

ROLE OF TRIDOSHA IN GARBHA IN RELATION TO SOMATOTYPES

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ABSTRACT

The most important fundamental *Siddhanta* of *Ayurveda* is *Tridosha* that represent the state of health in a balanced stage. Somatotype is a taxonomy developed in the 1940s by American psychologist William Herbert Sheldon to categorize the human physique according to the relative contribution of three fundamental elements and these three fundamental elements are the three germ layers: - ectoderm, mesoderm and endoderm which usually develops into ectomorph, mesomorph and endomorph respectively that ultimately represent the physical and psychological traits of *vata*, *pitta* and *kapha* respectively. The *garbha* is formed by the union of *shukra* and *shonita* in *garbhashaya*. The *shonita* is *panchbhotika* because everything in this universe is *panchbhotika* but *shukra* is devoid of one *mahabhuta* i.e., *aakash*. Both this *shukra* and *artava* after association give rise to *kalal* or morula which is *panchbhotika*. The *panchmahabhutas* are responsible for the formation of *tridosha* and these *tridosha* are responsible for the formation of *prakriti* that represent the physique of an individual.

Keywords: *Tridosha*, *Garbha*, *Prakriti*, Somatotypes.

INTRODUCTION

Tridosha is one of the basic fundamental principles of *Ayurveda* as it plays important role in the information of *Garbha*. The balanced state of *tridosha*, *dhatu*,

Agni, *mala* represents the balanced health of an individual.¹ It has been clearly mentioned in *Ayurvedic* texts, “*Dosha-dhatu-mala mulam hi shariram*”.² Out

of all these, *doshas* are predominantly contributing to the formation of *garbha-prakriti*. At the time of fertilization, the *dosha* which is predominantly present in *shukra* and *shonita* directly leads to the formation of *prakriti* that can't be changed throughout life.³ A human's life comprises *sharira*, *indriya*, *sattva* and *atma*. The *Sharira* is made up *panchmahabhuta* and it is a congregation of *vata*, *pitta* and *kapha*. *Ayurveda* further believes that the basic building blocks of a living human being are the sub-atomic particles, atoms and molecules which have been labelled by *Charaka* as *Deha-parmanu*⁴ or materials that constitute the smallest unit of human beings i.e., cells. This cell is also *panchbhotika* and *tridoshika* because the concept of human mass or *pinda* is that whatever is in-universe, it is present in *pinda* and everything in the *pinda* is available in the universe, which is called as *Loka-Purusha samya siddhanta*.⁵ Also, this cell is made up of germ layers, i.e., ectoderm, mesoderm and endoderm. *Tridosha* is also present in each and every cell of the body that represents the somatotype of an individual whether this is ectomorphic, mesomorphic or endomorphic and these somatotypes are corresponding to the *prakriti* mentioned in *Ayurveda*. The *prakriti* are also responsible for the formation of the physical, mental and social behaviour of a person and on the other hand, the somatotypes also represent the same. Therefore, there is a unique relation between *prakriti* and somatotypes that inherent or propagated from the very initial stage of *garbha*.

Review of literature

Tridosha in Garbha

The human body is made up of *Panchmahabhuta*⁶ i.e., *Akash*, *Vayu*, *Agni*, *Jala* and *Prithivi*. These five elements work at both gross and subtle levels and it is their gross form and forces are *Vata*, *Pitta* and *Kapha*. The body is a congregation of these forces that help in the development of the human body and has also been compared with the role of the moon, sun and air by *Sushruta*.⁷

The three important processes in *Garbha* are also done by *tridosha*.

1. Cleavage- *Vibhajana* by *Vata*
2. Gastrulation- *Pachana* by *Pitta*

3. Organogenesis- *Kledana* by *Kapha*

The *panchbhotika* composition of *tridosha*

1. *Vata*= *Vayu* + *Akash*
2. *Pitta*= *Teja*
3. *Kapha*= *Prithivi* + *Apa*

The processes carried out by *panchmahabhuta*:

1. *Vayu Mahabhuta*- it divides the *Garbha* into fragments.
2. *Teja Mahabhuta*- it helps in *Pachna kriya* and through this help in maturity of *Garbha*.
3. *Apa Mahabhuta*- it helps in the nourishment of *Garbha*.
4. *Prithvi Mahabhuta*- it helps in compactness of cells, means maintain *Samhanana*.
5. *Akasha Mahabhuta*- it maintains the space in the foetus.

