GUT HOMEOSTASIS–BY DIET AND AGNI

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Abstract: A healthy body is important to get success in life and to get healthy body, healthy food is important. When we think about healthy food, the first picture come in our mind is food rich in nutrient, but food rich of vitamin and mineral in not sufficient for good health.

Food rich in micronutrient is healthy, but on individual basis it is not healthy all time, for the person at particular time food should be properly digested and accumulated in body to give nutrition. In nut shell it can be said that to get optimal nutrition, the food should be according to person, with its proper digestion and assimilation.

In Ayurveda, role of selection of food according to (1) Property of food (2) According to the place and condition of persons (body type, physical and mental condition) (3) According to digestive power of person are explained very well in the form of Ashta Ahara vidhi visheshayatan along with code and conduct to be followed while taking food and known as Ahara vidhi vidhan and advised to for proper digestion and assimilation of food. By following these rules of food selection and code and conduct of eating one can get proper nutrition from particular food.

Key words: Ayurveda, Digestion, Ashta, Ahara vidhi visheshayatan (अष्ट आहार विधि विशेषायतन) are advised for proper digestion and assimilation of food to maintain gut homeostasis.

Introduction: Health depends on proper balance of agni and ahara. During intake of food, certain factor should be kept in consideration to obtain its all benefit i.e. ashta ahara vidhi visheshayatan and ashta ahara vidhi vidhana. These factors are complementary to each other and denote wholesomeness of diet [1]. Their consideration is essential like.

Prakriti : Nature of food articles
Karana: Method involved in the processing of the food articles.
Samyoga : Combination of food article
Raasi : Quantity of food article
Desha : Habitat or climate
Kala : Time i.e. state of disease and or state of an individual.
Upayoga samstha : Rules governing the intake of food
Upayokta : Wholesomeness of individual who takes it.

These factors giving rise to good as well as bad effects and at the same time are helpful to one another. It is essential to know this factor in order to intake the right diet. There are the dietetic rules and procedure for healthy as well as for certain types of patients, concerning the intake of food that is most wholesome. One should eat food which is [2]

- Hot
- Unctuous
- In due measure
- After full digestion of the previous meal
- Non antagonistic in potency
- In the congenial place.
- Provided with all the favorite accessories
- Neither too hurriedly not too leisurely
- Without talking and laughing.
- With full concentration
- Have proper regard to one.
**Ahara** that has been consumed after considering code and conducts of *ahara vidhi visheshayatan and vidhan* goes in body and is being properly processed by *agni*. There are four functional state of *agni* according to predominance of *dosha* and *dushya* \(^3\) i.e.

- **Samagni** due to influence of normally equilibrated *dosha*.
- **Visamagni** due to influence of predominance of *vata dosha*.
- **Tikshnagni** due to influence of predominance of *pitta dosha*.
- **Mandagni** due to influence of predominance of *kapha dosha*.

*Samagni* it ensures complete digestion of food ingested at proper time without any irregularity leads to proper functioning of *dhatus*. *Visamagni* In this state function of *agni* is irregular and fitful. It sometime helps the process of complete digestion and other time improper digestion. Thus leads to improper formation of *dhatus*. *Tikshnagni* In this condition *agni* is excessively excited, it easily digests even a very heavy meal, in very short span of time and when it get no food to digest it starts digesting *dhatus* and thus cause *dhatu shosha*. *Mandagni* In this state *agni* in unable to digest even a small quantity or otherwise even easily digested food leads to *vidaha*. In nutshell all changes occurring at macroscopic, microscopic, inorganic and organic level are due to *paka karma* of *agni*. *Agni* that is present in body, termed as *kayagni* is divided into three as \(^4\)

- **Jatharagni**–which look after digestion and absorption of food.
- **Bhootagni**–it converts all *vijateeya panchabhautic dravyas* to *sajateeya dravyas*.
- **Dhatvagni**–for the purpose of synthesis and breakdown of tissues.

**Function of Jatharagi Include**

- Digestion of food
- **Saarakitta vibhajana** (Absorption)

After function of *jatharagni ahara rasa* get form, and then *bhootagni* and *dhatvagni* comes into play so *vikateeya ahara rasa* get converted into *sajateeya* to different *mahabhutas* of body and after functioning of *dhatu paka* gives nourishment to body tissue. But when proper functioning of *agni* get disturbed, *ama* get formed at various level in body that leads to different pathological conditions.

- **Apakva ahara in amashaya**
- **Apakva ahara rasa in amashaya**
- **Ama at dhatu level.**

When food gets properly digested it forms *sara* and *kitta bhaga*. *Sara bhaga* get absorb and after digestion with *dhatvagni*, forms *sthayi* and *asthayi* *poshaka dhatu*. *Sthayi poshaka dhatu* gives nutrition to permanent *dhatu* i.e. *sthayi rasa dhatu* gives nutrition to...
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rasa dhatu proper and asthayi rasa dhatu after functioning of raktagni forms sthayi and asthayi rakta dhatus, in the same manner other dhatus get form and get their nutrition from their previous dhatus.

