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CONCEPT OF AGNI AND ITS CLINICAL RELEVANCE: A REVIEW

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ABSTRACT

Ayurveda is the ancient Indian system of medicine, Ayurveda defines healthy individual as "sama dosha sama agnischa..." Impaired agni is the root cause for manifestation of all disorders. Agni is responsible for Bala, Arogya, Ayu, Prana, Swasthya, Varnam, Utsaha, Prabha, Oja & Teja. Ingested food is to be digested, absorbed & assimilated which is necessary for the maintenance of life & is performed by Agni. Agni has been divided into 13 types i.e. one Jatharagni, five bhutagni & seven Dhatvagni, Jatharagni is the most important one, which digest food & transforms it into Rasa & Mala. When Agni got vitiated the whole metabolism in body would get disturbed & causes Mandagni.

There are various disease developed due to mandagni mentioned in different samhitas like-Agirna, Aamdosha,, aamvisha, Alasak, Visuchika, Grahaniroga, Bhayajatisara, Sokajatisara etc. So understanding of Agni concept is need of Ayurvedic physician to determine the status of agni during prescribing drugs & drug doses along with prescription of Aahar-Vihara(Pathya-apathya).

KEYWORDS- Agni, Jatharagni, Mandagni.

INTRODUCTION

Today is era of science, in which everyone is busy to get luxurious lifestyle. Due to development of science many pesticides & chemicals are use to increase productivity. Polluted air & water lead to diseases of annavahasrotas (digestive system). The faulty lifestyle lead to interruption of Dincharya (daily regimen) & Ritucharya (seasonal regimen) described in Ayurveda & also effect social & mental status of person. If the man does not follows the rules of taking food & continuously taking virudhahara (unwholesome diet), stop

natural urges his Agni (digestive fire) get vitiated & vitiated jatharagni is the cause of all diseases. Inspite of Mandagni (weak digestive fire) If diet is taken it will not digest properly & causes Grahaniroga (small intestine disease), in case of Atisar (diarrhea) If apathyakar Ahara taken it causes Agnimandya (suppressed digestive fire), Improper digestion, distension of abdomen & vitiated the Grahani i.e. shastipittadharakala & causes Grahani roga.

MATERIAL AND METHODS

This article is based on review of Ayurvedis texts. Materials related to Agni, Agnimandya & other relavant topics have been collected. The main Ayurvedic texts used in this study are Charak samhita, Sushruta samhita, Astang sangraha, Astang hridaya, Madhav nidana & available commentaries on these. We have also referred to the modern texts & searched various websites to collect information on the relevant topics.

Concept of Agni

The food we ingest is broken down into the constituent that nourished the tissues & support our everyday functions. When Agni which burns within hours stomach is affected by incorrect lifestyle & eating habits, this ultimately affects the digestive process causing food to be either partially digested or over digested leading to formation of Ama (toxin) With the help of that particular Agni, the body substances can get nourishment and can perform their functions normally. This can be understood in the terms of wear and tear phenomena of each body cell. It is very clear that any of the body cell cannot do anything without the help of *Agni*, therefore a Vaidya should always take care of *Agni* as the *Prasama* or *Prakopa* of *Dosa*, *Dhatu* and *Mala* are depended on the status of *Agni*. In other words, it can be said that homeostasis of *Dosa* etc can be maintained through *Agni*.

According to Ayurveda there are 13 types of *Agni* in body namely.

- 7 *Dhatwagni*,- refers to tissue metabolism.
- 5 Bhutagni refers to the final digestion in liver AGNI.
- 1 *Jathragni*.- refers to the whole process of digestion in G.I.T(prime one and nourishes the other *Agnis*).

Physiological & pathological aspects of Agni

(a). Samagni- Normal secretion of digestive enzymes Healthy state of Agni First variety is not associated with dosa and it is called samagni state and it is the physiological state of agni. The Samagni digests and assimilates food properly at the proper time. This thus increases the

quality of the *Dhatus* (supportive tissues of the body). Persons having *Samagni* are always hale and healthy.

