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CONCEPTUAL STUDY ON AVASTHAPAKA

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ABSTRACT

In Ayurveda, *Ahara* is considered as one among *Tryo-upasthamba* which supports *Deha*, where *Ahara* is mentioned in the beginning which signifies the importance of *Ahara*. The conversion of heterogenous *Panchabautika Ahara* to homogenous components takes place by the process of digestion with the help of *Agni*. Digestion is defined as the process by which food is broken down into simple chemical substances that can be absorbed and used as nutrients by the body. The Digestive process is accomplished by the mechanical and enzymatic breakdown of food into simpler chemical compounds. In Ayurveda digestion is explained as *Avasthapaka* which takes place in 3 stages, namely *Madhura Avasthapaka, Amla Avasthapaka, and Katu Avasthapaka*. Any changes in these stages lead to the formation of diseases.

Keywords: *Avasthapaka, Madhura Avasthapaka, Amla Avasthapaka, Katu Avasthapaka*, digestion.

INTRODUCTION

Ahara plays an important role in maintaining a good energy level. The one who consumes proper food becomes capable of nourishing the *Deha Dhatu*, promoting *Oja*, *Bala*, and *Varna*, only in the presence of normal functioning of *Agni*. [1] *Ahara* has *Shad Rasa* undergoes *Pachana* at different levels in order to nourish *Dhatu*. The food consumed by mouth undergoes a process of digestion, metabolism, and `assimilation. *Agni*, *Samana Vayu*, *Pachaka Pitta*, and *Kledaka Kapha* play a very important role in digestion. *Samana Vayu*, present near the site of *Agni* stimulates the *Pachaka Pitta* for digestion and separation of food. *Kledaka Kapha* helps in softening the food materials. In Ayurveda, the whole process of digestion is termed as *Avasthapaka* and it takes place in 3 stages namely *Madhura Avasthapaka, Amla Avasthapaka,* and *Katu Avasthapaka*, which in turn stimulates *Kapha, Pitta*, and *Vata* respectively. Any de-arrangement in *Tridosha* leads to disease.

Aim

To understand *Trividha Avasthapaka* and their relationship with *Dosha*

Materials and methods:

Concept of *Avasthapaka* as explained in *Samhitha* and modern concepts from the textbook of physiology

Avasthapaka:

Avastha-means stages.

Paka- means changes taken by *Agni*.

Paka is the digestion of ingested food material. It involves a change in the form, structure, and taste of ingested materials.

When food is ingested, it has to be digested to get absorbed. In the Ayurveda concept of digestion, every food particle undergoes a common path of 3 stages.

Each of these 3 stages through which every food particle has to pass while getting digested is called *Avasthapaka*. Each of these stages is denoted by *Rasa*.

Prana, with its power of attraction, draws the ingested food into the *Koshta*. This food gets softened by an unctuous substance after which it gets split into smaller particles by liquid (saliva). Thereafter the *Agni* located in *Udara* gets stimulated by *Samana Vayu*. The *Agni* stimulated by *Vayu* helps in the digestion of food of appropriate quality taken in the required quantity and at right time for the promotion of longevity. [2] *Jataragni Paka* or digestion of food has been described under *Avasthapaka* as a change in the state or form of food substances taking place. Even though the *Pachaka Pitta* is stated to digest the food, *Tridosha* takes part in this process. *Prathama Avasthapaka* takes place in *Urdwa Amashaya Dwithiya Avasthapaka t*akes place in *Adho Amashaya* and *Trithiya* in *Pakwashaya*. During this stage *Madhura, Amla,* and *Katu* become dominant in each phase of digestion, on this basis it is classified into 3 phases:

- *Madhura Avasthapaka*-predominant of *Kapha Dosha*
- *Amla Avasthapaka*-predominant of *Pitta Dosha*
- *Katu Avasthapaka*-predominant of *Vata Dosha*

Madhura Avasthapaka:

Even though the ingested food contains six *Rasas*, the first stage of digestion is *Madhura Paka*.[3] During this stage, the ingested food is subjected to the initial phase of digestion where digestion takes place in *Urdwa Amashaya*. As soon as the food consisting of *Shad Rasa* is taken, sweetness (*Madhura bhava)* is manifested resulting in the *Udirana* of *Phenabhuta Kapha*. [4] Here *Madhura Rasa* is subjected to *Paka* as it is predominant of *Prithvi* and *Jala mahabhuta.* 1st stage of digestion gives rise to *Kapha Dosha* and *Madhura rasa.*

The digestion of carbohydrates starts in the oral cavity. When the food is chewed, it is mixed with saliva which contains ptyalin (alpha-amylase) which is an enzyme for digesting starches and mucus secretion that contains mucin for lubricating and surface protective purposes. Saliva does *Pachana* and *Kledana* of carbohydrates that is this enzyme hydrolyses starch into disaccharide maltose and other small polymers of glucose. The food remains in the mouth only for a short period of time. With the help of *Prana Vayu* and *Samana Vayu* deglutition of chewed food to the stomach takes place. Starch digestion continues in

the body and fundus of the stomach for long as one hour before the food becomes mixed with stomach secretion. Mixing of food in the stomach with gastric secretions forms a semifluid mixture called chyme, which resembles the formation of *Phenabhuta*. Carbohydrates are almost converted into maltose and other small glucose polymers before passing beyond the duodenum or upper jejunum. [5] These glucose polymers are sweet in nature hence this stage of digestion is called *Madhura Avasthapaka.*