Disturbance in function of agni at any level i.e. jatharagni, bhutagni and dhatuvagni leads to formation of ama that is causative factor of different pathological conditions. But gross digestion takes place in amashaya, that’s why acharya has described formation of ama, primarily in amashaya. Due to disfunctioning of agni, food remain undigested and form ama which is foul in smell, very slimy and vitiates doshas and dhatus when get absorbed. [5]

Symptoms of Ama [6]: Srotarodha—obstruction—this can occur in any large, small or minute channel, when it is indicated by stagnation and disturbance in transport and metabolism in gross as well as at cellular level. Weakness or reduced working power in any part of body or organ is due to obstruction in their nutrition caused by Ama.
• Heaviness and lethargy
• Coated tongue
• Improper digestion and evacuation

This Ama is responsible for vitiation of all the doshas and dhatus. Concept of agni is very different concept then that of modern concept of digestion. In modern gastroenterology digestion takes place in body by the help of various types of enzymes. There is no direct evidence about the longevity, health, cheerfulness, plumpness, luster vitality etc. having relation with proper digestion as Ayurvedic concept about function of agni is. But new researches has shown and giving glimpse that has been well elaborated in samhitas in relation to concept of agni and ama.

A research has shown that apart from digestion digestive system has control on immunity, brain and hormonal secretion. New concept of gut flora is also responsible for the function other than digestion. Gut flora [7, 8] are the microbial population living in intestine.

Human body carries about 100 trillion of microorganisms in intestine, a number ten times greater than the total number of human cell in the body. Metabolic activity performed by these bacteria resembles those of an organ, leading some to liken gut bacteria to a forgotten organ. Relationship between gut flora and human is mutualistic relationship. They perform function i.e. 1. Fermenting unused energy substrate. 2. Training the immune system. 3. Preventing growth of harmful pathogenic bacteria. 4. Regulating the development of gut. 5. Producing vitamin for the host such as biotin and vit. K. 6. Producing hormone to direct the host to store fat.

Population of species are founding vary widely among different individual but stay fairly constant within an individual over time, even though some alteration may occur with changing life style, diet and age. Microbes are mostly composed by three entero types.
Prevotella, Bacteroids and ruminococcus, having, association between concentration of each microbial community and dietary component i.e. Prevotella is associated with carbohydrate and simple sugar diet and Bacteroids is associated with animal protein, amino acid and saturated fats. Gut flora however can also be changed by following a long term diet. These microbes digest certain food that the stomach and small intestine has not been able to digest and helps the production of vitamin B and K. It helps to maintain wholeness of the intestinal mucosa. It plays important role in immune system, performing barrier effect.

According to modern science enzymes and gut flora plays major role in digestion. Along with this, intact epithelial lining of digestive tract is also important for proper absorption of food along with it, it also prevent access of external agent that can initiate or perpetuate mucosal inflammation by secreting immunoglobulin, mucous, difencine and antimicrobial products.

**Discussion:** Ayurvedic concept of ahar vidhi visheshayatan and ahar vidhi vidhan is great concept, modern diatitions giving only consideration about caloric, value of food there in no concept about -
- Nature of place of origin of food and person who is consuming it,
- About habitat, about method of preparation and combination of food article
- About state of disease and state of individual
- About quantity of food article
- Rules to be followed during taking food.

These concepts are very scientific concept, the food that is consumed considering all these rules and regulation get property digested and giving dhatu poshana. It is very clear concept by Ayurvedic view. Consumption of food afterigestion of previous meal and giving consideration to rules of ahar vidhi visheshayatan and ahar vidhi vidhan may have their specific neuro hormonal effect by which enzymatic secretions and gut permeability can be regulated and controlled.

State of agni is also very peculiar concept, only properly digested food gives proper nutrition to body, so choice of food should be according to status of agni because if agni is not proper, food which is consumed after giving consideration to ahar vidhi vidhan and visheshayatan will not give optimal result. Ama forms due to improper function of agni in different level of digestion but it primarily forms in amashaya and pakvashaya level. Ama in rout cause of all most all disease. In modern physiology new concept that is gut flora is new area of research in maintaining health and initiation of disease process i.e. if balance in gut flora get disturbed various pathological condition like depression, anxiety, mood swing, psychological disorder, autoimmune diseases, obesity, cancer, decrease immunity can occur.

Researchers are trying to find out how to regulate gut flora. Concept of agni and ama will helps in these two research area. Proper function of agni is responsible for maintenance of local environment of gut, because properly digested food get properly absorbed and it will help to maintain population of good gut flora in gut and the food that is not taken at proper time, during anxiety or contaminated with various antigen will not digest properly and will alter absorption and opening of tight junction and form immune complex that causes various type of allergies, autoimmunity and inflammation. These concepts are very similar concept like ama. So to prevent and treat these conditions, concept of treatment of ama and agni are very important.

**Conclusion:** Agni has been considered as cause of life and body (deha dharan) and ama as rout cause of all disease (sarva dosha prakopana). So by giving consideration to concepts related to agni and ama in researches related to gut microbiota; pathogenesis and mode of disease management can be better understand. Thus concept of agni and ama can give new vision in field of maintenance of gut homeostasis and thus maintenance of health and cure of disease.

**References**

