Effect of Mental Status of Mother on Foetal Health – An Ayurvedic Point of View

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Authors’ contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

The science of Ayurveda strongly states that the mental status of the mother has a strong influence on foetal health. This does not start from the time of conception. Instead from the time of development of the ovum itself all the mental conditions of the mother start affecting the foetal health. In this busy urban life mental health of the mother is given less importance. Most of the women, including pregnant ladies are under stress in present scenario. Hence awareness regarding the impact of the mental status of the mother on the fetus may help the society to prevent the ill effects of maternal stress on the fetus.

Keywords: mental status; foetal health; garbha; Garbhini; napumsaka.

1. INTRODUCTION

Pregnancy is an important phase in every womans life. Healthy and nutritious diet during pregnancy is an important factor for proper development, weight gaining of the foetus and to avoid unpleasant symptoms like fatigue, morning sickness, anemia etc of mother. Healthy lifestyle and mental sanity of the mother also bear a great impact on the growth and development of the foetus.
Ayurveda is the science of life emphasis on prevention of diseases through a balanced food and life style. It also offers different treatment modalities for diseased conditions. For the preventive aspect different modality are explained like ritucharya (seasonal regimens), dinacharya (daily routine), ritumaticharya (regimens during menstrual period), garbinicharya (regimems during pregnancy), sootikacharya (regimens during postnatal period) etc, which a person is supposed to follow for keeping himself healthy. In Ayurveda while explaining the different healthcare measures equal importance is given to the body, mind and spirit. Hence, the health care of a mother for getting a healthy progeny need to start not from the time of conception, but even before her puberty. For this purpose, a women should take special care of her diet, lifestyle and mental health to attain a healthy progeny.

With the advancement of medical science special importance is given for health care during pregnancy but the mental status of the mother was given less importance. Even though recent researches in this field suggest that there is a strong impact of antenatal mental status of mother on foetal health. In Ayurveda, specific diets and regimens are advised for pregnant ladies and some activities are restricted during this period. Ayurveda gives equal importance to the psychological condition of the mother, as it also influences the foetal health. Different measures are explained in Ayurveda to maintain the mental health of the mother before conception and during pregnancy to obtain the offspring with all the good qualities.

According to Ayurveda there is a strong association between the mental status of the mother and physical and mental health of the developing foetus. Ayurveda strongly opines that the psychological condition of a women before conception and during gustation can influence the future embryo.

2. BEFORE CONCEPTION

During olden days, the preparation for getting a good offspring by the parents start before conception itself. Specific regimens are told for the lady during her menstrual period. Sushruta suggests to avoid sleep during day time, excess talking, hearing too much sound in excess volume etc by a woman during her menstrual period [1]. It is told that a wholesome psychological condition of the women during this period is also important for attaining a progeny with all the good characteristics [2]. Even though all the parts of the body are developed naturally their quality is determined by the wholesomeness in the activities of the mother [3]. Acharya Charaka also states that the psychological features of the individual are determined by the psychological status of the parents [4].

Ayurveda uniquely suggests that mental and physical health care of a women before conception is also important to attain a healthy offspring. At the time of birth all developing ova are in prophase of first meiotic division. Further development of ovum takes place from puberty. Hence from puberty itself general lifestyle, mental health, way of behavior etc of the mother can influence the future embryo. Researches show that emotional stress during puberty in a female increases the chances for having an offspring with autism [5]. Hence the health care of the mother should be started before conception itself. The vitiated dosha can affect the reproductive system and oogenesis which in turn will affect the foetus when she conceive [6]. Following proper regimens and healthy lifestyle during this period will help in the proper development of the gametes and prevent any clinical condition related to ovulation

3. AT THE TIME OF INTERCOURSE

Ayurvedic Samhitas give a special significance to the mental status of the mother at the time of intercourse. At this time should be with the desire of an offspring with all the good qualities. Charaka has the opinion that which animal women think off at the time of conception, the offspring will be having characteristics similar to that anima [7]. The mental status of the women at the time of intercourse will also affect the potency of the offspring. If she has reduced passion during sexual intercourse, it can lead to the development of an offspring who is affected with shanda or vakreenapumsaka (types of impotence). Aversion to the man at the time of intercourse can lead to a condition called ershyabhiratinapumsaka (type of impotence) in the foetus [8].

The thoughts and acts of mother during the time of intercourse can also influence the fetus [9]. This is the time related to conception and fertilization. It may reduce the cortisol level in her body. Studies show that if the lady is in a stressful condition there is an increased chance of getting homosexual children as the fetal sex
hormone production can get affected with their raised levels of stress hormone, cortisol [10]. Elevated cortisol can alter the expression of genes involved in sexually dimorphic brain organization [11].

