



Review Article

A review on role of *prakriti* in aging

Mahesh Chand Purvya¹, M. S. Meena²

¹Lecturer, Department of Sharir Kriya, Punjab Ayurveda College and Hospital, Morjand Khari, Sriganganagar Rajasthan, ²Head, Department of Sharir Kriya, National Institute of Ayurveda, Jaipur, Rajasthan, India

Abstract

Ayurveda is an eternal science with absolute principles, and *prakriti* is one of these. It plays an important role in the selection and establishment of every factor for which a person is going to interact from conception till death, e.g. lifestyle, diet planning, etc. *Prakriti* stands for nature of the body in terms of *dosha* and is decided at the time of conception according to the predominance of *dosha*. It does not change during the whole life and is responsible for the physical and mental characteristics of an individual. This *prakriti* is of seven types according to *tridosha*. The individuals of specific *prakriti* exhibit biological variations in terms of structure, function, behavior, individual response to internal and external environmental stimuli, susceptibility to different diseases, etc. Aging is a process of decaying and included in natural diseases. In our body, *Pitta* or *Agni* is responsible for the various types of pathological conditions. Although aging is a natural pathological condition, *Pitta* plays an important role in its causation like other pathological conditions. It is clearly indicated in *Charak samhita* that persons having *Pitta* predominance personality tend to suffer early with decaying process and other changes of aging. Through this article, we have made an attempt to reevaluate the interrelationships between *prakriti* and aging.

Key words: Aging, *dosha*, *Pitta*, *prakriti*, *Jara*

Introduction

Ayurveda has a holistic approach and includes all the factors which are absolute or accessory in the determination of health. *Prakriti* is one of the most important concepts and it is decided at the time of conception. *Prakriti* indicates toward physical or *dosha* constitution. Involvement of *dosha* in *prakriti* formation may be individual or intermingled. So, *prakriti* is of seven types, i.e. *Vataj*, *Pittaj*, *Kaphaj*, three *dwandaj* and one *samadoshaj*. Among these, *samadoshaj* is an excellent and homeostatic state, while others are considered as defective constitutions and susceptible for various diseases.^[1-3] Each *prakriti* has specific physical and mental characteristics which totally depend on the involvement of *dosha*. For instance, individuals with *Kaphaj* constitution have smoothness of organs and joints, clarity of complexion, firmness, compactness and stability of the body, are slow in action and movement, have a stable gait, excellent strength, patience, peacefulness, longevity, etc. These characteristics are manifested due to particular properties of the *dosha* which is involved predominantly in the formation of

prakriti. *Prakriti* affects each factor by which a person is going to interact and decides the status of health. It is clearly indicated in texts that lifestyle and various activities should be planned opposite to *prakriti* for the maintenance of health. In this way, *prakriti* also affects and decides the quality and rate of aging. All the constitutions having *Pitta* predominance have a tendency to suffer untimely with aging because *Pitta* has a synergistic effect on the process of aging due to its *ushna*, *tikshna*, *amla*, *sara*, *katu gunas*. It is clearly indicated in classical texts. We can utilize this concept in the prevention and management of aging, especially in the case of *Pittaj* predominant persons, and make *vriddhavastha* pleasant and disease free.

Aims and objectives

1. To study the concept of *prakriti* in context of aging.
2. To establish the interrelationship between *prakriti* and aging.

This conceptual study will be helpful in the various progressive clinical and survey studies.

Materials and Methods

Only textual materials have been used for this study, from which various references have been collected. Main Ayurvedic texts used in this study are *Charak Samhita*, *Sushruta Samhita*, *Ashtang Sangrah*, *Ashtang Hridya* and the available

Address for correspondence: Dr. Mahesh Purvya, Lecturer, Department of Sharir Kriya, Punjab Ayurveda College and Hospital, Morjand Khari, Sriganganagar, Rajasthan, India. E-mail: maheshpurvya@gmail.com

commentaries on it. Modern texts and related websites have also been searched.