Amla avasthapaka:

Madhura Avasthapaka takes place in *Urdwa Amashaya* whereas the *Amla Avasthapaka* takes place in *Adho Amashaya*. [6] *Amla Rasa* has predominance of *Teja* and *Jala Mahabhuta*. *Jataragni* acts on food, which is already made into small fragments by teeth and breaks it into *Panchabauthika* components due to *Teja* and *Jala mahabhuta*.They together constitute *Amla Rasa* and *Pitta Dosha*. The *Madhuribhava* of *Avasthapaka* seems to be ended by *Amlatwa* of *Pachaka Pitta*. The partly digested food of *Madhura Avasthapaka* moves into *Adho Amashaya* and enters into *Amlapaka*. [7] During this process of digestion, the food remains in *Vidhagda* form which results in the formation of *Amlabhava* in *Pachyamanashaya* and *Udirana* of *Pitta* takes place. [8] The second stage of digestion gives rise to *Pitta* and *Amla Rasa*.

Pepsin is the important peptic enzyme of the stomach, is most active at a pH of 2.0 to 3.0, and is inactive at a pH above about 5.0. Consequently, for this enzyme to cause the digestion of proteins, the stomach juices must be acidic. The gastric glands secrete a large quantity of HCL at a pH of 0.8 but by the time it mixed with stomach contents and with secretions from nonoxyntic glandular cells of the stomach, the pH then averages about 2.0-3.0 a highly favourable range of acidity for pepsin activity. Protein digestion takes place with the help of proteoses, peptones, and a few polypeptides. Most of the protein digestion occurs in the upper small intestine, the duodenum, and the jejunum under the influence of proteolytic enzymes from pancreatic secretion. Immediately upon entering the small intestine from the stomach, the partial breakdown products of protein food are attached by major proteolytic pancreatic enzymes namely trypsin, chymotrypsin, carboxypolypeptidase, and proelastase. [9]

Katu avasthapaka:

The partly digested food is propelled from *Adho Amashaya* to *Pakwashaya* for the completion of digestion. When the food product reaches *Pakwashaya*, it gets further digested and dehydrated by *Agni* and it takes a bolus form resulting in *Katu*, which stimulates *Vata*. [10] This stage occurs due to the separation of *Akasha* and *Vayu Mahabhuta*. They together constitute *Katu Rasa* and *Vata Dosha*. So, the third stage of digestion because of *Katu Bhava* leads to the origination of *Vata Dosha*.

All the fat digestion takes place in the small intestine except a small amount of less than 10% which occurs in the stomach by lingual lipase secreted by lingual glands in the mouth and swallowed with saliva. Fat digestion starts with the breakdown of fat globules into small sizes so that water-soluble digestion enzymes can act on the globules surface. This process is called the emulsification of fat. As the content reaches the large intestine, absorption of the remaining water and electrolytes get started. The large intestine can absorb a maximum of 5-8 litres of fluid and electrolytes per day. Bacterial activity occurs in *Pakwashaya*. They are capable of digesting a small amount of cellulose. In this way providing a few calories of extra nutrition to the body. Other substances formed as a result of bacterial activity are vitamin k, vitamin b12, thiamine, and riboflavin and various gases contribute to flatus in the colon, especially carbon dioxide, hydrogen, and methane. The odour of faecal matter is due to the presence of odoriferous (*KatuBhava*). Products include indole, skatole, mercaptans, and hydrogen sulphide. [11]

DISCUSSION

When the person excessively indulges in *Kaphakara Ahara, Madhura Avasthapaka* predominates. *Ati Sampurna, Ati Madhura, Sheetha Snigdha, Avyayama, Divaswapna, Sheshmakara Ahara, Achintya* leads to the production of excessive *Kapha Dosha*

leads to excessive nourishment leading to *Vridhi* of *Medo Dhatu* results in *Sthoulya*. [12]

Pitta generated due to increased or prolonged *Vidaha Avastha* of digestion by excessive *Amla* nature of *Pitta* is termed as *Amlapitta*. Patients with *Amlapitta* indulge in *Virudha Bhojana, Vikritha Bhojana, Athyadika Amla, and Vidhaha Anna* resulting in digestion predominating with *Amla Avasthapaka*. Altered *Amla Avasathapaka* causes *Amlapitta*. [13]

If the person excessively indulges in *Vishamashana*, *Ruksha Ahara Athilanghana*, *Rathri Jagarana*, *Ati Vyayama*, *Vega Dharana*, *Chinthya* leads to *Vata Dosha* aggravation and disturbance of *Katu Avasthapaka* leading to *Dhushana* of *Apaana Vata* resulting *Vibhanda*. [14]

CONCLUSION

Aharapaka occurs at different stages of *Avasthapaka*, in each stage, specific *Bhava* predominates leading to the formation of *Dosha*. If *Agni* is hampered it will impair the physiological equilibrium of *Dosha* resulting in impairment in A*vasthapaka* resulting in the formation of disease.

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