

A Comprehensive Study on Importance of Agni in Metabolism

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ABSTRACT

Ayurveda is the ancient Indian system of life sciences and Medicine. Ayurveda has described an important factor of digestion and metabolism in our body as Agni. Agni in Ayurveda has a significant role to maintain body homeostasis, body functioning, metabolism of body and proper functioning of body. Agni is responsible for strength, health, longevity, vital breath and it determines the quantity of food to be consumed. Ingested food is to be digested, absorbed and assimilated, which is obligatory 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. According to the functions and sites of action, Agni has been divided into 13 types, i.e. 1 Jatharagni, 5 Bhutagni and 7 Dhatvagni. They work together to maintain the balance in the body as Jatharagni is maintaining metabolism and Bhutagni and Dhatvagni is maintaining the cellular metabolism. About the importance of Agni, Acharya Charaka has mentioned that after stoppage of the function of Agni, the individual dies, and when the Agni of an individual is Sama, then that person would be absolutely healthy and would lead a long, happy and 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.

KEYWORDS: Agni, Bhutagni, Dhatvagni, Jatharagni, Digestion, Absorption.

I. INTRODUCTION

AYURVEDA has considered Agni is a very important factor for the maintenance of good health. Ayurveda says that if Agni is not in its normal state than it will result in the formation of a disease. 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. This Agni is not in the form of flame as the terrestrial fire but is in the form of liquid which is called as "Pitta" in Ayurveda. 'There is no Agni apart from Pitta and Pitta itself is "Agni" declared Charaka. [1] Consumption of food may be various forms i.e. eatables, beverages, linctuses (licked) and mastic able foods, which is wholesome if consumed in suitable quantity and free from contamination. These substances undergo metabolic transformation by the effect of Jatharagni, Bhutagni and Dhatvagni. Initially Jatharagni gives stimulation to Bhutagni because consumed food is Panchabhautika, it has to undergo transformation by the respective Bhutagni, then only it becomes easy for tissue metabolism by Dhatvagni, Then processed metabolic products circulate inside the Srotas continuously by the help of Vata Dosha. This supports the development, strength, complexion and happiness as well as growth of tissues. Dhatu remain in their normalcy after receiving respective nutrients from metabolized food substances. Jatharagni is the main principal substance responsible for disease and health. During its normalcy it is responsible for

longevity, complexion, strength, health, enthusiasm, well built, luster, immunity (Oja), temperature, other Agni's (Bhutagni and Dhatvagni) and other vital functions all are dependent on Jatharagni. Therefore healthy state of body and diseased condition is entirely dependent on status of Agni. [2]

II. MATERIAL AND METHODS KOSHTHAGANI VYAPAR (FUNCTIONS OF DIGESTIVE FIRE)

The food ingested, is acted upon by the normal Koshthagni opposite Pachaka Pitta and cooked properly to produce two substances, the Sarabhaga or the Ahara Rasa (the essence of food) and Kitta Bhaga (the waste products of food). The Sara Bhaga or Ahara Rasa undergoes further changes being acted upon by the Bhutagani and gets converted into Rasa Dhatu- the first Dhatu (first tissue) of the body. The activities of Koshthagni and Bhutagni together form the Ahara Paka or digestion of food. The Rasa Dhatu contains the nutrient materials derived from the food and required by the Dhatu (tissues), this Rasa Dhatu circulates all over the body supplying the nutrients to all the other Dhatu, which utilize this material for their growth (metabolism).[3]

IMPORTANCE OF AGNI

Bala (strength), Varna (colour), Swasthya (health), Utsaha (enthusiasm), Upachaya (development of the body), Prabha (complexion), Oja (strength), Teja (valour), Vaya (age), and even Ayu (life)- all depend on Agni and its function (fire-like activity). So long as Agni is normal, man can have a healthy and long life, loss of Agni leads to loss of life. [4]

CONCEPT OF PITTA & AGNI IN AYURVEDA

It is a question of debate to say Pitta and Agni are one and the same. Is there any separate Agni other than Pitta? Or Pitta itself is Agni? For this Sushruta said no separate Agni is found other than Pitta. It is due to the properties of hotness in Pitta leading to burning cooking and such similar functions performed by Pitta are considered as Agni itself & it is called Antaragni. Large food molecules are broken down to smaller molecules both mechanically & chemically by the action of Pitta. Further Pitta helps for the process of transporting these smaller molecules across the intestinal wall which facilitates absorption & lastly

undigested portions of food and waste products are removed from the body. [5]

TYPES OF AGNI

Agni is countless because of its presence in each and every dhatu Paramanu (cell) of the body. But, enumeration of the number of Agni varies in various classical Ayurvedic texts, as show below Charaka has mentioned about 13 Agni. Jatharagni -1, Bhutagni -5, Dhatvagni -7. [6]

According to Sushruta, five types of Agni are decorated, viz. Pachakagni, Ranjakagni, Alochakagni, Sadhakagni and Bhrajakagni.[7] However, there is an indirect reference of Five Bhutagni underlying in the brief description made to the transformation of food aliment.[8]

Sharangadhara has also recognized five Pitta(Pachaka, Bhrajaka, Ranjaka, Alochaka and Sadhaka). [9]

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 Dhatu.

