Physiological aspects of Agni

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Abstract

Agni is the invariable agent in the process of Paka (digestion, transformation). Ingested food is to be digested, absorbed and assimilated, which is unavoidable for the maintenance of life, and is performed by the Agni. Different examples are available in our classics to indicate that Pitta is the same as Agni, but some doubt arises behind this concept, that Pitta is Agni. Agni is innumerable because of its presence in each and every paramana of the body. But, the enumeration of the number of Agni varies in various classical Ayurvedic texts. According to the functions and site of action, Agni has been divided into 13 types, i.e. one Jatharagni, five Bhutagni and seven Dhatvagni. Jatharagni is the most important one, which digests four types of food and transforms it into Rosa and Mala. The five Bhutagnis act on the respective bhutika portion of the food and thereby nourish the Bhutas in the body. The seven Dhatvagni act on the respective dhatu by which each Dhatu is broken into three parts. In this way, the entire process of transformation consists of two types of products – Prasad (essence) and Kitta (excrete). The former is taken for nourishment while the latter one is thrown out, which otherwise defiles the body if it stays longer.

Key words: Agni, bhutagni, dhatvagni, jatharagni, Pitta

Introduction

Ayurveda has described an important factor of digestion and metabolism in our body as Agni. Ingested food is to be digested, absorbed and assimilated, which is unavoidable for the maintenance of life, and is performed by Agni. In Ayurveda, the term “Agni” is used in the sense of digestion of food and metabolic products. Agni converts food in the form of energy, which is responsible for all the vital functions of our body. Therefore, Ayurveda considers that Dehagni is the cause of life, complexion, strength, health, nourishment, lusture, oja, teja (energy) and prana (life energy). (Cha. Chi. 15/3, 5.1)

About the importance of Agni, Acharya Charak has mentioned that after stoppage of the function of Agni, the individual dies, and when the Agni of an individual is sanna, then that person would be absolutely healthy and would lead a long, happy, healthy life. But, if the Agni of a person is vitiated, the whole metabolism in his body would be disturbed, resulting in ill health and disease. Hence, Agni is said to be the base (mool) of life. (Cha. Chi. 15/4, 5.2)

According to modern medicine, metabolic processes, division and multiplication are going on in all cells (dhatu paramana) of our body from birth till death. The cell is the functional unit of the body. According to Charak, the constituent parts of the body, if further divided into the atoms, are sure to become innumerable, as such cells or atoms are exceedingly numerous, very minute and ultrasensory. In the conjunction and disjunction of cells, the activating factors are Vata and the nature of action (Cha. sha.7/17). In Shushrut, we can see how the “Avayavaas” are formed from “various dhatus” (Su. Sha. 4/25-30). Thus, based on Charak and Shushrut, the above cells can be considered as “dhatu paramana.” For these constant processes in all cells, a biological energy is constantly essential, without which the survival of our body will be quite impossible. The same biological energy is provided by Agni in Ayurveda. This Agni-provided biological energy in the cells (dhatu paramana) of our body is of two types: potential and kinetic.

Review and Discussion

The study of Agni can be summarized according to the following points:

1. General description of Agni in various Ayurvedic texts.
2. Normal physiological function of different types of Agni.

In Brahmastutra, Agni has been meant to be a sign of life in the body. Great value of Agni has been shown by classical literature. Acharya Yasaka has given the etymology of the term “Agni,” which is as follows: Agni = A + G + Ni. The word “A” denotes root “I,” meaning “to go”; “G” denotes the root
“Anja,” meaning “to glitter” or root “daha,” meaning “to burn” and “Ni” means “to carry.” The etymology given by Yasaka, Shankaracharyya (vedantasutra shabda kalpa druma) illustrates that Agni carries everything in it. It moves everywhere and metamorphoses substances, burns, assimilates, glitters and grows. Agni is a pivot around which the remaining factors responsible for the maintenance of health and causation of disease as well as decay revolve (Shabdakalpadrum).[5]

