



Review Article

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CORRELATION OF FOOD DIGESTION PROCESS: AYURVED AND MODERN VIEW, WITH SPECIAL REFERENCE TO AGNI

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ABSTRACT:

Ayurved is the most ancient system of medicine in the world. It is the science of life. The first and foremost principle of Ayurved is the Protection of health of a healthy person. Acharya Sushrut has described the status of healthy person i.e. *Swastha as --A person whose Dosha ,Agni,Dhatu,and Mala kriya are in Samya sthiti i.e.prakritavastha,having prasanna atma indriya and mana is called Swastha. To maintain this state uttam Ahar dravya and its proper Pachan is important.*

The definition of health given by World Health Organization is " A state of complete physical, mental and social well being and not merely the absence of disease ". This reveals that the definition of health given by Ayurveda and W.H.O. are nearly the same. To maintain this state *quality food and its proper digestion* is important.

Acharya Charak stated in *chikitsa sthan adhyaya 15* that –An important element of body that is the *poshak of Deha, Dhatu,Oja,Bala and Varna* is called as "AGNI ". This Agni digests the food we take and nourishes the whole body. If its work get hampered it leads to formation of *Apakva ahara* i.e. indigested food leads to many diseases, so it is important to know the digestion of food and concept of Agni. This article describes the digestion of food in accordance with Ayurved and Modern view as well. For that purpose Ayurved samhita and Modern textbooks are referred.

In Ayurveda the digestive process starts from mouth and ends in guda i.e. Annavaha strotas. For this Bodhak Kapha, kledak kapha, Pachak Pitta, Saman Vayu, Apan Vayu, Pran vayu plays an important role. For the digestion absorption and nourishment upto cell level Jathragni, Panch bhutagni converts the ahariya dravya into pakva ahara rasa and then saar kitta vibhajan. The Saar bhag is then again absorbed by Saptadhatwagni and nourishes the particular dhatu.

In Modern Science, Digestive process is explained as Mechanical digestion includes maceration of food, peristalsis, opening of sphincters and peristaltic movements at different organs. The Chemical digestion includes the digestion and absorption of food by gastric juice, pancreatic juice, bile, intestinal juice.

The concept of Agni can be correlated in ayurved and modern view as- Jathragni resembles with the gastric juice especially the Hydrochloric acid. Panchbhutagni resembles pancreatic and bile salts. Saptadhatwagni resembles intestinal juices.

In Ayurveda the process of digestion is controlled by Pran vayu which stays in shir. In the same way modern science stated that digestion is controlled by neuronal and hormonal system.

The above said correlations are mentioned in tabular form for easy understanding.

Keywords:

Agni, Swastha, Dosha, Dhatu, Pachan, Digestion.

Aim:

To elaborate the process of digestion of food through Ayurved granthas and Modern science textbooks.

Objectives:

To study the role of Agni in digestion and absorption of food in body.

INTRODUCTION:

Agni is primarily important for the digestion of all types of food in any form. It is responsible for biotransformation of Ahar i.e. food into *Sharir Dhatus*. The strength, complexion, potential, glow and anabolism of body depend on agni (Charak samhita. chikitsa sthan.15/5). The role of Agni not only limited upto digestion but it also helps in *sara kitta vibhajan*, the separation of *Ahara into Rasa and Mala*. Ancient books of Ayurveda explained the digestion of food. Bodhak kapha, Kledak kapha, Pachak pitta,

Saman vayu, Vyan vayu, Apan Vayu, Pran Vayu are the main doshas which helps in this. The Jatharagni is the main type of Agni have control on co-ordination and functioning of other types of Agnis. Panchbhutagni are the another type of Agni that digest the *Panchbhutatmak Bahya Ahara* and digest *Jaliya (jal mahabhut pradhan), Akashiya (Akash mahabhut pradhan)* etc Ansha(part) from it. The Agni at the level of Dhatus called Dhatwagni. It absorbs its *poshak ansha* and gives strength to that particular Dhatu. As long as the Agni is normal or within Physiological limits, digestion and metabolism are also maintained within the physiological range and are likely to be deranged with the disorder of Agni.