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

JATHARAGNI

Jatharagni is the Agni present in the Jathara (stomach and duodenum). According to Ashtanga Hridaya, Jatharagni, the seat is Grahani (duodenum), so called because it withholds the food for a certain time inside the Amashaya (stomach) to facilitate digestion. In the opinion of Dhanvantari, it is the Kala known as "Pittadhara" situated at the entrance of the Pakvashaya (intestine) and acting as a bolt to the door of the pathway/channel of food. It is responsible for the duration of life, health, courage, Oja (essence of the Dhatu), strength of all the Bhutagni and Dhatvagni. The strength of the Grahani is from Agni itself, and the strength of Agni is from Grahani.

Jatharagni is also classified into four categories according to its performance of digestion in the human being namely Vishmagagni, Tikshanagni, Mandagni and Samagni,[10] According to Harita Samhita, Samagni depends on whether the Dosha (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.

BHUTAGNI

Bhutagni is the one that is present in a basic element (Bhutas). There are five Agni in each of the five basic elements, namely – Parthiva (earth), Apya (water), Teja (Agni), Vayavya (Vayu) and Nabhasa (Aakash).

Each and every cell in our body is composed of the five Mahabhuta or five basic elements. Naturally, each cell (Dhatu 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. Thus, they are completely similar with respect to the five basic elements with their Bhutagni in our body cells as well in the entire outside nutrient that we ingest for the nutrition of our body. Acharya Charaka 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 Bhuta nourish their own specific Bhautika elements of the body. [11] These Bhutagni 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 Dhatu (seven element tissues of the body) contain their own Agni to metabolize the nutrient materials supplied to them through their own Srotas.

- a) Rasagni present in the Rasa Dhatu.
- b) Raktagni present in the Rakta Dhatu.
- c) Mamsagni present in the Mansa Dhatu.
- d) Medagni present in the Meda Dhatu.
- e) Asthyagni present in the Asthi Dhatu.
- f) Majjagni present in the Majja Dhatu.
- g) Shukragni present in the Shukra Dhatu.

Each Dhatvagni 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 Anna Rasa 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 Dhatu 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. [12]

PHYSIOLOGICAL & PATHOLOGICAL STATES OF AGNI SAMAGNI

First variety is not associated with Dosa and it is called Samagni state and it is the physiological state of Agni. The Samagni digests and assimilates food properly at the proper time. This thus increases the quality of the Dhatu (supportive tissues of the body). Persons having Samagni are always hale and healthy.

VISHAMAGNI

Vishamagni is the state in which improper digestion and metabolism takes place i.e. sometimes performs normal functions followed by abnormal one and manifest flatulence, abdominal pain, upward movement of Vata inside the Kostha, diarrhea, and heaviness in abdomen, intestinal gurgling and straining exercise for evacuation of stools. When this Agni is affected by the Vata Dosh, it creates different types of Vatavyadhi.

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 Sushruta 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. Tikshnagni state gives rise to manifestation of Vatavyadhi.

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. Dhanvantri says that Agni digests the least amount of food in the greatest amount of time and manifest heaviness in abdomen and head, cough, excessive salivation, vomiting and weakness of the body. Mandagni state gives rise to manifestation of Kaphaja Vikara.

III. CONCLUSION

After detailed description of AGNI, it can be come to an end that AGNI plays a significant role in maintaining good health of a human being. In clinical practice AGNI PARIKSHA of the patient is very important, because on the basis of this Pariksha future treatment plan can be decided. Healthy state of the body and diseased condition depends absolutely on AGNI. VATA (Prana, Udana, Samana, and Apana) stimulates the digestive fire. AGNI should be protected by proper intake of food because this act as a fuel. If a person is deprived of food or takes too much food for quite some time then it results in the disruption of AGNI and disease develops in the body. Jatharagni is important because it facilitates secretion of various juices, enzymes etc leading to proper digestion of food. Further Dhatvagni and Bhutagni help for the digestion absorption and assimilation of food substances into the body. AYURVEDA says that disturbed function of AGNI is the root cause of all diseases.

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