In shabdakalpa druma, 61 synonyms of Agni have been compiled. These synonyms help in explaining the nature and functions of the Agni, e.g., Vaishvanara, Sarva Paka, Tannompata, Amivachatana, Damunasa, Shuchi, Vishwambhar, Rudra etc. (Shabdakalpadrum).[6]

Agni as Pitta?
The origin of Pitta is from “Tapa,” which means: (1) combustion/ digestion – to give nourishment to the body by digestion of ingested food, (2) to maintain heat – by means of heat, it maintains the color, lusture, etc. of the body (Su.Su.-21/5).[7]

Now, there is a question as to whether Pitta and Agni are both the same or are different? Does any area exist of Agni without Pitta, or is it that Pitta is Agni? This should be clearly understood. Different views have been suggested regarding Pitta and Agni by different Acharyas. Some Acharyas consider Pitta to be Agni while others speak differently.

According to Acharya Sushruta, there is no existence of any other Agni in the body without Pitta, because when there is increased digestion and combustion in the body due to Ushna guna of Pitta, the treatment is like Agni (Su. Su. 21/09).[9] Acharya Marichi has also emphasized that the Agni present in the Pitta gives good or bad results when it is normal or vitiated (Cha. Su. 12/11).[9]

Chakrapani has commented on “Pittantargatta,” that the function of Pitta inside the body is not combustion but its work is to provide heat of Agni. Besides this, Acharya Shrusut has described five types of Agnis as the variety of Pitta. Acharya Bhoj also considered Pitta as Agni, digestive fire is included within Agni, which is especially meant for different enzymatic activities of the body, i.e. pachana, deepan, bhedana, etc. (Chakrapani Tika on Cha.Su.-12/11).[10]

According to Hemadri, Pitta is of five divisions, which are located in the interior of the pukavshaya and amashaya, although it is composed of panchabhutas. Because of an increase of (predominance qualities of) tejus bhuta, it is devoid of liquidity (although it is a liquid). Also, because it does not possess snigdha (viscidity), sita and such other properties of apa bhuta, it is called by the term “Anal” because of its function of paka. It cooks the food, dividing it into essence and waste separately. Being localized there, it bestows grace (help) to the other Pitta present there and also the other dhatus present in the dhatus by giving them strength (power of functioning), which is known as “Pachaka Pitta” (As.Hr.Su.12/10-12).[11]

Different examples are available in our classics to indicate that Pitta is the same as Agni. But, some doubts arise behind the concept of whether Pitta is Agni, e.g.

• why indulgence of aggravating factors like katu, vidahi, etc. reduces the strength of Agni instead of enhancing it.

• appropriate example to highlight the above concept that ghee alleviates Pitta but enhances Agni.

• the quotation of Acharya Sushruta, Samadoshah samagnisheca (Su. Sha. 15/48)[9] has clearly indicated that Pitta and Agni are not the same.

Types of Agnis
Agni is innumerable because of its presence in each and every dhatu paramanu (cell) of the body. But, enumeration of the number of Agnis varies in various classical Ayurvedic texts, as shown below

• Charaka has mentioned about 13 Agnis. Jatharagni – 1, Bhutagni – 5, Dhatvagni – 7 (Ch.Chi.15/58).[13]

• According to Acharya Sushruta, five types of Agnis are illustrated, viz. Pachakagni, Ranjakagni, Alochakagni, Sadhakagni and Bhrjakagni. However, there is an indirect reference of five Bhutagnis underlying in the brief description made to the transformation of food stuff. (Sh. Su.21/10.).[14]

• Vagbhata has described different types Agni, viz. – Bhutagnis – 5,– Dhatvagnis – 7, –Dhoshagnis – 3 and– Malagni – 3,.