According to modern science of Physiology, the digestive system carries out five basic activities as Ingestion, Movement of food, Digestion, Absorption, Defaecation, Mechanical Digestion, Chemical digestion and thus the body gets nourishment from the food. According to Ayurved concept, Sthul pachan and Sukshma pachan are the main processes occurs in the digestion of food. Jathragni convert the bahya ahar dravya into ahar rasa is the sthul pachan and then Dhatwagni and Bhutagni digests and absorbs the poshya ghatak from ahar rasa and thus completed the sukshma pachan. This ahar rasa then converted into poshya ghatak and nourishes dhatu. While studying digestion process mentioned in ayurved and modern texts, some similarities are found. The jathragni can be correlated with Gastric juice; Dhatwagni and Bhutagni can be correlated with Pancreatic juice, intestinal juice and bile salts. Also Ayurved samhitas explained the role of Pran vayu, Saman Vayu, Apan Vayu in the process of digestion which is important of Anna pachan, Grahan and vahan. This can be correlated with the neuronal control of digestion. This Article especially correlates the view of digestin process according to Ayurved and Modern physiology as well and the role of Agni.

Materials and Methods:

References of Agni and Food digestion process have been described in Ayurved samhitas and Modern Physiology texts are studied and collected.

All the data were compiled, analyzed and discussed below.

Ayurved Concept of Agni --

Origin of Agni: The origin of Agni is with Vayu and Origin of Vayu is with Akash mahabhut.

Synonyms of Agni: Antaragni, Kayagni, Koshthagni, Audarya, Tejas, Pachakagni.

Function of Agni: Digestion, Absorption, *Sara kitta Vibhajan*, *Dhatuposhan* and thus provide *Ayu, Varna, Bala, swasthya, Utsaha, Upachaya, Prabha, Oja, Teja, Prana*. (Charak samhita. chikitsa sthan. 15/5).

Importance of Agni: Acharya Sushruta stated Agni as “Bhagwan” due to its extreme importance in keeping equilibrium of health. (Sushrut. Sutrasthan 37).

In Bhagwatgita adhyaya 15, Lord Krishna stated that, “I remain within the creatures in the form of Agni and digest *chaturvidha ahara*.”

Acharya Charak explained in chikitsasthan adhyaya 15 that, if intensity of Agni reduces, it causes disease and hence it is called as root of diseases. If it is extinguished, the person dies.

In Ashtang hridaya nidanasthan adhyaya 12, the basic concept of Agni is well mentioned as –there is no fundamental difference in physical and biological fire or Agni, except that the latter is associated with living organism.

Types of Agni: In Ayurveda Samhita, Agni has been described by Acharyas in 13 types as-

- 1) 1 Jatharagni 2) 5 Bhutagni 3) 7 Dhatwagni.

Explanation:

- 1) **Jatharagni** : According to Madhav Nidan, The *Ahara* enters in *Mahastrotas* through *Mukha*, it gets digested by the various *Kshara and Amlarasa* secreted in *Mahastrotas*. (Madhav Nidan Adhyaya 6/2). The Agni responsible for this process is called as Jatharagni. Ashtang Hridaya sutrasthan adhyaya 12 stated that this Jatharagni resides in *Koshtha*, especially in *Grahani* and digests all types of food. Thus Acharya Vagbhat gives prime importance to Jatharagni, in Vagbhat Sharirsthan adhyaya 3/71.
- 2) **Bhutagni** : Acharya Charak stated *panchmahabhutgunayukta Ahar dravya* are digested by five bhutagni as *Parthiv, Apya, Agneya, Vayaviya and Nabhas*. The process of Bhutagni –paka is not limited to the *Annavaha strotas* (G.I.Tract) but it extends up to the *Dhatu* level also. (Charak samhita chikitsa sthan 15/13).

3) **Dhatwagni:** Dhatwagnis are related to the pakas of the nutrients at Dhatu level .Acharya Charak said all the seven dhatus have their own Agnis, in Charak chikitsa stahan adhyaya 15/15.*Rasagni, Raktagni, Mamsagni, Medagni, Asthagni, Majjagni and Shukragni* are the seven dhatwagnis. They maintain the quality and quantity of respective dhatus.

While explaining the Concept of Agni Acharyas divided the process of Pachan into Two main Types:

- a) **Sthul Pachan-** Started from the digestion of food in mukha to amashaya and grahani.
- b) **Sukshma Pachan-** The pachan ,absorption of pakva ahar rasa at the level of Dhatus.

