

PHYSIOLOGICAL UNDERSTANDING OF AVASTHAPAKA: A REVIEW

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ABSTRACT

In *Ayurvedic* text *Ahara Paka* (digestion) is divided in two stages, namely *Avasthapaka* and *Nishthapaka* or *Vipaka*. *Ayurveda* is the ancient medical science, in which *Ahara* containing *Shada Rasa* undergo *Pachana* at different level in order to nourish the *dhatu*. *Ahara* converts in *Ahara Rasa* by *Jatharagni*, *Ahara Rasa* provides nourishment to *Deha Dhatu*. The *Jatharagni* is primarily situated in the *Grahani* and it helps in the digestion of *Ahara Rasa* of appropriate quality taken in required quantity & in right time. *Avasthapaka* is the stage in the state or form of *Ahara* in the *Amashaya* and *Pakvashaya* in the course of digestion. *Avasthapaka* includes three

stages i.e. *Madhura Avasthapaka*, *Amala Avasthapaka*, *Katu Avasthapaka* for the completion of digestion process associated with the development of *Kapha*, *Pitta* and *Vata Dosha* respectively. *Jatharagni* initiates and maintains *Pachana* of *Ahara* into *Ahara Rasa*. After that absorbed to respective *Dhatu* by the action of *Dhatwagni* and *Bhutagni*. Equilibrium in this process lead to *Swasthya* (health) and variation in this process lead to various *Vyadhis* (diseases). Hence, the stage and process of *Avasthapaka* (process of digestion) plays a vital role in maintaining the state of health.

KEYWORDS: *Avasthapaka*, *Jatharagni*, *Ahara Rasa*, Disease.

INTRODUCTION

Ayurveda is the ancient medical science and science of life. In *Ayurveda* *Ahara* is included in the *Trayopastambha*.^[1] *Ahara* maintains and supports *Deha*, *Dhatu*, *Ojas*, *Bala* and *Varna* with the help of *Agni*.^[2] *Avasthapaka* is name given for stage wise digestion of *Ahara* in *Ayurveda*. During these stages of digestion *Doshas* are formed and nourished. *Doshas*

enriched in their places also support their subtypes located in other places of body. The ingested *Ahara* has to get digested to undergo absorption. Every food particles should undergo different stage of digestion in order to convert macro-nutrients into micro particles to help easy absorption. Factors like *Agni*, *Ahara Parinamkara Bhava* and *Ahara Vidhi Visheshaytana* is participates in this process. Hence, all these factors collectively maintain the process of digestion leading to *Utpatti* of *Prakrita Dosha* thereby achieving *Dhatu Poshan*. In modern science, digestion and absorption of food component like, carbohydrates, proteins, fats, lipids and minerals etc. occur at different levels in gastrointestinal tract along with the formation of metabolic end products. *Avasthapaka* is a process and stage of food digestion, in which biochemical and physical transformation takes place at three places and in three stages of gastro-intestinal tract. Where, because of specific type of digestion, there is three *Rasas* i.e. *Madhura*, *Amla*, and *Katu* are arose respectively. On this basis, has been classified into three groups:

1. Madhura Avasthapaka

As soon as the food consisting of six *Rasas* is taken, sweetness is manifested during the first stage of *Avasthapaka* resulting in the production of thin and frothy *Kapha*. Since, mouth and *Amashaya* is the seat of *Bodhaka* and *Kledaka Kapha* respectively and these *Kapha* is responsible for physio-chemical changes in taken *Shada Rasa Ahara* by *Sanghata* (cleavage), *Kledana* (hydration), and *Snehana* of *Anna*. The process of digestion is start from mouth, only the fraction of it commenced in the mouth. After that food propelled into *Amashaya* for further digestion resulting into stimulation of *Kapha* which is thin and frothy in nature. The movement of the food from the mouth to the *Amashaya* is brought about by *Prana Vayu* and it is said to be responsible for *Sthivana* of saliva, *Kshavathu*, *Udgara*, *Shvasana* and *Annapravesha*.^[3,4,5]

2. Amla Avasthapaka

The semi-digested food moves downwards from the *Amashaya*, this semi-digested and sour stuff stimulate the production of *Pitta* which is transparent in nature, since *Pitta* is also of sour nature which mixed with sour food stuff.^[6] This process of digestion is production of acidified chyme, which has been characterized by both *Charaka* and *Vagbhata* as *Vidagdha*. The term *Vidagdha* as interpreted by *Chakrapanidatta* as “*Pakwapakwam*” or *Kinchitapakwam*, *Kinchitapakwam*” i.e. partly or not fully digested.^[7,8]

3. *Katu Avasthapaka*

The third aspect of *Avasthapaka* is *Katu Avasthapaka*. When the food products reaches the *Pakwashaya* (colon) after the completion of *Amla Avasthapaka* for further digestion process. In this stage food gets further digested and dehydrated by the *Agni*, and it takes a bolus form resulting in *Katu Rasa*. This aspects relates to the acrid and pungent nature of the reactions that occur in the *Pakwashaya* or large intestine. *Charaka* has succinctly described the way in which the food residue or *Anna Kitta* is dealt with in this part of the GI tract. *Acharya Charaka* says “the material passed down from the *Amashaya* having reached the *Pakwashaya*, is dried up and converted into lumps by heat – an acrid and pungent gas being produced in the process”.^[9]