Role of *Kapha* in *Garbha*

The trophoblastic cells provide nutrition to embryo.⁸ They help in the development of *Ulva*, *Jarayu*, *Apara* and *nabhi nadi*. The process of nutrition of *garbha* in the very early stage is done by the absorption of tubal and uterine secretions. This is done by *Kapha dosha*.

Role of *Pitta* in *Garbha*

The segmentation nucleus divides into two types of functional cells i.e., trophoblastic and embryoblastic cells.⁹ The trophoblastic cells provide nutrition to the embryo and also form the nutritive organs for the embryo-like placenta and umbilical cord. The embryoblastic cells differentiate to form cell mass that ultimately forms gastrula. This function is performed by *agni mahabhuta* which represent the *pitta dosha*.

Role of *Vayu* in *Garbha*

According to *Bhel*, *vayu* carries *shukra* in *garbhasaya* and after association with *artava*, it forms *garbha*. He also told that as a seed of paddy or barley sown in the well-prepared field will nicely grow as paddy or barley, similarly healthy *shukra* deposited in a healthy vagina and reaches the uterus by running through different *avartas* of *yonis*. The *shukra* and *shonita* remain in the uterus in the form of liquid or milk for some time and after association give rise to all body parts like some fruit. Also, *Vata* is responsible for the mitotic division of *dehaprmanu* throughout the embryonic life and thereafter also.

The human body is multicellular which have so much variation in morphological characteristics as well as functional characteristics from one individual to another individual. But the human body also possesses some common characteristics. This all is due to *vata*, *pitta* and *kapha*. The variation occurs due to the predominance of *dosha* that is present at the time of fertilization.¹⁰ The role of *vata*, *pitta* and *kapha* is in multiplicative growth, differential growth and providing nutrition respectively.

Role of Tridosha in Garbha-Poshana¹¹

The process of nutrition of *garbha* in a very early stage is done by the absorption of tubal and uterine secretions. This is done by *Kapha dosha*.

Agni is situated in the umbilical region of the foetus and with the help of *vata*, it travels throughout the human body. The *vata* with the help of *agni* opens all the *srotas* and help in the growth and development of a foetus. The maternal blood comes towards the embryo through the umbilicus. *Vata* is responsible for the flowing of blood and blood itself has the *ushma* property which represents the *pitta dosha*. Thus, *vata* and *pitta* are also provided nutrition to the foetus through the umbilical cord.

The three embryonic germ layers (fundamental elements in embryonic life)¹²

The embryonic stem cells are differentiated into three different germ layers: - ectoderm, mesoderm and endoderm. All the tissues of the body are derived from one or more of these layers. The 16-cell stage is called morula and it has an inner cell mass covered by an outer layer of cells, the trophoblast. The cells of the trophoblast help to provide nutrition to the embryo. The fluid partially separates the inner cell mass from the trophoblast, the morula now becomes a blastocyst. The cells of the inner cell mass multiply and are rearranged to form an embryonic disc having two layers: - the epiblast and the hypoblast. The epiblasts differentiate to form, the ectoderm (outer layer), the mesoderm (middle layer) and the endoderm (inner layer) are formed when the hypoblasts become flattened and line the yolk sac. And these germ layers represent *tridosha*.

The basic requirement for healthy Garbha

The early development of *garbha* is greatly influenced by the quality of *shukra* and *artava*. The ideal *shukra* have the properties like *sphatikaabhama*, *drava*, *snigdha*, *madhura*, *madhugandhi* and *tailasho-dranibhma*¹³. And the ideal *artava* have blood like a rabbit or like a liquid shell. This blood does not cause any permanent stain on the cloth. According to *Acharya Charaka*, the *artava* has blood like *phal* or like red rose or like *bir bhuti*.¹⁴

Prakriti

The word *Prakriti* is derived from *Pra* + *Kriti* (to create or to act). *Pra* means the "before", and *kriti* means "creation". Therefore, *prakriti* means "which exists before creation".

Each & every individual is unique. Their size and shape are different, even physiological and psychological characters are also different because individuals have predominant *pancha-bhutas*, *doshas* (*vata*, *pitta* & *kapha*), *tri-gunas* (*satva*, *raja* & *tama*) at the time of birth which decides their constitution. Once this constitution is set, it is permanent for that individual. These individualistic features are the manifestation of *prakriti*. In *Ayurveda*, *prakriti* represents the traits appearing at the time of union of *Shukra* (sperm) and *Shonita* (ovum). It is unchangeable *doshika* predominance from birth to death. It is the presentation or expression of oneself in terms of morphological, physiological, psychological or social aspects.

