition may end in abortion, IUGR or foetal abnormalities. The similar concepts explored in Ayurvedic classics in the form of *Garbha poshana* (foetal nourishment) aided by *Apara* (placenta) and *Nabhi nadi* (umbilical cord).

Keywords: Foetal nourishment, Placenta, Umbilical cord, *Apara*, *Nabhi nadi*

INTRODUCTION

Development of a baby follows a predictable path, from conception to birth. After the union of sperm and ovum, cells divide and differentiate, the developing baby begins as a zygote, forms in to a blastocyst, becomes an embryo and then transforms in to a foetus. From the very beginning, the developing cells need oxygen and nutrients which are received from the mother through the endometrium, placenta and the umbilical cord. Ayurvedic classics also explores about the role of *Apara* (Placenta) and *Nabhi naadi* (Umbilical cord) in

foetal nourishment. Here is an attempt made to understand the concepts of *Garbha Poshana* (foetal nourishment) in comparison with modern concepts of foetal nourishment and related applied aspects.

LITERARY REVIEW

The union of *Shukra* (sperm) and *Artava* (ovum) along with the *Atma* (Soul) inside the *Kukshi* (Uterus) forms the *Garbha* (Foetus)¹. It is well said that when a pregnant woman uses appropriate diet and proper mode of life along

with normalcy of *Shad garbhakara Bhavas* (the six factors for conception) influenced by the time factor the foetus grow normally in the mother's womb². So the nourishment from the mother's womb plays a prime role for the normal growth of the foetus. The Rasa formed after the digestion of food consumed by the mother will be utilised for the nourishment of the mother's body, nourishment of the foetus and formation of the milk³.

In Ayurvedic classics nourishment of the foetus is explained in two parts. Before the foetal body parts are not perceptible it gets nourishment by absorbing moisture and by osmosis. After the body parts become observable, a part of the nutrition is received by permeation through the pores of skin situated in the hair roots of the body and the umbilical cord. The foetal umbilicus is attached to the umbilical cord, umbilical cord to the placenta. The placenta is attached to the mother's heart. The mother's heart plunges the placenta with blood through exuding blood vessels. This nutrition provides strength and complexion as it contains all essential factors⁴.

Another reference explains, from the time of conception up to the period until the body parts of the foetus are not fully conspicuous, it gets nourishment by *Upasneha* (diffusion) through the vessels running obliquely in to all the body parts. This is well understood with the help of a simile that as a tree situated on the bank of a full pond derives its nourishment, similarly foetus also receives nourishment. When the body parts become perceptible the foetal umbilical cord is attached to the maternal *Rasavaha nadi* (Artery) which carries the essence of mothers diet⁵. Acharya

Vagbhata adds that from umbilical cord the *Rasa* (nutrient) reaches *Pakwashaya* (digestive system) of the foetus, there with its own *Kayagni* (digestive fire) gets metabolised and provides nourishment to it.

According to modern science after fertilization, till the implantation blastocyst receives nutrition partly from the substance stored within the ovum and partly by diffusion from the uterine secretion. When the blastocyst moves towards the uterine cavity, large quantity of secretions formed by the secretory cells of the fallopian tubes provide nutrition. Once it reaches uterus it gets implanted. After implantation deciduas or endometrium of the pregnant uterus provides nutrition. The gland show marked dilatation and increased tortuosity and increased secretory activity. The endometrial stromal cells contain extra quantities of glycogen, protein, lipids and minerals necessary for the conceptus. From 8th week onwards gradually it is taken up by the placenta⁶. Placenta is the site of exchange of nutrients and wastes between mother and foetus. There will be exchange of oxygen and carbon dioxide across the foetal membrane. The foetus obtains its nutrients from the maternal blood such as glucose, lipids, amino acids, water and electrolyte⁷.

Umbilical cord also plays an important role in foetal nourishment by establishing a connection between the placenta and the foetus. Through which the foetal blood flows to and from the placenta. It develops from the connecting stalk. It consists of 2 arteries carry deoxygenated foetal blood to the placenta, one umbilical vein which contains oxygenated

blood and nutrients from mother's intervillous spaces in to the foetus⁸.

DISCUSSION

Since the foetus is completely dependent on the mother for nourishment, if there is any improper food intake by the mother, it may directly affect the foetus. This may end up in *Garbhasrava* (Abortion), *Garbha shosha*, *Upavishtaka*, *Nagodara* (Intra uterine growth restriction), *Mrutagarbha* (Intra uterine foetal death)⁹ and *Vikruta garbha*¹⁰ (Congenital malformation).

Modern science also explains certain conditions which are caused due to improper foetal nourishment.

1. IUGR (Intra uterine growth restriction):-The maternal cause includes deficiency of critical substrate such as glucose, amino acids and oxygen to the mother.

Placental causes include case of poor uterine blood flow to the placental site for long time. This can be due to Placental pathologies including Placenta previa, Abruption, Circumvallate, Infarction and Mosaicism¹¹.

2. Intra uterine foetal death:-Deficiency of Iron, Folic acid, Vitamin B₁₂ and protein will lead to hypoxemia which can lead to foetal death¹².

3. Congenital malformation:-Maternal intake of alcohol, drugs and malnutrition will lead to congenital malformation¹³.

To fulfil the optimal nutrition to the foetus and the mother, Ayurvedic classics explores about *Masanumasika garbhini paricharya* i.e. month wise dietic regimen for the pregnant mother. From the first day of conception itself the pregnant has to have palatable food with pre-

dominance of liquid, sweet, unctuous food processed with appetising materials. By proper following these regimens, woman delivers the child possessing good health, strength, all the good qualities and long life¹⁴.

CONCLUSION

Nourishment plays an important role in healthy growth of the foetus. The concept of *Garbha poshana* (foetal nourishment) explained in Ayurvedic classics holds good in parlance with modern science. The deficiency conditions, placental and umbilical cord abnormalities which can lead to the improper nourishment of the foetus should be diagnosed in the early pregnancy and should be treated accordingly. *Masanumasika garbhini paricharya* (month wise dietic regimen) explained in Ayurvedic literature should be followed by the pregnant woman to get a healthy offspring.

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