Amplifying this description *Chakrapanidatta* has observed that the term *Shoshana* used by *Charaka* instead of *Pachanama* is significant. The former in this view, relates to dehydration of the food residue which has been brought to the *Pakwashaya*, whereas the latter refers to the digestion of food in the *Amashaya* by *Agni*. The term “*Paripindita Pakwashya*”, according to him, refers to the process of the formation of fecal lump. The term “*Vayusyat Katubhavat*” described the production, in the process of an acrid and pungent gas.^[10]

AIM AND OBJECTIVE

To understand the physiological importance of *Avasthapaka* in the light of contemporary knowledge of digestion.

MATERIALS AND METHOD

Materials related to *Agni, Ahara paka* in *Ayurveda* and other related topic have been collected from various *Ayurvedic* Classical texts. *Charaka samhita, Sushruta samhita, Ashtanga Hridaya* and their commentaries are used for this review article. The modern medical literatures as well as other various related information were collected from related website.

DISCUSSION

Avasthapaka (the process of digestion) includes *Madhura Avasthapaka, Amla Avasthapaka* and *Katu Avasthapaka*. *Madhura Avasthapaka* occur in *Amashaya* (from oral cavity to stomach), *Amla Avasthapaka* occur in *Grahani* (small intestine) and *Katu Avasthapaka* occur in *Pakwashya* (large intestine).^[3]

The various events associated with the process of digestion include following

1. Mixing and lubricating the food with secretion of the GI tract to ensure uniform homogenization.
2. Enzymatic secretion from various glands and cells lining, the GI tract to breakdown complex molecules into simpler molecule such as oligomers, dimers and monomers.
 - (i) All digestive enzymes act by hydrolysis.
 - (ii) Most GI tract enzymes are secreted as inactive precursors which are the activated in the GI tract.
3. Secretions of acid or bicarbonates from the GI tract to insure optimal P^H for digestion.
4. In the case of fats, secretions of emulsifying agents such as bile acids helps in emulsifying fat thereby promoting fat digestion.
5. Final digestion of most oligomers and dimers occurs at the small intestine brush border resulting in release of monomers that are finally absorbed.^[11]

The food that is propelled mouth into the *Amashaya* and get mixed with the *Drava* or fluid present in this organ is broken down (*Bhinnasamghatam*) and softened. In modern aspect the act of spitting of saliva and swallowing of food are important in the present context.

Overview on Avasthapaka

Rasa performs important function in *Avasthapaka*. In the initial stage of digestion, *Kapha Dosha* is generated due to *Madhura Bhava*. Because of *Kapha Vriddhikara Guna*, *Madhura Avasthapaka* predominates in stage. If the *Guna* in food are *Katu*, *Laghu*, *Tikshna* etc. copious *Pitta* is formed. If the food is predominated with qualities like *Sheeta*, *Madhura*, *Guru* etc. only small amount of *Pitta* is generated. Hence *Guna* of *Ahara* contributes in *Udirana* of *Doshas* in different stage of digestion. This holds good for all the stages of *Avasthapaka*.

Ahara containing *Shada Rasa*, undergo digestion irrespective of the qualities such as *Madhura*, *Amla*, *Lavana*, *Katu*, *Tikta*, *Kashaya*, *Kapha Dosha Udirana* take place during the *Madhura Avasthapaka*, *Pitta Dosha* and *Vata Dosha Udirana* take place during *Amla* and *Katu Avasthapaka* respectively. It is not necessary that food should come in contact with *Agni* to undergo *Avasthapaka*, default location of *Kapha* and other *Dosha* are fixed. *Bhava* like *Madhura Bhava*, *Amla Bhava* etc. permanently exist in default location, these *Bhava* are responsible for food to turn into stages and generate *Kapha* and other *Doshas*.

Madhura Rasa in *Koshtha* located above *Hridya*, replenishes *Kapha Dosha* and contributes to *Shareera Bala*. *Amla Rasa* expressly located between *Nabhi* and *Hridya* and by default *Pitta* gets replenished there. *Katu Rasa* particularly located below *Nabhi Pradesha* and by default *Vata* gets replenished there.^[12]

CONCLUSION

The concept of digestion and assimilation of food more or less similar to modern science in several aspects. *Aharapaka* occurs in different stages of *Avasthapaka*. In each stage specific *Bhava* predominates leading to formation of *Doshas*. In *madhura*, *Amla* and *Katu Avasthapaka* *Madhura*, *Amla* and *Katu Rasas* predominates and results in *Udirana* of *Kapha*, *Pitta* and *Vata Doshas* respectively. These maintain physiological homeostasis. If this physiological homeostasis is disturbed then it leads to *Vaishamya* of *Doshas*, which play a definite role in the *Samprapti* (pathogenesis), leading manifestation of *Vyadhi*.

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