The steps in pachan is as follows-

1) **Avasthapak-** This process occur in Koshta. Any Ahara or Aushadhi dravya enter in Annavaha strotas is get digested by Pachan – Shoshan- Saar kitta vibhajan – purish and mala nirmiti. While going through these processes the Rasabhav of ahar dravya changes.This Rasantar Occur in Different Avastha of Anna pachan hence it is called as Avastha pak or Prapak. This is elaborated by following Table-

Avastha Paak	Sthan	Kaal bhojanott ar	Vighatak Mahabhut	Rasa utpatti	Dosha udiran	Sharir lakshana
Pratham	Mukh to Amashay	3 to 3.5 hrs	Prithwi, Jal	Madhur	Kapha	Aalyasa, Mukhmadhurya, Mandata
Dwitiya	Adho amashya to Grahani	6 to 6.5 hrs	Tej	Amla	Pitta	Alpa Anta koshtha daah
Tritiya	Pakvashaya	12hrs	Vayu, Akash	Katu	Vaat	Utsah, Agni sandhukshan, Kshudha janiv.

2) **Vipak**- At the end of Digestion (jara nishthakale) the specific ras is formed which cannot be changed further as the digestion process is completed is called as Vipak or Nishthapak. This form of Rasantar is now circulate with Rasadhatu all over the body and nourishes the dhatus with there own Dhatwagni. Vipak Karya depend on the pradhan rasa of ahardravya taken. Eg. Madhur Vipak karya- Malmutra nissar, kaphavardhak, and Shukravardhak. (Ref Charak samhita sutrasthan 26/61-62). There are different opinions of different Acharyas on the types of Vipak as-

- a) **Shadvidh Vipakwad**- Ras are 6 as Madhur, Amla, Lavan, Katu, Tikta , Kashay accordingly the Vipak are 6.
- b) **Panchvidha Vipakwad**-According to Sushrutachrya, (Sushrut samhita sutrasthan-46) the type of Vipak are as the type of panchbhautik ahar. They are as Parthiv Vipak, Aapya, Tejas, Vayaviya and Nabhas Vipak.
- c) **Trividh Vipakwad**- As the doshas are three accordingly the Vipakas are three as- Madhur vipak- Kaphavardhak. Amla vipak- Pittavardhak, Katu vipak Vatvardhak.
- d) **Dwividha Vipakwad**- As per Sushrutacharya, Vipak are of two type a) Guru-Prithwi and Jal mahabhutadhikya dravya- Guruvipak. b) Laghu Vipak- Tej, Vayu, Akash Mahabhutadhikya dravya.

3) **Dhatuposhan Nyay**-

The poshak ahar rasa formed in the process of pachan is now ready for nourishment of Dhauts. In this process Dhatwagni and Bhutagni Helps for the sukshma pachan. To explain this Acharyas mentioned Dhatuposhan nyay, which elaborate how each dhatu get poshan with the poshak ahar rasa.

- a) **Kedar kulyanyay**- Kedar means farm and Kulya means the small canals of water in the farm. The first one is get the poshak ahar rasa first. According to this, Dhatu get poshan chronologically. As the Ras dhatu get nourishment first, then Rakta dhatu And then the next one. Dalhanacharya and Chakrapani both accepted this nyay.
- b) **Ksheer Dadhi nyay**- Ksheer means milk and Dadhi means curd. As the milk is converted into curd , curd into loni and loni into ghrut. In the same way sharir dhatu utpatti and poshan occurs one after the other in uttarottar karma.(Charak Vimansthan 15/16)

- c) **Khalekapotnyay**- Khal means storage of grains and Kapot means Pigeon. As Each pigeon have its grains and then go to their own nest, in the same way each dhatu get its own poshak ansh by different margas or srotas. Dhatwgni helps in the poshan of concern dhatus. Charak tika kar Chakrapani accepted this nyay.

Modern Concept of Agni –

Modern Physiology describes Agni as Anatomy and Physiology of Digestive system and other accessory organs help in digestion, absorption, excretion.

Anatomical view:

- 1) **Gastro Intestinal tract:** Mouth, pharynx, oesophagus, stomach, small intestine, large intestine, rectum, anal canal.
- 2) **Accessory structures:** Chemical digestion of food is depending on the structures outside the G.I.tract -The pancreas, liver and gall bladder.

