



Review Article

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ROLE OF AGNI IN AYURVEDIC PHYSIOLOGY: A COMPREHENSIVE REVIEW

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ABSTRACT

Ayurveda, the ancient Indian scientific system, explains a number of ideas about biological reaction and physiological functioning, including Agni. The body's metabolic and digestive processes are thought to be controlled by Agni. An extremely important process for the growth and development of the human body is the Agni's ability to digest and assimilate food. Agni governs health and strength and establishes how much food should be eaten. It is the Agni's responsibility to digest, absorb, and assimilate food, which is essential for life maintenance. 13 types of Agni have been identified, including 1 Jatharagni, 5 Bhutagni, and 7 Dhatvagni. Because it is essential to the function of Bhutagni and Dhatvagni, Jatharagni is the most important of all the Agni types. This study combines traditional Ayurvedic texts with contemporary medical knowledge. Texts from Charak, Sushruta, Vagbhata, and current research articles are all included in the literature study. The most crucial one is Jatharagni, which breaks down four different kinds of food and turns them into rasa (taste) and mala (waste product). The five to nourish the Bhutagni in the body, Bhutagnis act on the corresponding bhautik (a portion of the meal). Each of the seven Dhatvagni acts is divided into three parts and placed on its corresponding dhatu. Thus, the entire transformation process yields two different kinds of products: kitta (excrete) and prasad (essence). While the later is expelled, the former is used for sustenance; if it remains in the body for an extended period of time, it defiles it.

Keywords: Ayurveda, Agni, Jatharagni, Bhutagni, Dhatvagni, Metabolic process.

INTRODUCTION

In Ayurveda Agni becomes vitiated, the body's digestion is disturbed, which leads to ailments. Since various bio-changes are constantly occurring throughout the human body, Agni has the entire body. Agni parts that fulfill different characteristics according to their qualities. Acharya Sushruta and Vagbhata, the organ called grahani is situated among pakvasaya (large intestine) and amasaya (stomach). The connection that exists among Agni and grahani is proportional for example Agni upholds the capability of grahani and grahani upholds the capability of Agni.¹ "Agni" in Ayurveda describes the breakdown of food and metabolic byproducts. It vitalizes vital body activities by converting food into energy. Dehagni is (essential for life, vitality, strength, immunity, energy, and general well-being), according to Ayurveda.² Acharya Charak highlighted the significance of Agni, saying that a person dies when Agni stops working. A person has optimal health, longevity, and well-being when their Agni is in balance. On the other hand, an imbalance in Agni disrupts metabolism, which leads to illness and bad health. Agni is hence considered the foundation of life.³ Modern medicine recognizes that throughout our lives, from conception to death, metabolic activities, such as cell division and multiplication, take place in every cell of our body. The cell is acknowledged as the basic functional unit of the organism. According to Acharya Charak, the body's basic parts would become countless if they were separated into atoms since these cells or atoms are incredibly little, innumerable, and imperceptible to the human senses. The forces that propel cell conjunction and disjunction are vata and the nature of action.⁴ The Sushrut Samhita describes in detail how dhatus (different tissues) avayavas (combine to generate distinct body parts). Charak and Sushrut assert that these cells can be thought of as dhatu paramanus (the basic components of tissues). Agni, its utility in health. The main functions of internal bodily

Agni are dahana (oxidation or combustion) and paka or pachana (physical and/or chemical transformation) of the ahara.

Types: According to Charak Agni is classified into 13 different types based on its specific functions and areas of action within the body.⁵ These are.

1. Jatharagni: There is a singular Agni situated in the stomach and duodenum.
2. Bhutagni: Five Agnis corresponding to the five basic elements.
3. Dhatvagni: Seven Agnis, each residing in one of dhatus (the seven bodily tissues).

Jatharagni

The Agni found in the jathara (stomach and duodenum) is called Jatharagni. Ashtanga Hridaya, Jatharagni, claims that the grahani (duodenum) is the seat. It gets its name from the fact that it temporarily withholds food in the Amashaya (stomach) to aid in digestion. According to Dhanvantari, it is the kala called "Pittadhara," which is located at the entrance of the gut pakvashaya (large intestine) and serves as a bolt to the door of the food channel or passageway. It is in charge of life, health, bravery, Ojas (the dhatus' essence), and the strength of all Bhutagni and Dhatvagni. Agni is the source of Agni's strength, and grahani is the source of Agni's strength. Jatharagni is also classified into four categories namely Vishamagni, Tikshanagni, Mandagni and Samagni.