- **(b).** *Vishamagni* Irregular secretion of digestive enzymes. Visamagni is the state in which improper digestion and metabolism takes place i.e. sometimes performs normal functions followed by abnormal one and manifest flatulence, abdominal pain, upward movement of vata inside the kostha, diarrhea, and heaviness in abdomen, intestinal gurgling and straining exercise for evacuation of stools. When this *Agni* is affected by the *Vata Dosha*, it creates different types of *vatavyadhi*.
- (c). *Tikshnagni Tikshnagni* means very quick/very sharp/very fast Hypersecretion of digestive enzymes. *Tikshnagni* is a state of very quick digestion of food, regardless of the type of food. Acharya Sushrut states that when the power of digestion is increased from normal to above normal, food digests very quickly and produces hunger or the desire for food. When food is digested, the throat, the mouth cavity and the lips become dry with a burning sensation. This condition is known as "*Bhasmak Roga*" according to Ayurveda. Tiksnagni state gives rise to manifestation of vatavyadhi.
- (d). *Mandagni-"Mand"* means slow. Hyposecretion of digestive enzymes. The meaning of the *Mandagni* is slow digestive power or digestive capacity. Those who are having *Mandagni* eat very little and are unable to digest the smallest amount of food. *Dhanvantri* says that *Agni* digests the least amount of food in the greatest amount of time and manifest heaviness in abdomen and head, cough, dyspnoea, excessive salivation, vomiting and weakness of the body. Mandagni state gives rise to manifestation of kaphaja vikara.

1. Jatharagni

It converts the gross food particles into smaller particles which are then able to be absorbed. It is related to the gastro-intestinal tract. (*Jathar* means Gastrium) The *Ayu* (life span), *Varna* (complexion), *Bal* (vitality), *Swasthya* (good health), *Utsaha* (enthusiasm), *Sharir Vridhi*, *Prabha* (glow), *Oja* (vital essence), *Tej* (lusture), *Agnis* and the *Pran* (life breaths) are derived from the *Agni* in the body.

Physiology of jatharagni

Pranavata, the property of which is to convey the food from mouth downwards, takes the food from mouth to *Kostha*. There, it will be subjected to *Samghatabhedana* (chymilification) by *Dravatva* and *Snigdhatva of Kledak Kapha* which is present in *Amasaya*. This makes food soft, mucillagenous. *Jatharagni* situated below the *Amasaya* in *Garahani* is activated by

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Samana Vayu and digests the food which is taken in proper Matra and in proper manner observing all the Aharavidhivisesayatanas and Ahara Vidhividhana, in order to increase the longevity of life. In process of digestion jathargni works at 3 levels.

- Madhuravasthapaka (production of kapha/digestion of carbohydrate)
- Amlavasthapaka (production of pitta/digestion of protein & fats)
- Katuavasthapaka (production of vata)

Importance of jatharagni

It is an important factor to be considered while prescribing treatment. It is known fact that at each and every second multiple process of transformation took place in human body, these may be Biophysical, bio-chemical or any other type of transformation process. There are two types of procedures continuously going on in human body which are *Caya* and *Apacaya* (*metabolism*) and for that the body has got two synonym *Deha* and *Sarira*. *Deha* means which continuously gets nourishment from food and on performing the essential activities living body wears out some of its portion continuously is called *Sarira* and this wear and tear phenomenon is balanced by *Jatharagni*.

2. Dhatwagni

The use of term *Dhatwagn*i, made more frequently in the classical world of *Ayurveda*, stands for *Pittas* concerned with the formation of *Dhatus*. The seven kinds of *Dhatwagnis*.

[1] Rasagni [2] Raktagni [3] Mamsagni [4] Medagni [5] Majjagni [6] Asthyagni [7] Shukragni.