Conceptual study

Concept of prakriti

The word *prakriti* has been derived from "*Prakarshen karoti iti Prakriti*" which means manifestation of special characteristics due to predominance.^[4] In *Ayurveda*, the word *prakriti* has been used in the sense of *deha prakriti* or *doshaja prakriti*. According to *rasa-vaisheshik*, *prakriti* is a state which is formed at the time of fertilization due to eminence of *dosha*.^[4] It remains unchanged from fertilization till death. According to *Acharya Sushruta* and *Charak*, *prakriti* is determined at the time of fertilization due to the predominance or increased status of *dosha* which is normal or physiological. Although *prakriti* is determined by the *dosha* predominantly involved, some other factors are also involved in the *prakriti* formation as described by *Acharya Charak* in *viman-sthan* chapter 8. These factors are *shukra-shonita*, status of uterus at the time of fertilization, status of environmental time period, food and regimen adopted by mother during pregnancy and nature of *mahabhuta* comprising the fetus. The fetus gets afflicted with one or more of the *doshas* which are dominantly associated with the above-mentioned factors. *Prakriti* 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 fetus. Therefore, *prakriti* of some people is dominated by *Kapha*, some others by *Pitta*, some others by *Vata* and some others by the combination of two *doshas*. In some other cases, however, the equilibrium of *doshas* is well maintained.^[5,6] Although all these factors mentioned above play an important role in the determination of *prakriti*, *doshas* are involved primarily in the formation of *prakriti* of above-mentioned factors. Therefore, *doshas* are the root cause in the initiation and formation of *prakriti* of any individual. Characters which are manifested in a person of any specific *prakriti* depend upon properties of the *dosha* involved. For example, *Vata* with *laghu*, *sukshma*, *chala*, *vishada*, *ruksha*, *shita* and *khara* properties imparts its properties in developing personality. Same should be understood with regard to rest of the *doshas*. In mixed personality characters, more than one *dosha* appear specifically. Characters of various personalities are discussed below.

Vataja prakriti

Characters of *Vataja prakriti* persons are as follows.^[7-9]

Ruksha: Unctuousness, emaciation and dwarfness of the body; long-drawn, dry, low, broken, obstructed and hoarse voice; always keeping awake.

Laghu: Light and inconsistent gait, action, food and movement.

Chala: Unstable joints, eyes, eye brows, jaws, lips, tongue, head, shoulder, hands and legs.

Bahu: Talkativeness, abundance of tendons and veins.

Shighra: Quick in initiating actions, getting irritated and the onset of morbid manifestations, quick in affliction with fear, quick in likes and dislikes, quick in understanding and forgetting things.

Shita: Intolerance to cold things, often getting afflicted with cold, shivering and stiffness.

Parusha: Roughness of hair of the head, face and other parts of the body, nails, teeth, face, hands and feet.

Vishada: Cracking of the limbs and organs, production of cracking sound in joints when they move.

Based on the above-mentioned qualities, it can be seen that individuals having *Vataj* type of constitution mostly possess strength, lifespan, procreation, accessories of life and wealth in lesser quantity.

Pittaja prakriti

Characters of *Pittaja prakriti* persons are as follows.^[10-12]

Ushana: Intolerance to hot things, having hot face, tender and clear body of port-wine mark, freckles, black moles, excessive hunger and thirst, quick advent of wrinkles, graying of hairs and baldness, presence of some soft and brown hair on the face, head and other parts of the body.

Tikshna: Sharp physical strength, strong digestive power, intake of food and drink in large quantity, inability to face difficult situations and glutton habits.

Drava: Looseness and softness of joints and muscles, voiding of sweat, urine and feces in large quantity.

Visra: Putrid smell of axilla, mouth, head and body in excess.

Amla and *katu*: Insufficiency of semen, sexual desire and procreation.

By virtue of above mentioned qualities, a man having *Pittaj* type of constitution is endowed with moderate strength, moderate lifespan, moderate spiritual and materialistic knowledge, wealth and accessories of life.

Kaphaja prakriti

Characters of *Kaphaja prakriti* persons are as follows.^[13-15]

Snigdha: Unctuousness of organs.

Shlakshna: Smoothness of organs.

Mridu: Pleasing appearance, tenderness and clarity of complexion.

Madhur: Increased quantity of semen, desire for sexual intercourse and number of procreation.

Sara: Firmness, compactness and stability of the body.

Sandra: Plumpness and roundedness of all organs.

Manda: Slow in action, intake of food and movement.

Stimita: Slow in initiating actions, getting irritated and morbid manifestations.

Guru: Non-slippery and stable gait with entire sole of the feet pressing against the ground.

Shita: Lack of intensity in hunger, thirst, heat and perspiration.

