ISSN: 0976-7126
Saxena & Shrivastava, 14(6-7):48-51, 2023

International Journal of Pharmacy & Life Sciences
Open Access to Researcher

Role of Bhutagni in Digestion

Mayuri Saxena*1 and Navin Kumar Shrivastava2

*1, Associate Professor, Department of Kriya sharir, Shubhdeep Ayurved Medical College & Hospital, Indore, (M.P.) - India

2, Associate Professor, Department of Agadatantraevam Vidhivaidyak, Shubhdeep Ayurved Medical College & Hospital, Indore, (M.P.) - India

Article info

Received: 01/05/2023

Revised: 20/06/2023

Accepted: 23/06/2023

© IJPLS

www.ijplsjournal.com

Abstract

Ayurveda has described an important factor of digestion and metabolism in our body as Agni. Ingested food is to digested, absorbed and assimilated which is unavoidable for the maintenance of life and is performed by Agni in Ayurveda. According to the functions and sites of action Agni has been divided in to 13 types – 1 Jatharagni, 5 Bhutagni, 7 Dhatvagni, Almost processs of digestion and metabolism of food are depend upon jatharagni and bhutagni . Jatharagni gives stimulation to bhutagni because consumed food is panchbhautika, it has to be undergo transformation by the respective panchbhutagni then only it become easy to digestion and tissue metabolism by dhatvagni,

Keywords: Agni, Jatharagni, Bhutagni, Dhatvagni, Digestion etc.

Introduction

Agni literally means fire. In Ayurveda science *Agni* means all those factors which is responsible for digestion and metabolism.All the functions of *Agni* are similar to *pitta dosha* because *Agni* is the *ushma* generated from *pitta dosha* in the body. *Agni* in Ayurveda is reflected in the concept of *Pitta*. The term *pitta* is derived from the root *"tapa"*- "to heat "or "to burn" Sushrut sutra sthan 21**.** From the point of view of Ayurveda, *pitta* has been described as *Agni*(fire), so it performs fire like actions that is *paka*, which refers to *pachana* (digestion) , *Dahana* (burning) including *bhinna samghata* (splitting).

As per Ayurveda the understanding of the structure and function of human body, the pathology and diagnostics are based on its own theories of *Triguna (Sattva-Raja-Tama), Tanmatra,Panchamahabhuta, Tridosha (Vata-Pitta-Kapha)* and *Agni*. Consumption of food may be in various forms that is *leh, paya, bhojya* and *bhakhya*, 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's* then only it becomes easy for tissue metabolism by *Dhatvagnis.* Then processed metabolic products circulate inside the *srotas* continuously with the help of *Vata dosha*. This supports the development, strength, complexion and happiness as well as growth of tissues. *Dhatus* remain in their normalcy after receiving respective nutrients from metabolized food substances. *Jatharagni* is the main substance responsible for disease and health.

***Corresponding Author**

During its normalcy it is responsible for longevity, complexion, strength, health, enthusiasm, well built, luster, immunity *(ojas),* temperature, other *Agni's (bhutagni and dhatvagni)* and other vital functions all are dependent on *jathargni*. Therefore healthy state of body and diseased condition is entirely dependent on status of *Agni* [1].

About the importance of *Agni,* Acharya Charak has mentioned that when *Agni* stop its functions the individual dies, and when the *Agni* of an individual is balance *(sama),* then that person would be healthy and would lead a long, happy, healthy life. But, if the *Agni* of a person is vitiated, the complete metabolism would be disturbed, resulting in disease. Hence, *Agni* is said to be the base (*mool*) of life. [2]

Classification of Agni-

Agni is classified into three classes and the number of Agni enumerated are over 13 as shown below: charak Samhita

1-*Jatharagni* (1)- (present in the gastro-intestinal tract). This includes factors responsible for digestion and metabolism at gastro-intestinal tract level.

2- *Bhutagni* (5)-They act on the corresponding substrate based on mahabhuta composition to make them homologous to body constituents. This includes factors responsible for digestion and metabolism at the organic level. Five types of bhutagni act after jatharagni, but before dhatvagni on the food and its metabolites.

3- *Dhatvagni*(7)-is responsible for transformation of one dhatu into another namely rasagni, raktagni, mamsagni, medo-agni, majjo-agni, asthi agni and shukra agni. This includes factors responsible for digestion and metabolism at dhatu (various tissues).