4. DURING PREGNANCY

According to Ayurvedic principles the physique of the offspring depends upon the *panchamahabhuta* (5 basic elements of universe) which the *garbha* (foetus) acquire from the mother, father, *Atma* and the nutrients from the mother etc. But the psychological feature of an individual is determined by the psychological status of the mother and what the pregnant lady perceives through her sense organs during the pregnancy period [4]. The effect of the mental status of the mother on the fetus is so much that, the lady acquires a fetus with similar characters what she wishes at the time of her pregnancy. The woman is asked to keep a strong desire about the characteristics of offspring which she wishes [12]. She is asked to wish an offspring with strong and powerful body, good immunity, intellect, cleanliness and healthy mind [13] so that she will get an offspring with all those qualities. When a woman wishes for a son with specific characteristics, she is advised to think about the people who live in a place with these characteristics and she should also follow the food and regimens of the people living in such a place [14]. Ayurvedic scholars further explains that, during pregnancy the physical, biochemical, hormonal, psychological changes will be expressed in terms of pregnancy longings [6]. From the 4th month onwards the desires of the foetus will be exhibited through the mother. As the mother possesses two hearts one of herself and one belonging to the foetus, she is called *douhrudini* (possessing 2 hearts) and the desire exhibited by her is called *douhruda* (pica of pregnancy). If the *douhruda* is not fulfilled the offspring will be having deformities in those *indriyas* (sense organs), desires of which were neglected. It can lead to deformities like hunch back, lame, dumb, deaf, [15] blindness, dwarf, deformities of the eye etc. [16]. Specific *douhruda* experienced by the pregnant lady and their effects on the fetus are also explained by Sushruta [17]. So to fulfill the desires of the fetus one should fulfill the desires experienced by the mother [18]. Even though she desires unwholesome things, it should be satisfied by mixing with wholesome things to prevent any complications. Because withholding the desires of the mother will lead to *vataprakopa* (increase of humour-vata) which intern will harm the foetus [19].

Pregnant lady is asked to avoid anger, jealous, fear etc and she should not be depressed. Otherwise, it can lead to abortion [20]. *Garbhnini* (pregnant lady) is asked to keep away from anything which has a negative impact on the sense organs and also from materials that create *mada* (delirium) [21]. Especially over fear and depression, should be avoided by the pregnant lady during pregnancy [22]. Above all, people were asked to behave pleasantly with a woman who is pregnant. She is also should interfere with good people and people whom she likes. Her husband is specifically asked to behave in a way how she likes [13].

Different studies have identified that different thoughts and feelings experienced by the pregnant women will be communicated to the foetus by the neuro hormones [23]. The desires of the foetus and mother are interconnected. Excess depression, anger etc of the mother may affects the foetus. By keeping a strong desire, the woman can acquire an offspring with the same characters that she wishes. It can be due to the influence of maternal hormones on the developing foetus. In urban social environment most of the women are leading a stressful life due to, family stress, occupational stress, discrimination etc. The maternal stress can also affect the foetal growth in terms of altered blood flow through the uterine artery of the mother [24]. Stress can be one of the major reasons for genetic disorders. Maternal stress can elevate the levels of glucocorticoids and an excess level of glucocorticoids can cross the placental barrier, reach the fetal brain and alter the mRNA expression in foetus. A study conducted in 21 nulliparous rats, wherein frontal cortex of new born rats were analyzed for mRNA, showed that mild gestational stress altered mRNAs of the frontal cortex in a region involved in maternal care, decision-making, stress responses, and epigenetic regulators of gene expression in the newborn offspring. This could be one of the possible mechanisms by which gestational experiences modulates the gene expression of the offspring, as mRNAs is an important biomarker for disease states in humans [11].

Many studies have identified that whatever chemicals released in the body of a pregnant women can get transported into placenta and there by the foetus and it can affect the baby inside the womb [25]. In another one study 147
physically healthy mothers are compared with another group of ICD-10 depressed mothers. It is found that infants of ICD-10 depressed mothers had low birth weight (mean=3022g) compared to non-depressed mothers (mean≤2500g), which was statistically significant (RR=1.9) [26]. Further a study from Pakistan found that the negative effects of antenatal depression of mother, continued in foetus for one year even after birth [26]. Studies from south Africa indicates that maternal depression in postnatal period can also adversely affect the infant growth and failure to thrive [27-28]. Recent studies also identified that elevated foetal activity, LBW and prematurity as common consequences of prenatal maternal depression [29]. All these researches suggest that the antenatal and postnatal psychological distress in mother can adversely affect the multiple aspects of child development.

The negative emotions of the mother can lead to genetic abnormalities, problems related to development of ovum, ovulation and excess levels of cortisol. These factors in turn can affect the foetal health. The role and transmission of inherited factors is explained in terms of beeja, beejabhaga and beejabhagavayava in Ayurveda. The ritumaticharya, garbhinicharya etc. protective measures explained in Ayurveda prevent the dosha vitiation and regulate the gene sequencing, gene expression and hormonal balance [6]. So by maintaining a wholesome mind and healthy regimens, the woman can acquire an offspring with all the good qualities.

5. CONCLUSION

According to Ayurveda the emotional connection between mother and foetus does not begin with birth. The general life style and mental health have an influence on the foetus even before conception itself. The period before conception is the period of development of ovum and the mental health of the mother might be affecting the development of the ovum at genetic level. As the ovum acquires its features from the mother, the mental and physical health care of the mother should be started earlier.

The desires of the foetus and mother during gestation period are interconnected. Depression, anger, stress etc of the mother can affect the physical and mental health of the developing embryo. During pregnancy period the mental health of mother and foetus are related through hormones. Ayurveda suggests that, by maintaining mental sanity, adopting wholesome food and regimen and keeping a strong desire for a healthy offspring, the woman can acquire an offspring with superior characteristics. It will help in healthy development of ovum and avoid the impact of maternal stress hormones on foetus. The interrelationship between the pre-conceptional maternal mental status and foetal health still remain understudied and further researches need to be conducted in this context.

CONSENT

It is not applicable.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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