Physiological view:

- 1) **Mechanical digestion**-Consists of various movements of the G.I.tract. Food is macerated by teeth, tongue helps in swallowing through mastication process. Smooth muscles of stomach and small intestine churn the food so it is thoroughly mixed with digestive enzymes. Upper oesophageal sphincter regulates the passage of food. The food at this level pushed through the oesophagus by Peristalsis, which is controlled by medulla. Lower oesophageal shincter relaxes during swallowing and thus allows the bolus to pass from oesophagus into the stomach. Muscularis produces mixing wave peristalsis, so that maceration of food, mixing it with gastric juice, reduces food to chyme and force the chyme through pyloric sphincter. Pyloric sphincter opens to permit passage of chyme into duodenum from stomach, prevents backflow of chyme from duodenum to stomach. In small intestine Segmentation is there, it mixes chyme with digestive juices and brings food into contact with mucosa for absorption and pulses the intestinal contents. Peristalsis propels the chyme onward through intestinal tract. Segmentation and Peristalsis are controlled by autonomic nervous system. In large intestine, Muscularis i.e. Haustral

churning takes place. so the contents moved from haustrum to haustrum by muscular contractions. Peristalsis in large intestine moves the contents along the length of colon by contractions of circular and longitudinal muscles. Defaecation is also the mechanical digestion occurs in this area. The chyme has remained in large intestine for 3 to 10 hrs., it has become solid or semisolid as a result of absorption of water and is now known as faeces, which is eliminated by contractions in sigmoid colon and rectum.

2) **Chemical digestion:**

In Mouth- Salivary amylase initiates breakdown of starch, monosaccharides can be absorbed into the blood stream. Saliva provides medium for dissolving foods so they can be tasted and for initiating digestive reactions. Lingual lipase digest 30 percent of triglycerides into fatty acids and monoglycerides.

In Oesophagus- Mucus transports food to stomach. It does not produce digestive enzymes and does not carry on absorption.

In Stomach –Mucosa has Zymogenic cells secrete pepsinogen and gastric lipase which split triglycerides. Oxyntic cells secrete Hydrochloric acid which kills microbes in food, denatures proteins, convert pepsinogen into pepsin. Inhibits gastrin secretion and stimulates secretion of cholecystokinin. Oxyntic cells also secrete intrinsic factor and absorb vitamin B12, necessary for erythrocytic formation. Mucus cells secrete Mucus that protects stomach wall and G cells secrete Gastrin that stimulate parietal cells to secrete Hydrochloric Acid. Secretion of Gastric juice and contraction of smooth muscles in the Stomach wall and Gastric emptying are regulated by nervous and hormonal mechanism.

In Pancreas- Pancreatic juice is produced around 1200 to 1500ml. It has a slightly alkaline pH that buffers acidic gastric juice in chyme, stops the action of pepsin from the stomach. Pancreatic amylase helps in carbohydrate digestion. Pancreatic lipase digest triglycerides, Trypsin digests proteins. Pancreatic secretion is regulated by both nervous and hormonal mechanisms.

In Liver- Carbohydrate metabolism: Through glycogenesis and glycogenolysis. Lipid metabolism: The liver stores some natural fats. Hepatic cells synthesize cholesterol and use cholesterol to make bile salts. Protein metabolism: Converts toxic ammonia into

much less toxic urea for excretion in urine. Hepatic cells synthesize most plasma proteins. Bile salts are used in the small intestine for the emulsification and absorption of fats, cholesterol, phospholipids and lipo proteins.

In Small intestine-The chyme entering in this area contains partially digested carbohydrates, proteins and lipids. The completion of the digestion of carbohydrates, proteins and lipids is a collective effort of pancreatic, bile and intestinal juice in small intestine.

In Large intestine-Mucosa:secrete mucus, absorbs water and other soluble compounds. Lumen: Bacterial activity occurs there which breaks down undigested carbohydrates, proteins and amino acids into products that can be expelled in faeces or absorbed and detoxified by liver, certain Vitamin B and Vitamin K synthesized.

Discussion:

In Ancient Ayurveda texts like Charak samhita ,Sushrut samhita, Vagbhat, Madhav Nidan the Concept of Agni is well elaborated. There is no fundamental difference in physical and biological fire and Agni which is associated with living organism. The effect of fire at physico chemical level is decomposition, disintegrstion and acceleration of various chemical reactions occurring in nature. The main function of Agni is to disintegrate the food into their simplest components making it easy for absorption and utilization by the body, which is actually the digestion and metabolism as per modern science.

The Jatharagni is main type of Agni which controls other Agnis and thus the metabolism. It's states of equilibrium depends on *Doshas i.e. Vata, Pitta and Kapha* (main elements that construct the body) and Dhatus (Rasa, Rakta, mamsa, meda, asthi, majja and shukra).

Pitta dosha in context of agni- As per Vagbhatacharya, Pitta is of five type, one of the pitta stays in between Amashya and pakvashay and is panchbhutatmak. But having more ansh of agni it removes dravatva(tyaktadravatwam) in itself and helps in the process of Digestion, this pitta is called Pachak pitta and due to its karma it get the name Agni. (Vagbhat sutrasthan 12/10,11).