Bhutagni-

The term bhutagni is derived from two words: bhuta and agni and the word bhuta indicates five fundamental elements (mahabhuta). Agni means the factors responsible for digestion and metabolism

Bhutagni is the agni which is present in a basic element (*Bhutas*). Every cell in our body is composed of the five *mahabhutas* or five basic elements. Naturally, each cell (*dhatu paramanu*) consists of these five *Bhutagni* also. All the nutrients 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 ().[**3]**

There are five mahabhuta and their five respective Agni as follows:

- *Parthivaagni* (factors within the prithvi mahabhuta)
- *Apyaagni* (factors within the apa mahabhuta)
- *Taijasa* or *agneyaagni* (factors within the agni mahabhuta)
- *Vayaveeyaagni* (factors within the vayu mahabhuta)
- *Akasheeya* or *nabhasaagni* (factors within the **akasha mahabhuta**)

[Cha.Sa.Chikitsa Sthana 15/13

Role of *Bhutagni-*

These *Bhutagnis* act after the *Jatharagni* present in the stomach and duodenum, acting on the food and causing their disintegration. As per modern physiology 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.

The initial digestion of food is take place by *jatharagni* which results in its breakdown into five distinct elemental groups that is *parthiva. apya, tejasa,vayavya* and *nabhasa. Jatharagni* stimulates the agni present in each of the five element This Agni digests and metabolizes the substance of that particular group. It assimilates and makes the food components adaptable to corresponding dhatu. The same portion is then subjected to the action of dhatvagni for further assimilation in the body.[4],[5].

Bhutagni Sthan-

The process of digestion and metabolism by *bhutagni* takes place in the *Yakrit* (liver). *Yakrit* (liver) is the site of most of those reactions which

involves alteration of foreign compounds which can be mobilized. [6]

Bhutagnipaka-

According to Acharya Charak, the digestion of food by *jatharagni, Jatharagni* is stated to ignite the *agni* fraction present in each of the five groups, results in the breakdown of food in to five elements that is *parthiva. apya, tejasa, vayavya* and *nabhasa*. [7]**.** It would seem that the ultimate products of *jatharagni paka* are situably processed by *bhutagni paka*,which are now fit to be acted upon by the specific *Agni* associated with each one of the seven *dhatus*,before they are finally synthesized as a part of latter.

The foregoing description of *bhutagni paka* resemble the description of auto digestion, comparable to anaerolic reactions this step would seem to be necessary, as the food consumed are foreign to the body that is *vijatiye* and unless they are situably processed they may not be converted as organism specific that is *sajatiye* substances.This can be illustrated with the example of starch,fats,and protein of the food which by the process of digestion are rendered fit to be re-synthesised as organism specific carbohydrate,fat and protein.thus, vegetable starch or cellulose is first broken down to its elemental form that is glucose and its polymers towards the end of the intestinal digestion before they are again rebuilt in the body as organism- specific animal starch or glycogen .Like fats derived from plants and animals are broken down during the process of digestion to their elemental forms. Fatty acids and glycerols before they are rebuilt in the body as organism-specific lipids. The same is case with protein also.These are broken down in to their elemental forms amino acids before they are synthesized as organism – specific protein albumin,fibrinogen,most of the globulins and non –essential amino acids.

It would, seem that *bhutagni paka* takes place in the *adha-amashaya* itself ,it would appear from the available description of the *paka*, that it resembles in some respects events which take place in the small intestine and in the liver.It was shown that *yakrit* itself is anatomically and functionally related to *kostha*.Hence, it may be posited that the *bhutagnipaka*,which is commenced in the *adha-amashaya* , is continued and completed in the *yakrit.*

Ahara representation *shadras* inproper proportion(balanced diet)

⇩

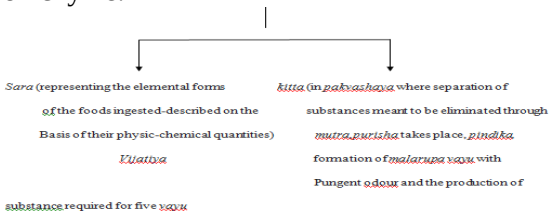
I stage-*Madhura Bhava* (*urdhva amasaya*/stomach in the fundus- starch digestion)

↓

II stage-*Amla bhava (urdhva amasaya* in the body and pylorus of the stomach-protein digestion- formation of peptones and acidifies chime)

↓

Pachakagni (jatharagni)- passage of the gastric digested (acidified chyme) to *adha amashaya(ksudrantra)* resulting in the discharge,in this place of *acchapitta* and its action on chyme.



