

## CONCEPT OF AGNI AND AMA IN AYURVEDA

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## ABSTRACT

In *Ayurveda* *agni* is basic principle of life and is said to be the reason for existence and it is compared to God. *Agni* is the factor responsible for digestion and metabolism. It is considered as the cause of life, strength, health, complexion and lusture. *Acharya Charaka* mentioned that if functions of *agni* become inactive, then the individual dies. If *agni* is in normal state, then person lives long healthy life and if the *agni* is vitiated, the whole metabolism in the body would be disturbed which leads to ill health. In *Ayurveda* there are 13 types of *agni* in the body- 1 *jatharagni*, 7 *dhatwagni* and 5 *bhutagni*. Among all these, *Jatharagni* plays the most important role and nourishes the other *Agnis*. Any malfunctioning of *Agni* will lead to formation of *Ama* which is the root cause of production of diseases. To understand the physio-pathology of the disease, the concept of *Ama* is the most important fundamental principle of *Ayurveda*. *Ama* is undigested food which occurs due to *Agnimandhya*. This study aims to explore the concept of *agni*, its physiological and pathological states and role of *ama* in the production of diseases.

**KEYWORDS:** *Agni*, *Ama*, Digestion, Disease, *Agnimandhya*.

## INTRODUCTION

According to the *Ayurveda* creation and destruction of the universe, metabolism and catabolism in organism all are based on the concept of *agni*. *Agni* has its own physical characteristics, location and functions in the body and to maintain the health of an individual *ayurveda* emphasized that the balance state of *agni* is essential. It brings the transformation of the *ahara* and helps to digest and metabolize the various components of the food and responsible for subsequent tissue nourishment. In *Ayurveda* there are 13 types of *agni* are present in the body. First one is *jatharagni* which acts on the food in the digestive tract and converts it into absorbable form and plays the most important role and also nourishes the other *agnis*. It is responsible for the whole process of digestion in G.I.T. Second is *bhutagni* which are of 5 types and acts after process of *jatharagni*. The digestion by *bhutagni* is called as "*Sukshma Paka*". Third one is *dhatwagni* which are of 7 types and they digest and transform nutrients and supplied to the specific *Dhatus*, this is also called as "*Sukshama Paka*". Further if the *agni* is in its normal state it is said to be *samagni*. If the *agni* is vitiated then it causes three pathological states of *agni* namely *Mandagni*, *Tiksnagni* and *Vishmagni*.

If our *agni* is strong, we're able to digest food efficiently and easily. On the other hand, if *agni* is weak, our body won't digest the ingested food item well, creating toxic residue or *ama* that lodges deep in our cells and causes various diseases, poor complexion, languid blood-circulation, low energy levels, flatulence and poor immunity against diseases.<sup>[1]</sup>

*Ama* is undigested, properly unprocessed consisting of heavy, unctous liquid, sticky, fibrous material which has foul smell.<sup>[2]</sup> It is formed due to hypo-functioning of *agni*, the first *dhatu* '*Rasa*' is not properly digested, instead the *anna rasa* undergoes fermentation being retained in the *amashaya*. This *rasa* is called as *ama*.<sup>[3]</sup> Thus *ama* is formed due to *agnimandhya* and *aam* production cause *agnimandhya* & vice versa.

Thus according to *Ayurvedic* principles promoting proper functioning of the digestive fire is the main key of treating the root cause of the diseases.<sup>[4]</sup> The knowledge of *Sama* and *Nirama* is necessary to avoid all kind of *vyapada* while treating the patient.<sup>[5]</sup>

## AIMS AND OBJECTIVES

- To explore the concept of *agni*, its physiological and pathological states.
- Role of *ama* in the production of diseases.

## MATERIAL AND METHODS

This is based on the conceptual study. The literature review collected from *Ayurvedic* classics, related web sites and journals.

### CONCEPT OF AGNI

The term “Agni” is used in the sense of digestion of food and metabolic products. *Ayurveda* described *Agni* as *Dehagni* because *Agni* converts food into form of energy, which is responsible for the all functions of the body, nourishment, *oja*, *teja*, health.<sup>[6]</sup>

#### Nirukti of Agni

The word *Agni* is derived from – *Ang dhatu & Gati pratyaya* which means widely spreading.

#### Place of Agni

*Grahani* is seat of *agni* and it is so called since it holds the food for proper digestion and assimilation. It holds the food just above the umbilical region and it is supported and nourished by the *agni*.<sup>[7]</sup>

#### Concept of Agni as a Pitta

According to *Sushrutacharya*, *Agni* described as *Pitta*. *Pitta* is derived from “*Tapa*” which mean combustion or digestion.<sup>[8]</sup> When describing about *Agni & Pitta* different view have been suggested by *acharyas*.

According to *Sushrutacharya* there is no any *Agni* without *Pitta*, means *agni* is one of the *guna* of *Pitta*.<sup>[9]</sup> Digestion and metabolism are the main function of this *Pitta* or *Agni*.