Characteristics features of different Prakriti¹⁵

The *Kapha Prakriti* individuals are unctuous, smooth, soft, sweet, firm, dense, slow, stable, heavy, cold, viscous and clear. The *Pitta Prakriti* individuals are not able to tolerate hot things, have good physical strength, strong digestive power, the putrid smell of sweating, grey hair or baldness, etc. The *vata prakriti* individuals are dwarf, dry, lean, energetic, prominent bones, etc.

Prakriti determination

According to *Acharya Charka*, *Prakriti* or the physical constitution of the foetus is determined by the following factors: -¹⁶

1. Sperm and ovum.
2. Season and condition of the uterus.
3. Food and regimens of the mother; and

4. Nature of the *mahabhutas* comprising the foetus. The foetus gets afflicted with one or more of the *doshas* which are dominantly associated with the above-mentioned factors. The physical constitution of an individual is determined on the basis of these dominant *doshas* in the above-mentioned factors when they initially unite in the form of the foetus. Therefore, the physical constitution of some is dominated by *kapha* (*slesmala*), of some others by *pitta* (*pittla*), of some others by *vata* (*vatala*) and some others by a combination of two *doshas* (*samsrishta*). In some other cases, however, the equilibrium of *doshas* (*sama prakriti*) is well maintained.

Doshas dominating the sperm and ovum during the time of conception and also those inhabiting the uterus at that time determine the *prakriti* (physical constitution) of the individual. Food and regimens of the mother which aggravate *doshas* at that time also determine the physical constitution. The *dosha* which ultimately emerges at dominant factors determines the *prakriti* or the physical constitution. Season etc., also indirectly serve as important factors for the determination of *prakriti* since they also aggravate *doshas* in the sperms and ovum. So according to some other texts on medicine *prakriti* of an individual is determined based on the condition of the sperms and ovum.

Somatotypes

Sheldon's "somatotypes" and their associated physical and psychological traits were characterized as follows:^{17,18}

- Ectomorphic: characterized as linear, thin, usually tall, fragile, lightly muscled, flat-chested and delicate; described as cerebrotonic (intellectual), inclined to desire isolation, solitude and concealment; and being self-aware, tense, anxious, restrained in posture and movement, introverted and secretive.
- Mesomorphic: characterized as hard, rugged, triangular, athletically built with well-developed muscles, thick skin and good posture; described as somatotonic, inclined towards physical adventure and risk-taking; and being vigorous, courageous, assertive, direct and dominant.

- Endomorphic: characterized as round, usually short and soft with under-developed muscles and having difficulty losing weight; described as viscerotonic (sociable), enjoying food, people and affection; having slow reactions, and being disposed to complacency.

DISCUSSION

Each & every individual is unique. Their size and shape are different, even physiological and psychological characters are also different because individuals have predominant *Pancha-bhutas*, *Doshas* (*vata*, *pitta* & *kapha*), *Tri-gun*as (*satva*, *raja* & *tama*) at the time of birth which decides their constitution. Once this constitution is set, it is permanent for that individual. These individualistic features are the manifestation of *Prakriti*. In *Ayurveda*, *Prakriti* represents the traits appearing at the time of union of *Shukra* (sperm) and *Shonita* (ovum). It is unchangeable *Doshika* predominance from birth to death.

According to the modern concept, initially, there are three germ layers: ectoderm, mesoderm and endoderm which represent ectomorphic, mesomorphic and endomorphic somatotypes respectively because of their similar physical and psychological traits. Some individuals present mixed traits of any of two somatotypes or all three somatotypes which represent the concept of *sapta dehika prakriti*.

CONCLUSION

The word "Somatotypes" represent "*Prakriti*" which is made at the time of birth by the fusion of *shukra* and *shonita* in *garbha*. The body constitution whether an individual is ectomorphic (*vata-prakriti*), mesomorphic (*pitta-prakriti*), endomorphic (*kapha-prakriti*), ectoendomorphic (*vata-kapha prakriti*), ectomesomorphic (*vata-pitta prakriti*), mesoendomorphic (*pitta-kapha prakriti*) and ectoendomesomorphic (*vata-pitta-kapha prakriti*), decides at the very early stage of embryo which is made up of ectoderm, mesoderm and endoderm germ layers. And these germ layers represent the basic *tridosha*, *vata*, *pitta* and *kapha* respectively.

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