1. Samagni- The one that breaks down food at the appointed time without causing the body any problems is called Samagni (the normal one). It is health-promoting and perfect. It is typically present in samsarga and sammishra prakriti individuals (a constitution that is derived from the combination of two and all three dosha, respectively).

2. Vishamagni- Because of Vata's major influence, Agni's action is erratic and inappropriate in this situation. There are times when it facilitates full digestion, and other times it causes loose movements, ascites, constipation, dysentery, distention of the abdomen, and limb weight.

3. Tikshnagni- Which means "The powerful or strong," is the body that breaks down even enormous amounts of food before the appointed period, causing burning in the gut, sour belching, thirst, the sense of hot fumes escaping, and other health issues. Pitta prakriti (bilious constitution) people typically have it; Pittakara ahara vihara (food and activities that increase Pitta) causes it to develop in others and leads to Pitta-originated disorders.

4. Mandagni- The Mandagni due primarily to the impact of Kapha. Mandagni is the person who performs the delayed pachan of the dish, although consuming very little of it. The complications include prasek (flowing froth), shvaas (breath), udarpidaa (abdomen pain), and shiras's (heaviness).

Bhutagni

The Bhutagni Charak claims that the breakdown of food by Jatharagni results in the sanghatbheda (conflict resolution) of the former into five different physiochemical groups, including parthiva (earth), apya (water), vyaas (diameter), and others. Journal of Pharmaceutical Research Worldwide nabhasa (sky atmosphere), vayava (wind or air), and agneya (fire). It is then claimed that the Agni moiety found in each group's compounds digests the substance, causing a drastic alteration in their vilakshanaguna (characteristics). Food substances are thereby made suitable for assimilation and accumulation as components of the matching bhuta class of compounds found in dhatus. The seven Dhatwagnis, which are found in each dhatus, are said to act as a sort of mediator in this assimilation process. Five mahabhutas (fundamental element) make up this living being, according to Sushrut.

Dhatwagni

Seven dhatus and their respective Agni's

1. Rasagni - in Rasa Dhatu (plasma/lymph)
2. Raktagni - in Rakta Dhatu (blood)
3. Mamsagni - in Mamsa Dhatu (muscle)
4. Medagni - in Meda Dhatu (fat)
5. Asthyagni - in Asthi Dhatu (bone)
6. Majjagni - in Majja Dhatu (marrow and nervous tissue)
7. Shukragni - in Shukra Dhatu (reproductive tissue)

Each of these Agni's ensures proper transformation of nutrients into the corresponding tissue. The srotas (channels) are the pathways through which the nutrients and metabolic products travel.⁶

Physiological importance of Agni

According to Acharya Charaka, one of the principal stages of Ayurveda

Agni = Life Force: The entire existence and function of the body depend on Agni. When Agni stops, life ceases.

Sama Agni (Balanced Agni): Indicates a state of perfect health, balanced metabolism, and mental clarity.

Vishama, Tikshna or Manda Agni (Vitiated Agni): Leads to metabolic imbalance, accumulation of toxins (ama) and various diseases.⁷

Physiological importance of Jatharagni

The main bioenergy that contributes to both health and illness is Jatharagni. Longevity, strength, energy, complexion, immunity, internal heat, and the smooth operation of the other Agnis are all nourished when it functions effectively. The body's ability to stay healthy or get ill is directly determined by the balance or imbalance of Agni. Regardless of rasa (taste), Jatharagni is essential to the metabolism and digestion of all foods. Separating the food into the sara (essential nutrient rich part of digested food) and kitta (waste product) portions is one of Jatharagni's functions. The Jatharagni are a collection of Agnis, such as the amashaya and grahani, that are found in different sections of the digestive system rather than being a single entity. Jatharagni has some control over these Agnis, which operate in a series. Two further kinds of Agni in the body, Dhatvagni and Bhutagni, are also impacted by Jatharagni. It also manages the various Pitta doshas (mind body element associated with fire and water), particularly through Pachaka Pitta (which governs digestion and influences) the activities of Bhrajak Pitta (responsible for skin color), Sadhaka pitta (bridge connecting the heart and mind), Ranjaka Pitta (responsible for imparting color to the nutrient fluid as it transforms into blood), and Alochaka Pitta (responsible for vision). As a result, Jatharagni is the body's main regulator of all Agnis and Pitta subtypes.⁸⁻⁹