Each *Dhatwagni* attends the digestion supplied to that *Dhatu* from circulating *Poshakamsha*. *Dhatwagni* is essential for the maintenance and growth of the *Dhatus*. Functions of *Dhatvagnis* are mainly two. One is synthesis of new tissue. Second is to yield energy for the function of tissue. If *Dhatvagni* is impaired both of these will impair. As the weakness of *kosthagni* leads to formation of *Ama*, the weakness of *Dhatwagni* also leads to production and accumulation of *Ama* in *Dhatu* (tissue level) concerned, giving rise to improper *Dhatu Vriddhi*. If *Dhatwagni* is stronger, they utilize quickly the quantity of nutrients supplied and still not getting satisfied and begins to destroy the *Dhatus* itself. Both *vridhhi* and *Kshaya* of the *Dhatus* are *Vikrita* and are mainly due to weak and powerful *Dhatwagnis* respectively.

3. Bhutagni

There are five *Agnis* in each of the five basic elements, namely – *Parthiva* (earth), *Apya* (water), *Tejas* (*Agni*), *Vayavya* (vayu) and *Nabhasa* (*akash*). Each and 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 in this world that we eat also consist of the same five basic elements with their respective *Agni* or bioenergy. Thus, they are completely similar with respect to the five basic elements with their *Bhutagni* in our body cells as well in the entire 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.

AGNI AND PITTA

According to *Maharsi Susruta* there is no other substance like *Agni* except *Pitta*, *Maharsi Caraka* also says that *Agni* performs its work through *Pitta*, *Vagbhata* in his text clearly says that only *Pacaka Pitta* can be correlated with *Agni* and all other types of *Pitta* are different than *Agni*, The term *Pitta* is derived from the root "*Tap*" which means to heat or to burn. This term is seen to have three meanings viz.

- 1. Tap Dahe- meaning to burn.
- 2. Tap Santape- to heat.
- 3. *Tap Aiswarye* to enable the eight fold achievement.

The *Pitta* as a whole itself cannot be considered as *Agni*. Only the *Agneya* portion of *Pitta* can be considered as *Agni*. This is balanced and controlled by the *Apya* portion of *Pitta*. The doctrine of *Agni-Soma* may be remembered in this aspect.

Role of Agni in the Therapeutics

In various Rogi pariksha (ex.-Navavidha, Dashvidh) Agni is mentioned. The term KAYA means Agni or the enzymes responsible for the digestion as well as metabolism. KAYACHIKITSA deals with the management of various disease caused by the impairment of power of digestion & metabolism.

Clinical Assessment of Agni (Ca.Chi. 15/8-9)

Signs and symptoms of proper functioning of Agni

- Adequate diet
- Timely evacuation of bowel and bladder
- Good strength
- Good resistance to infection (good immunity)
- Good Skin luster and texture
- Proper functioning of all sensory organ.

Mild/ moderate malfunctioning of Agni

- Loss of appetite
- Lethargy
- Recurrent infection
- Constipation/diarrhea
- Incomplete evacuation of bladder or difficult micturition
- Improper functioning of sense organs
- Depression/loss of feeling of happiness

Severe malfunctioning of Agni

- Collection of fluid in body (Ascitis, edema, pleural effusion, pericardial effusion etc.)
- Marked loss of energy and general debility
- Loss of enthusiasm
- Improper sleep, etc.

Malfunctioning of *Agni* leads to production of Ama (undigested foods that remains in tract and acts as antigens and are responsible for production of autoimmune diseases). Production of Ama may can occur at the level of *Jathragni* (improper digestion in G.I.T), *Bhutagni* (liver dysfunction) or *Dhatwagni* (disturbed tissue metabolism).

Management

• Drugs acting at the Level of Jathragni

Trikatu- A polyherbal preparation having equal amount of three herbs namely Sunthi (*Zingiber officianalis*), Maricha (*Piper nigrum*) and Pippali (*Piper longum*) is supposed to work on *Jathragni* at the level of *Madhuravasthapaka* and *Amalavasthapaka*. They are believed to intensify salivary flow and gastric juice secretion, and help in digestion. Salivary

and gastric secretions are increased when the nerve centers are stimulated by the sense of smell and by the presence of pungent principles in the foodstuff.