• Sharanagadha has recognized five pittas only (Pachak, Bhrjak, Ranjak, Alochaka and Sodhak) (Sha.Su.Pu.Kh.-5/52).[15]

• Bhavamishra has followed Acharya Charaka and Vagbhata (Bh.Pu.Kh.-3/169,180).[16]

Agni has been divided into 13 types according to the function and site of action. These are:

1. Jatharagni – one Agni present in the stomach and duodenum.

2. Bhutagni – five Agni from five basic elements.

3. Dhatvagni – seven Agni present, one in each of the seven dhatus.

Accordingly, they are classified into three groups, namely Jatharagni, Bhutagni and Dhatvagni.

Jatharagni
Jatharagni is the Agni or bioenergy present in the Jathara (stomach and duodenum). According to Ashtanga Hridaya, Jatharagni, the seat is grahah (duodenum), so called because it withholds the food for a certain time inside the Amasaya (stomach) to facilitate digestion. In the opinion of Dhanvantari, it is the Kala known as “Pittadhara,” situated at the entrance of the Paksavayya (intestine) and acting as a bolt to the door of the pathway/channel of food. It is responsible for the duration of life, health, valour, ojas (essence of the dhatus), strength of all the bhutagni and dhatvagni. The strength of the grahah is from Agni itself, and the strength of Agni is from grahah. When the Agni undergoes vitiation, grahah also gets vitiated and produces diseases (As.Hr.Sha.3/50-54).[17]

Jatharagni is considered to be the most important because and every nutrient that one ingests first comes to the Jathara and is subjected to the action of Jatharagni. Jatharagni digests the food materials that consist of the five basic elements and transforms it for utilization by the respective Dhatus paramanu (tissues).

Jatharagni is also responsible for separation of the food material into the essence portion (PRasad) and the waste products (kitta) in our body (As.Hr.Su-12/8).[18]
Jatharagni is directly related to Dhatvagni or bioenergy in the cells and their metabolic processes, with ultimate tissue metabolism or Dhatu-Pak process. All the Dhatvagni depend on the normal, healthy state of Jatharagni. If the Jatharagni is hyperactive (Tikshna) or hypoactive (Mande), it will cause an excessive or retarded action of the Dhatvagni. This disturbed action ultimately leads to various disorders. Jatharagni is the main important Agni that controls the function of all other 12 Agnis. All the Agnis are totally dependent on the status of Jatharagni (Cha. Chi. 15/39-40). [19]

Jatharagni is also classified into four categories according to its performance of digestion in the human being (Cha. Chi. 15/51), [20] namely Vishamagni, Tikshnagni, Mandagni and Samagni.

According to Hareet Samkita, Samagni depends on whether the Doshas (Vata, Pitta, Kapha) are in normal stage. When the Pitta is higher than normal, the condition is known as Tikshnagni. When Vata and Kapha are higher than normal, the condition is known as Mandagni.

a) Samagni: The Samagni digests and assimilates food properly at the proper time. This thus increases the quality of the Dhattus (supportive tissues of the body). Persons having Samagni are always hale and healthy.

b) Vishamagni: This type of Agni changes between digesting food quickly and slowly. When this Agni is affected by the Vata Dosha, it creates different types of udaragata roga.

c) Tikshnagni: Tikshnagni means very quick/very sharp/very fast. Tikshnagni is a state of very quick digestion of food, regardless of the type of food. Acharya Shushrut states that when the power of digestion is increased from normal to above normal, food digests very quickly and produces hunger or the desire for food. When food is digested, the throat, the mouth cavity and the lips become dry with a burning sensation. This condition is known as “Bhasmak Roga” according to Ayurveda.

d) Mandagni: “Mand” means slow. The meaning of the Mandagni is slow digestive power or digestive capacity. Those who are having Mandagni eat very little and are unable to digest the smallest amount of food. Dhantvantri says that Agni digests the least amount of food in the greatest amount of time.

Bhutagni

Bhutagni is the one that is present in a basic element (Bhutas). There are five Agnis in each of the five basic elements, namely – Parthiva (earth), Apya (water), Tejas (Agni), Vayarya (vayu) and Nabhasa (akash).