According to Atrey Muni the Ushma of Vatadi dosha, Rasadi dhatu and Mala is called Jathragni.(Vagbhat sharirsthan 3/49). T

The place of Agni is Grahani and this is also called as Pittadhara kala. Saman vayu accelerates the Agni. Pranvayu takes the mrudu anna in Koshta and Pachak pitta in amashaya digest the ahara.

The dosha and their function in ahara pachan is mentioned in the tabular form as below-

Type of Dosha in Ahar pachan	Sthan	Karya
Bodhak kapha	Jivha	Rasdnyan
Kledak Kapha	Urdhwa Amashay	Anna sanghat klinnata
Pachak Pitta i.e.Agni	Amashaya Grahani Pakvashya	Pachan, Grahan
Pran vayu	Shir	Anna praveshtkrut
Saman vayu	Agnisameep, Koshta	Anna grahan, Pachan, Koshtha sanchar
Apan vayu	Guda	Mala Mutra visarjan
Ranjak pitta	Amashaya	Ras Ranjan

Thus agni transform the ahara rasa in Pakva rasa by the process of digestion. This is pakva ahara rasa that produces normal rasadi dhatu. Then Bhauma, Aapya, Aagneya, Vayaviya and Nabhas are the five bhutagni which digests their own guna separately and get self poshan also. This pakva ahara rasa is then divided into Saar and Kitta ansh. The liquid part of Kitta is Mutra, While the solid part is purish mala. The Saar is again get digested by Sapta Dhatwagni and nourishes Sapt dhatu as Rasa dhatwagni nourishes Rasa dhatu and so on. From Ahara rasa first Rakt dhatu is formed then Mamsa, then Meda, then Asthi, after that Majja, then Shukra and then from Shukra, Garbha is prajayte. Dhatwagni nourishes sapta dhatu and produces Prasad and kitta ansh as Prasad ansh nourishes the dhatu and kitta is mala of that particular dhatu as -Rasa dhatu mala is kapha, Rakta dhatu mala is Pitta, Mamsa dhatu mala i.e.mala from nose

ear eyes etc, Meda mala is sweda, Asthi mala is hair,nails,Shukra mala is Oja. The process of Ahara pachan depends on Dhatu and Dosha sthiti and the uttam sthiti of saptadhatu and dosha depends on uttam ahara. Thus the Anna Pacahan and Dhatu poshan is chakravat(as a cycle).

Acharya Vagbhat stated in Vagbhat sutrasthan that –Vata is responsible for *Vishmagni*, Pitta is responsible for *Tikshnagni* and Kapha is responsible for *Mandagni*. When these Tridoshas are in “*Sama Pramana*” i.e.Prakriti the Agni will be “*Samagni*” i.e. the normal and healthy state. Also in *Dwidoshaj prakriti* eg.*Vatakaphaj,Pittavataj Pradhan Doshas* impact can be seen on the Agni. The above status of Agni maintains the Physiology. When this Agni gets hampered due to vitiation of *Doshas*, it leads to *Vikriti* i.e. disease.

In modern physiology the concept of digestion explained anatomically and physiologically as well. In this article the mechanical and chemical digestion is explained. The process of digestion depends on the secretion of gastric, pancreatic juices and enzymes. Both mechanical and Chemical digestion depends on Nervous system and Hormonal system in human body.

The correlation between the process of digestion of food According to Ayurved and Modern view is mentioned in the following Table-

Stepwise Pachan/ Digestion in	Mechanical digestion	Agni,Dosha/Digestive juices,enzymes	Avasthapak or Vipak	Karya/Function	Control	Correlation
Mukha/ Mouth	Annacharvan, grahan. Food maceration, Swallowing.	Bodhak Kapha. Salivary amylase and lingual lipase.	Pratham Avasthapak	Annagrahan, madhur bhav utpatti. Saliva initiates digestion, breakdown of starch, monosaccharides.	PranvayuNeuronal	Function of both Bodhak kapha and Salivary amylase is to starts digestion in ayurveda and modern view.
Jathar/	Ahardravya	Kledak	Pratham	Ahar dravya pachan	Saman	Jathragni