Vijjala: Firmness and compactness in joints.

Achha: Clarity and unctuousness in complexion, appearance and voice.

By virtue of the above-mentioned qualities, a man having *Kaphaj* type of constitution is endowed with the excellence of strength, wealth, knowledge, energy, peace and longevity.

Dwandvaja prakriti

Individuals having a constitution dominated by a combination of two *doshas* are characterized by the combination of the manifestations of the respective *doshas*.^[16]

Samadoshaj prakriti

A *samadoshaj* type of individual who has all the *doshas* in a state of equilibrium is endowed with good qualities of all three types of individuals described above.^[17]

Concept of aging

Vaya represents the state of the body depending upon the length of the time that has passed since birth. Whole lifespan is divided into three parts, i.e. *bala*, *madhya* and *jirna*. *Jirnavastha* or *vriddhavastha* is the last phase of life, at the age of 60-70 years. This time period signifies by its name, i.e. the name *vriddha* is given to old age and the word *jirna* represents characteristics of this stage of life with of decay or degeneration. This stage is characterized by diminution of the *dhatu*, strength of sense organs, energy, manliness, valor, power of understanding, retention, memorizing, speech and analyzing facts. There is gradual diminution in the qualities of *dhatu* and dominance of *Vata* during this age.^[18] According to modern medical science, aging is the accumulation of changes in an organism or object over time. Aging in humans refers to a multidimensional process of physical, psychological, and social change. Some dimensions of aging grow and expand over time, while others decline. Reaction time, e.g. may slow with age, while knowledge of world events and wisdom may expand. Research shows that even late in life, the potential exists for physical, mental, and social growth and development.^[19-21] Aging is an important part of all human societies, not only reflecting the biological changes that occur, but also reflecting cultural and societal conventions. In biology, senescence is the state or process of aging. *Cellular senescence* is a phenomenon where isolated cells demonstrate a limited ability to divide in culture, while *organismal senescence* is the aging of organisms. After a period of near perfect renewal (in humans, between 20 and 35 years of age), organismal senescence is characterized by the declining ability to respond to stress, increasing homeostatic imbalance and increased risk of disease. This irreversible series of changes inevitably ends in death. Some researchers (specifically biogerontologists) treat aging as a disease. As genes that have an effect on aging are discovered, aging is increasingly being regarded in a similar fashion to other genetically influenced “conditions”, potentially “treatable”. Indeed, aging is not an unavoidable property of life. Instead, it is the result of a genetic program. Numerous species show very low signs of aging. In humans and other animals, cellular senescence has been attributed to the shortening of telomeres with each cell cycle; when telomeres become too short, the cells die.^[22]

Historically, the lifespan of humans is divided into eight ages; because the biological changes are slow and vary from person to person, arbitrary dates are usually set to mark the periods of life. In some cultures, the divisions given below are quite varied. In the USA, adulthood legally begins at the age of 18, while old age is considered to begin at the age of legal retirement (approximately 65 years).^[23]

- Pre-conception: Ovum, spermatozoon
- Conception: Fertilization
- Pre-birth: Conception to birth (pregnancy)

- Infancy: Birth to 1 year
- Childhood: 1-12 years
- Adolescence: 13-19 years
- Early adulthood: 20-39 years
- Middle adulthood: 40-64 years
- Late adulthood: 65 + years
- Death
- Post-death: Decomposition of the body

Ages can also be divided by decade:

Term	Age (years)
Denarian	10-19
Vicenarian	20-29
Tricenarian	30-39
Quadrigenarian	40-49
Quinquagenarian	50-59
Sexagenarian	60-69
Septuagenarian	70-79
Octogenarian	80-89
Nonagenarian	90-99
Centenarian	100-109
Supercentenarian	110 and older

Overall, aging is a natural phenomenon and *vriddhavastha* is the last stage of life. This stage is basically characterized by degenerative changes.

Interrelationship between aging and prakriti

Aging is a phenomenon of body and characterized by decay and degeneration in which anatomical structures are basically affected following which physiology is also disturbed. Body is governed by three humours known as *Vata*, *Pitta* and *Kapha*. They govern the whole body according to their nature, e.g. *Vata* is responsible for all the movements of the body. Same applies for the rest of *doshas*. These *tridoshas* determine the *prakriti* of a person according to their predominance. Each *dosha* has been designed for a specific group of bodily functions depending upon its *guna*.^[24-26] These functions of *dosha* are also found in an aggravated form in a particular type of *prakriti* dominated by that particular *dosha*. *Samadoshaj prakriti* is exception for this because all the functions of *tridosha* are neutralized by each other and a state of *dhatuamyia* is maintained.