• Drugs Acting at the Level of Bhutagni

Bhringaraja (*Eclipta Alba*) - Bringaraja is one of the most potent herbs supposed to work at the level of Bhutagni. It contains resin, alkaloid (eclipticine) is one of the main ingredients of many drugs use for the management of hepatitis and other liver disorder.

Picrorhiza kurroa (Kutaki) - According to Ayurveda Kutai (Picrorhiza kurroa) act as Pitta rechaka i.e. it helps in expulsion of bile. The active constituent is known as kutkin, a mixture of kutkoside and picroside. Pharmacologically, Kutkin (Picrosides and kutkosides) has hepatoproptective activity. Kutaki is the main ingredient of herbomineral preparation Arogyavardhini that is use most frequently for the management of liver disorder. According to Ayurveda, Arogyavardhini is supposed to work on Bhutagni level therefore its use is not restricted up to only liver disorders rather it can be use in all type of ailment related to chronic gastrointestinal disorders/digestive diseases.

Cucurma longa (Haridra) - Curcuma longa commonly known as turmeric is another plant which has got scientists attention as novel hepatoprotective agent. Dried rhizomes are used in medicine. It is cultivated throughout India. It is supposed to work on *Bhutagni* and therefore helpful in ailment results due to *Bhutagnimandya* like *Prameha* (Diabetes Mellitus), *Kamala* (Hepatitis) etc.

Andrographis paniculata (Bhunimba/Kalmegha) - Andrographis paniculata is well known medicinal plant for its usefulness in liver diseases. It is used as bitter tonic and febrifuge. Because of bitter taste it is popularly known king of bitters. It contains diterpene lactones (Andrographolide, neoandrographolide and kalmeghin).

• Drugs Acting at the level of Dhatwagni

- Rasagni- Khajoora (*Phoenix dactylifera*), Munakka (*Ribes nigrum*), Nagarmotha (Cyperus rotandus), etc.
- Raktagni- Manjjistha (*Rubia Cordifolia*), Sariva (*Hemidesmus indicus*), Khadira (Acacia catechu), Mandoora (Incinerated iron oxide), Kasisa (Ferrous sulphate), etc.
- Mamsagni- Guggulu (*Commiphora Mukul*), Kshara, Eranda (*Ricinus communis*) etc.

- Medagni- Kanchanara (*Bauhinia variegate*), Guggulu (*Commiphora Mukul*), Triphala, Louhabhasma, Agnimantha (*Premna integrifolia*), etc.
- Asthyagni- Laksha (*Laccifer Lacca*), Asthishrinkhala (*Cissus quadrangularis*), Nagabala (*Sida veronicaefolia Lam*), Godanti, Muktapisti, Shallaki (*Boswellia serrata*), etc.
- Majjagni- Guduchi (*Tinospora cordifolia*), Aswagandha (*Withania somnifera*),
 Rajatabharma, etc.
- Sukragni- Kapikacchu (*Mucuna pruriens*), Vidarikanda (*Ipomoea Digitata*), Satavari (*Asparagus racemosus*), Mash (*Vigna mungo*), etc.

Dietetics principles which should be followed for maintain the agni

- **1. Principle of balanced diet-** According to Ayurveda, the diet which nourishes both the mental and physical built is called balanced diet.
- a) Use of Sadarasa yukta Ahara- Charak while describing the types of Rasa, said that the appropriate use of all the six rasas maintains the equilibrium of (Dosa, Dhatu and Mala) body & maintain the agni.
- **b) Ahara matra-** Acharya Charak specifies the quantity of food according to its quality. If the food article is heavy (guru), only three-fourth or half of the stomach capacity is to be filled up. Even in the case of light food (laghu) articles excessive intake is not conducive to the maintenance of the power of digestion and metabolism. In this regard Charak further says in Vimanasthana Chapter 2, that for the purpose of taking food the stomach capacity should be divided into three parts, one part of it should be filled up with solid food, the second part with liquids and the third part should left for vata, pitta and kapha.
- **2.** Consideration of asta-aharavidhivisheshayatana- According to Acharya Charak, the eight factors which determines the utility of the various types of food are: i) Prakriti ii) Karan iii) Samyoga iv) Rasi v) Desha vi) Kala vii) Upayogasamstha viii) Upayokta.
- **3. Rules of taking ahara-** There are different rules laid by Acharya Charaka, Susruta and Vagbhata regarding the taking of diet. According to Charak the healthy individuals as well as (some of the) patients should observe the following.
- Usnamasniyata- One should take warm food. When taken warm, it is delicious; after intake it provokes the factors (enzymes) in the abdomen responsible for digestion; it gets digested quickly and helps in the downward passage of vata and detachment of kapha.