Each and every cell in our body is composed of the five mahabhutas or five basic elements. Naturally, each cell (dhata paramanu) consists of these five Bhutagni also. All the nutrients in this world that we eat also consist of the same five basic elements with their respective Agni or bioenergies. Thus, they are completely similar with respect to the five basic elements with their Bhutagni in our body cells as well in all the outside nutrient, that we ingest for the nutrition of our body. Acharya Charak has mentioned that the five Bhutagni digest their own part of the element present in the food materials. After the digestion of food by the Bhutagni, digested materials containing the elements and qualities similar to each bhutas nourish their own specific bhautika elements of the body (Cha. Chi. 15/13, 14). [21] These Bhutagnis act after the Jatharagni present in the stomach and duodenum, acting on the food and causing their disintegration. In the modern physiological perspective, the action of Jatharagni can be equated with the digestion in the stomach and duodenum, and the action of the Bhutagni can be equated with the conversion of digested materials in the liver.

Dhatvagni

All the seven Dhatus (seven element tissues of the body) contain their own Agni to metabolize the nutrient materials supplied to them through their own Srotas.

1. Rasagni present in the Rasa Dhatu.
2. Raktagni present in the Raktta Dhatu.
3. Mamsagni present in the Mamsa Dhatu.
4. Medagni present in the Meda Dhatu.
5. Asthagni present in the Asthi Dhatu.
6. Majagni present in the Majju Dhatu.
7. Shukragni present in the Shukra Dhatu.

Each Dhatvagni or the bioenergy present in each Dhatu synthesizes and transforms the essential Rasa Dhatu required for that particular Dhatu or cell from the basic nutrients present in the AnnaRasa or essence of the diet that we consume. Each Dhatvagni has got a specialty to synthesize and transform the constituents suitable to its particular Dhatu. This action is a sort of selective action. Acharya Charaka has mentioned the fact that the seven dhatus that are a support of the body contain their own Agni, and by their own Agni they digest and transform the materials supplied to them to make the substances alike to them for assimilation and nourishment (Cha. Su. 28/15). [22]

Conclusion

After a detailed discussion on Pitta and Agni, it is concluded that all theories in their regard have their own importance, and it is very difficult to conclude which theory is more appropriate. But, one conclusion that can be drawn after going through the details is that in regard of treatment, Pitta and Agni are the same, whereas in accordance to their, build they differ from each other.

Explaining briefly the digestive and metabolic functions of Agni, Acharya Charaka has mentioned that various types of dietic materials are digested by their own Agni (Bhutagni), encouraged and enhanced by Antaragni (Jatharagni), which is further digested and metabolized by Dhatvagni to associate the body with the nutritional strength, complexion and happy life along with providing energy to the seven dhatus.

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हिंदी सारांश

अग्नि का शारीरक्रियात्मक अध्ययन

आकाश कुमार अग्निवाल सी. आर. यादव एम. एस. मीना

विभिन्न आयुर्वेदीय प्रथ्यों में अग्नि का बृहत विवेचन मिलता हैं। अग्नि द्वारा शरीर आहार का पाचन होता है। आहार पाचनप्रक्रिया निर्मित आहार रस से शरीरस्थ धातुओं को पोषण और उर्जा प्राप्त होती है, जिसके द्वारा धातुओं अपने-अपने कर्म को करने में समर्थ होती है। अग्नि के स्वास्थ्य पर ही जीवन होता है और अग्नि के शान्त हो जाने पर मनुष्य मृत्यु को प्राप्त होता है। विभिन्न प्रथ्यों में अग्नि का अनेक प्रकार से वर्गीकरण भी मिलता है जैसे– जटराग्रि, भूलाग्रि, धातवाग्रि, समाग्रि, विषमाग्रि, तीक्ष्णाग्रि, समाग्रि।