Stomach.	vahan into Jathar. Food bolus enters in stomach by peristalsis of Oesophagus.	kaph, Pachak Pitta, Saman Vayu. Gastric Juice- Pepsinog en, gastric lipase, hydrochl oric acid,pep sin.	Avastha pak	and convert it in Ahar rasa. Split triglycerides,kills microbe,denatures proteins,absorption of vit B,Gastric emptying.	Vayu Nervous and hormon al Mechani sm.	resemble Gastric juices as the functions are same.
Pachit Ahar rasa nirmiti.Pi ttadhikya so Amlarasa bhav. Acidified Chyme.		Pachak pitta. Gastric Juice Esp. Hydroch loric Acid.	Dwitiya Avastha pak.	Ahardravya pachan by Pachak pitta causes Amla ras to the ahara rasa. Digestion of food by Gastric juice causes acidified chime.	Pachak pitta. Gastric cells secrete Gastrin that stimulat e parietal cells to secret Hcl.	Amlarasabhav pradhan Pachit ahar rasa resembles Acidified Chyme.
Pachyam anashaya Duodenum Jejunum	Vahan Sancharan of Ahar rasa. Pyloric sphincter	Pran vyan saman vayu, Panchbh	Tritiya Avasth apak	Panchbhutagni digests their own gunadhikya ansh from pakva ahar rasa and get self poshan also.	Panch bhutagni Nervous and hormon	In tritiya avasthapaka amlarasa bhav of pakv ahar rasa converted into katu

ileum	opens. Segmentation of small intestine, peristalsis.	utagni. Pancreatic juice, bile salts.		Pancreatic juice buffers acidic gastric juice in chyme and stops action of pepsin. Helps in carbohydrate digestion.	al control.	rasatmak pakva aharrasa due to vatadhiky. Pancreatic juice buffers acidic chyme.
Pakvashaya. Large intestine.	Saar kitta vibhajan. Haustral churning.	Saman vayu Apan vayu. Mucus.	Tritiya Avastha apak.	Drava shoshan and lavan rasadhikya ansh shoshan. Pakva ahar rasa divided into saar which get absorbed and nourishes Dhatu by Dhatwagni. Kitta ansh with more liquid get excreted as Mutra and more solid excreted as Purish Mala. Mucosa secret mucus absorbs water and soluble compounds. Bacterial activity causes Faecus formation and expelled out.	Vat dosh- Apan vayu. Autonomic nervous system	Absorption of water, formation of faecus are the processes similarly mentioned in both ayurved and modern.
Nishtapak absorption at Sapt Dhatu level. Small	Pakva ahar rasa that is ready for absorption and no conversion occur afterwards is called Nishtapak. This	Saptadhatwagni. Pancreatic, Bile, Intestinal Juice.	Vipak i.e. parivartan is stopped in the ahar	After saar kitta vibhajan, Saar is again digested by particular Dhatwagni for Dhatuposhan. The chyme entering in small intestine contains	Saptadhatwagni.	Saar bhag absorption by saptadhatwagni for dhatu poshan resembles the digestion of partially

intestine.	Rasanter circulate with Rasa dhatu all over the body. Pran vyan vayu saptadhatwagni is responsible for this process.		rasa.	partially digested carbohydrates, proteins and lipids. The completion of digestion of them occurs here due to the collective action of pancreatic juice, intestinal juice and bile.	Autono mic nervous system.	digested carbohydrates,p rotein and lipids in small intestine which nourishes the tissues and cells and thus nourishes the body.
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In the above table the first sentences in each box are related to Ayurved and the second sentences in each box are related to modern science.

CONCLUSION:

The Process of digestion of food is well explained in Ayurved since ancient era. Modern texts explained this process afterwards. The differences and similarities are elaborated in Discussion.

The function of Pran vayu, Saman vayu, Vyan vayu and Apan vayu in the process of digestion can be correlated with Mechanical digestion mentioned in modern science. The concept of Agni mentioned in Ayurveda can be correlated with the chemical digestion of food mentioned in modern science.

The Jathragni can be correlated with Gastric juice. Panchbhutagni can be correlated with Pancreatic juice and Bile salts. Saptadhatwagni can be correlated with the Intestinal juice.

Jathragni is the gut Digestion. Bhutagni separates each fraction of concern bhuta ghatak from ahara ras. Dhatwagni recombine the bhutas to form dhatus. Eg. Parthiv+Vayu= Asthi.

The Agni is of prime importance in the process of digestion. Jathragni, Panch bhutagni and Saptadhatwagni are the 13 types of Agni mentioned in ayurveda. Avasthapak, Vipak and Dhatuposhan Nyay is elaborated by acharyas to explain the process of digestion of food.

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