III stage-*Bhutagni paka*

- *Parthiva+parthiv agni*
- *Apya +apya agni*
- *Taijasa+taijasa agni*
- *Vayavya+vayavya agni*
- *Nabhasa+nabhasa agni*

↓

Dhatvagni paka- upadhatu and *anna rasa* for utilization for the production of *Sajatiye dravya.*

Parthiva- structral constituents of body i.e. proteins, muscles *(peshi),* vessels *(sira),* ligaments *(snayu),* tendons *(kandara),* bones and cartilages.

Apya-Body fluids like plasma, tissue fluids, lymph, adipose tissue & other lipid-containing structures like globulin and lipoproteins. Yellow & red bone marrow, male and female reproductive elements.

Agneya-Elements constituting R.B.C., enzymes; metals and minerals like fe, cu, Co, Mg, Ca, K, Na, Cl, I etc. & many energy locked substances,

eg. phosphorus linked sugars, vitamins (coenzymes), some hormones like thyroxin, bones & cartilages

Vayavya-Constituents required for the synthesis of neural structures and certain hormones like acetyl choline and sympathin etc., bones & cartilages,

Nabhasa-Empty spaces and cavities required for physiological processes

Functions of bhutagni-

- Digestion and metabolism of corresponding elements of food substance.
- Nourishment of indriya .
- For replenishment of guna in the body.

Bhutagni is required for the third stage of digestion, which forms unique material for the sense organs. Five bhutagni exist for taking the five elements portion of the digested food mass and converting them into nourishing substances for the five sense organs. Some of these specialized materials are the rods and cones responsible for photosensitivity in the eye, special liquids around the taste buds on the tongue, the mucus membrane material inside the nose that aids in smell, and special cartilage forming the architecture of the ear. Such substances specific to each sense organ are prepared by bhutagni. [8]

Conclusion

This article shows that the formation of *sara* and the separation of *kitta pakas* occur towards the end of *Avasthapaka, Jatharagni* and *bhutagni pakas* which by implication would appear to take place in the terminal portion of ileum. But available experimental evidence and observation shows that as digestion of different compounds of food that is fats , proteins , carbohydrates are completed , absorption of the digested fraction take place almost immediately, the undigested portion being taken over for further reactions as it passes down .It would therefore seem that the process of digestion and absorption follow each other very closely throughtout the entire length of *ksudrantra* and by the time, the food reaches the ceacum,hardly any digestable component of it is left.the portion that passes through the ceacum represents,for the most part undigested cellulose.If these observations are to be extended and applied to *jatharagni pakas* and *bhutagnipakas* then *jatharagnipaka* of the *aharadravyas*, should be immediately followed by bhutagni paka,resulting in the separation of sara and its absorption immediately the *kitta* being moved further down where the process repeats itself,until hardly anything of *sara* is left.In this view, the two processes-*jatharagni* and *bhutagni vyaparas* are concurrent ones.

Reference

1. Sharma RK, Das VB: Editor Charaka Samhita of Agnivesa, Chikitisa Sthan; Grahani Dosa Adhyaya: Chapter 15, Verse 3, Varanasi: Chaukhamba Krishnadas Academy, Edition 1, Vol. IV, 2009: 1-2.
2. Sharma RK, Das VB: Editor Charaka Samhita of Agnivesa, Chikitisa Sthan; Grahani Dosa Adhyaya: Chapter 15/4.
3. Charaka Samhita, Shastri K, Chaturvedi G. Varanasi: Chaukhamba Bharti Academy; 2004 Cha. Chi. 15/13, 14.
4. Charaka Samhita. of Agnivesa Chikitsa Sthana 15/13.
5. Astang Hrudaya.Sutra Sthana 9/6-8.
6. Astang Hrudaya. Sharira Sthana 6/59-60][3], [A.H. Sharira Sthana 3/59-61.
7. Chakrapani on charak chikitsa sthan adhyay 15 shlok13.
8. Charaka Samhita,.Chikitsa sthana 15/3-4, 12-14]

Cite this article as:
Saxena M. and Shrivastava N.K. (2023). Role of Bhutagni in Digestion. *Int. J. of Pharm. & Life Sci.*, 14(6-7): 48-51.

Source of Support: Nil
Conflict of Interest: Not declared
For reprints contact: ijplsjournal@gmail.com