- **Snigdhamasniyata-** One should take unctuous food, after intake, it provokes the subdued power of digestion; it gets digested quickly; it helps in the downward movement of vata. It increases the plumpness of the body, strengthens the sense faculties, promotes strength and brings out the brightness of complexion.
- **Jirne asniyata-** One should take food only when previous meal is digested. If one takes food before the digestion of the previous meal, the digestive product of the previous food, i.e. immature rasa gets mixed up with the product of food taken afterwards, resulting in the provocation of all the dosas instantaneously. If food is taken after the digestion of the previous food while the dosas are in their proper places and Agni (digestive enzymes) is provoked, there is appetite, the entrances of the channels of circulation are open, there is unimpaired cardiac function, downward passage of the wind and proper manifestation of the urges for voiding flatus urine and stool then the product of food does not vitiate the dhatus of the body, but on the other hand it promotes longevity in its entirety. So one should take food only after digestion of the previous meal.
- Viryaavirudhamasniyata- One should take food having no contradictory potencies. By taking such food one does not get afflicted with such diseases as may arise from the intake of food having mutually contradictory potencies.
- **Istedese, Istasarvopkaranam asniyata-** One should take food in proper place equipped with all the accessories. By doing so he does not get afflicted with such of the factors as would result in emotional strain.
- Naatidrutam asniyata- One should not take food too hurriedly; if food is taken too
 hurriedly it enters into a wrong passage; it gets depressed and it does not enter into the
 stomach properly. In this situation one can never determine the taste of food articles and
 detect foreign bodies like hair etc., mixed with them.
- Naativilambitam asniyata- One should not take food very slowly because this will not give satisfaction to the individual. In this situation he would take more than what is required; the food would become cold and there will be irregularity indigestion.
- Ajalpan, Ahasan, Tanmanabhunjita- One should not talk or laugh or be unmindful
 while taking food. One who taking food while talking, laughing or with detracted mind
 subjects him to the same trouble as the one eating too hurriedly.
- **Atmanamabhisamiksya-** One should take food in a prescribed manner; with due regard to his own self.

Yoga

Though *Ayurvedic* medicines are capable of regularizing the *Agni* to normal, yoga exercises by virtue of their specificity, work as catalytic agents for stabilizing the *Agni* at higher level even the medicines are withdrawn. This in itself is an important achievement, as medicines cannot be used permanently. Many Yoga practices are helpful for relief of digestive disorders. They are as follows.

- Bhujangasana
- Mayurasana
- Paschimottanasana
- Matsyendrasan
- Sarvangasa
- Vajrasana

CONCLUSION

Acharya Charak has mentioned that various types of dietetic materials are digested by their own *Agni* (*Bhutagni*), encouraged and enhanced by *Antaragni* (*Jatharagni*), which is further digested and metabolized by *Dhatvagni* to associate the body with the nutritional strength, complexion and happy life along with providing energy to the seven *dhatus*. Importance of *Agni* has been seen in both the healthy and diseased condition. In healthy condition it is necessary for maintenance of health while in diseased condition it is important for diagnosis as well as treatment of the particular disease. *Agni* is important in all types of treatment like *Samana*, *Sodhana & Sastrakarma*. The best way to maintain agni by adopting normal healthy lifestyle, follows dietetics principles & regular practice of *yoga*.

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