Physiological importance of Bhutagni

According to Ayurveda Bhutagni, paka follows Jatharagni paka (it completes the process of intestinal digestion). It is only after the completion of Bhutagni-paka (elemental digestive fire) that the formation of ahara – rasa (fluid formed from the digested part of food) is completed and rasa shoshan (absorption) of rasa is possible. The outcome of Jatharagni paka is two (a) the bhina sanghata (sanghata Bheda) or the spitting of the complex food substances into their ultimate elemental units or molecule. These elemental units are five groups (1) parthiva (2) apya (3) tejasa (4) vayavya (5) akashiya the criteria for such a grouping being the dominance of the particular bhuta over others of the Panchmahabhutaas (fundamental elements) could be judge from its characteristic qualities and (b) the activation of the nascent Agni – bhuta which forms part of the Panchbhautik (structure of each one of the five groups of molecules). The nascent Agnibhuta (manifestation of fire), present in each one of the Panchbhautik groups is known after the generic name of the particular groups i.e. (1) the Agni present in the parthiva group is known as parthivagni (earth) (2) the Agni in the apya group as apyagni (water) (3) the Agni in the tejasa group as tejo – Agni (fire) (4) the Agni of vyavya group as vayavyagni (air) (5) the Agni of the akashiya group as nabhasagni (space). The classification of the end products of Jatharagni paka as of five bhautik groups is based on the criteria of the samanya gunas (the general qualities or properties that are common to multiple substances or elements in the universe). The grahani has been stated to be the seat of Pachaka Pitta, Saman Vayu (vital energy or wind) and Kledaka Kapha (primarily located in the stomach) any impairment in these functions leads to Grahani Roga (GIT disease). Dosha's either individually or in combination getting greatly aggravated (increased) vitiate the grahani (duodenum) such disordered duodenum, eliminates out the food, either undigested or digested, associated with pain in the abdomen foul smell, sometimes as solid and sometimes as liquid. Ayurvedic scholars describe these diseases as Grahani Roga. Strength of Grahani depend upon strength of Agni present in grahani. The impairment of Agni leads to dushana i.e. (structural defect and functional impairment) of grahani resulting in Grahani roga. Grahani roga can be develop independently by factors responsible for vitiation of Agni.

Physiological importance of Dhatwagni

The structure of Dhatwagni doshas and malas (waste materials) are housed in the dhatus, which operate as both structural and functional units.¹⁰ The general development and nutrition of bodily tissues are part of the Dhatwagni (dhatwagnipaaka) process. The term "Dhatwagnipaaka" describes (the series of changes that food's essence goes through as it passes through the seven Dhatwagni entities). Each dhatu is metabolized by the seven Dhatwagni into two parts: mala bhaga (the waste products) and prasada bhaga (the essence).¹¹ Ushma or Dhatwagni (which are enzymes that change the tissue components, metabolize dhatus due to their inherent heat). Through their individual strotas (circulatory channels), the nutritional components of each dhatu support the dhatu that comes after it. For instance, the Rakta dhatu (the blood tissue of the body) is fed by the poshaka Rasa dhatu (the essence of food whose function is to nourish).¹² Prasad bhaga (The arrangement of substances) in this cycle can be correlated with anabolic pathways. Kitta-paka (there may be a connection between catabolic pathways and the organization of metabolic waste products or outcomes). Agnipitta (natural stimuli), are substances that help the cell continue its metabolic cycle. Without changing itself, an impetus regulates how quickly a compound reaction increases. Seldom do catalysts, such as Jatharaagni (substances associated to the stomach) have the ability to function outside of cells. Practically the same as Dhatwagni and Bhutagni, the majority of compounds are intracellular. The term "oxidase" refers to chemical oxidation that catalyzes an oxidation-decrease process. A protease is a catalyst that is concerned with the processing of proteins. The dhatwagnipaaka might be viewed as this extracellular and intracellular digestion.

CONCLUSION

Acharya Charaka has provided a brief explanation of the digestive and metabolic processes of Agni. He stated that different kinds of diet materials are broken down by their own Agni (Bhutagni), supported and improved by Antaragni (Jatharagni), and then further broken down and metabolized by Dhatwagni to give the seven dhatus energy and to associate the body with nutritional strength, complexion, and a happy life. Each of them contains Agni, which keeps the tridosas, dhatus, and malas healthy and normal. That is the significance of Agni in life. Ayurveda emphasizes individualized treatment and total well-being in its all-encompassing approach to illness management and health maintenance. The various factor of the body like life, complexion, strength, health, metabolic process, growth and development, lusture, ojas (vitality) and tejas (brightness), various factors responsible for transformation and metabolism of the tissues and even prana (life) are due to Agni. Until the digestive fire is in yukta (balanced stage), individual remains healthy for a long period and when vikrata (it becomes abnormal and imbalances), the individual becomes ill. If the digestive fire is completely lost, the person dies. So "Agni is the root of life".

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