Among the *tridoshas*, *Pitta* is basically responsible for the decay and degenerative changes due to its specific properties like *ushna*, *tikshna*, *visra*, *amla*, etc.^[27] If the *prakriti* of any person is dominated by *pitta dosha*, aggravated functions of *Pitta* can be observed in that particular person. These aggravated functions of *Pitta* first change the related physiology following which the anatomical structures are also affected with special reference to decay and degeneration. It is just like how excessive heat changes the surrounding environment and then destroys the articles in its path. Therefore, it can be said in the context of *Pittaj prakriti* persons that they are susceptible to untimely or premature manifestations of aging like graying of hairs, formation of wrinkles on skin, hair fall, etc.^[28] Increased level of *Pitta* with special reference to *agni* increases the metabolic level of biotransformation and thus energy consumption. These physiological changes result in various types of tissue destruction and premature manifestation of aging.

Discussion

Ayurveda is designed for healthy and long lifespan. This aim is fulfilled by its sound and absolute principles. *Prakriti* is one of the very important principles and plays a very important role in the designing of lifestyle of a person for maintenance of health. Its determination is also important in diseased condition as it is essential in the prognosis and planning of treatment. *Prakriti* remains unchanged during the whole life and affects every aspect of life. Thus, aging is not an exception. *Prakriti* is determined by the predominance of dosha with others combined in different proportions. *Doshas* are basic bodily factors responsible for the maintenance of physiology in different sections due to their specific properties. Among these, *Pitta* governs the section of metabolism, biotransformation and energy production. These physiological functions are increased in the persons having *Pitta* predominance *prakriti*. Increased *Pittaj* functions tend to increase the basal metabolic rate (BMR) and energy consumption which may lead to tissue destruction. Consequently, *Pittaj prakriti* persons are susceptible to premature aging and average life span. On the other hand, persons with *Kapha* predominance *prakriti* have a tendency to delayed manifestation of aging due to its specific synthetic properties as well as long lifespan. So, it is clearly indicated that if a person wants to be healthy, he must design his lifestyle opposite to *prakriti*.^[29]

Conclusions

To conclude, the following are the points derived from the above discussion.

1. *Prakriti* and aging both are natural phenomena as well as occur essentially.
2. All the physiological processes are directly controlled by *tridosha* and thus by the predominant *dosha* in a particular type of *prakriti*.
3. Both *Vata* and *Pitta* are responsible for destructive changes in their predominant stage due to their specific properties.
4. Aging is the procedure of decay and degeneration and thus aggravated by the predominant *Pitta* supported by *Vata*.
5. Aging is closely related with *prakriti* and can be delayed by using *Kapha* predominant *ahara* and *vihara*.

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हिन्दी सारांश

'जरा' के संदर्भ में 'प्रकृति' के प्रभाव का अध्ययन

महेश चंद पूर्व्या, एम. एस. मीना

प्रकृति आयुर्वेद के मूलभूल सिद्धान्तों में से एक है। मानव के जन्म से लेकर मृत्युतक जीवन के हर एक पहलू पर प्रकृति का प्रभाव होता है। गर्भाधान के समय दोषप्राधान्य के अनुसार प्रकृति घटित होती है। त्रिदोष पर आधारित यह प्रकृति सात प्रकार की होती है। व्यक्ति अपनी प्रकृति के अनुसार शरीर, संहनन, क्रिया, बर्ताव, बाह्य एवं आभ्यंतर प्रतिक्रियाओं का अनुकूलन, विभिन्न व्याधियों के प्रति ग्राहकत्व इत्यादि दर्शाता है। 'जरा' का समावेश स्वाभाविक व्याधियों में किया गया है। शरीर में पित्त अथवा अग्नि विभिन्न क्रियाओं के लिए उत्तरदायी है। चरक संहिता के अनुसार पित्त प्रकृतिवाले व्यक्तियों में जरावस्था शीघ्र देखी जाती है। प्रस्तुत अध्ययन में जरा प्रक्रिया एवं प्रकृति इन दोनों का संबंध निबंधित किया गया है।