According to *Acharya Charak*, *Agni* present in the *Pitta* gives good or bad results when its normal or vitiated state.<sup>[10]</sup>

*Acharya Hemadri* described as *Agni* has five division located in *Pawakshaya* and *Amashaya*. It composed of *panchmahabutas*, have dominance of *Tejas mahabhuta*.<sup>[11]</sup>

According to *Bhoja*, digestive fire is included within *Agni*. Therefore he considered *Pitta* as same as *Agni*.<sup>[12]</sup>

#### Importance of Agni

When the *agni* stops functioning, the individual dies; if the *agni* functions normally, the individual can lead a healthy and long life. Similarly, if the *agni* becomes abnormal, the individual suffers from various diseases; and hence, the *agni* is said to be the root cause of health and longevity.<sup>[13]</sup>

*Bala*, *Arogya*, *Ayu* and *Prana* are dependent on the state of *agni* that burns when fed by the fuel of food and drink or dwindles when deprived of them.<sup>[14]</sup>

#### Types of Agni

1. *Acharya Charak*<sup>[15]</sup>: 13 types

- *Jatahragni* - 1

- *Bhutagni*- 5
- *Dhavatgni*-7

2. *Acharya Sushrut*<sup>[16]</sup>: 5 types

- *Pachakagni*
- *Ranjakagni*
- *Alochakagni*
- *Sadhakagni*
- *Bhrajakagni*

#### JATAHRAGNI

*Jatharagni* is the *agni* or bioenergy present in the *jathara* (stomach and duodenum). As per *Ashtanga hridaya*, *Grahani* is the site of *Agni* which is responsible for the digestion of the ingested food. *Jatharagni* is considered to be the prime because each and every nutrient that one ingests first comes to the stomach and duodenum and is subjected to the action of *Jatharagni*. *Jatharagni* plays a key role in digestion of food-stuffs composed of the five basic elements and transforms it for utilization by the respective tissues. *Jatharagni* separates food material into the *sara* and *kitta* in the human body. It is also responsible for the duration of life, health, colour, *ojas*, strength of all the *bhutagni* and *dhatvagni*. *Jatharagni* is also classified into four categories according to its performance of digestion in the human being namely *Samagni*, *Vishamagni*, *Tikshanagni* and *Mandagni*.<sup>[17]</sup>

#### Samagni

The *Samagni* digests and assimilates food properly within proper time. This thus increases the quality of the *dhatu*s. Individuals having *Samagni* are always healthy. Due to balance state of *tridosha*, whatever the person eats *agni* digests the food if it is consumed in proper quantity and at proper time, with rules regulations of taking food.<sup>[18]</sup>

#### Vishamagni

Here the digestive fire is disturbed by *vata*. *Vishamagni* is state in which improper digestion of food takes place. Sometime it performs normal metabolism, sometime abnormal metabolism shows following symptoms- Flatulence, abdominal pain, upward movement of *vata* in *koshta*, *atisar*, intestinal gurgling, straining during defecation. Because of variability in *vata*, there are episodes of alternating cycles of strong appetite with loss of appetite and forgetfulness to consume foods.<sup>[19]</sup>

#### Tikshanagni

Here the digestive fire is disturbed by *pitta*. *Tikshnagni* is a state, where *ahara* digest very quickly, regardless of the type of food. *Acharya Sushruta* states that when the power of digestion is increased from normal to above normal, food digests very fast and produces *Kshudha*. When food is digested, the throat, the mouth cavity and the lips become dry with a burning sensation, *santapa* (burning sensation in whole body) and *daha* (local burning sensation). This condition is known as “*Bhasmak Roga*” according to *Ayurveda*.<sup>[20]</sup>

**Mandagni**

“Mand” means slow. Here the digestive fire is disturbed by *kapha*. 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 even a small amount of *ahara*. It shows symptoms like *Udarashirogaurava* (heaviness of abdomen and head), *Shwasa*, *Kasa*, *Praseka*, *Chhardi* and *Gasrasada* (weakness of the body).<sup>[21]</sup>

**BHUTAGNI**

*Bhutagni* is the one that is present in a basic element (*Bhutas*). Each element of nature making up our body composition is said to have a *agni* of its own. These *agnis* are responsible for the molecular metabolism and help in synthesis and break down of materials at molecular level. These represent the catabolic processes in our body. There are five *Agnis* in each of the five basic elements, namely.

1. *Prithvi* or *Parthiva agni* (fire within the earth element)
2. *Apya agni* (fire within the water element)
3. *Taijasa* or *Agneya agni* (fire within the fire element)
4. *Vayaveeya agni* (fire element within the wind or air element)
5. *Akasheeya / Naabhasa agni* (fire within the space or ether element)

*Acharya Charaka* 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 *bhutika* elements of the body.<sup>[22]</sup>

*Bhutagni* act after the *Jatharagni* present in the stomach and duodenum, acting on the food and causing their disintegration. In the modern physiology perspective, the action of *Jatharagni* can be equated with the digestion in the stomach and duodenum, and the action of the *Bhutagni* can be equated with the conversion of digested materials in the liver.<sup>[23]</sup>

**DHATVAGNI**

*Dhatvagni* means the fire which is located inside the tissue. These *agnis* are responsible for the formation of tissues and participate in the specific tissue metabolism. The *dhatvagni* represent the entire range of anabolic processes functioning in the respective tissues. *Acharya Charaka* has mentioned the fact that that the seven *dhatu*s that are a support system of the body contain their own *Agnis*, and by its virtue they digest and transform the materials supplied to them to make the substances alike to them for nourishment.<sup>[24]</sup>

1. *Rasagni* present in the *Rasa dhatu*.
2. *Raktagni* present in the *Rakta dhatu*.
3. *Mansagni* present in the *Mansa dhatu*
4. *Medagni* present in the *Meda dhatu*
5. *Asthyagni* present in the *Asthi dhatu*
6. *Majjagni* present in the *Majja dhatu*
7. *Shukragni* present in the *Shukra Dhatu*

**Agni Samyata and Agni Vaisamyata<sup>[25]</sup>**

Existence of all the different kinds of *agni* in their required *pramana*, *gunas* and *karma* is known as *Agni samya*. While *vridhhi* and *kshaya* in these aspects is known as *Agni vaishamyata*. *Vridhhi* and *kshaya* are known as *Tikshana* and *Manda* respectively. Both of these are abnormal and give rise to many diseases in the body.

**Effect of Agni Vaishamyata**

When the three kinds of abnormal *agni* stated above are present in *sharira*, digestion of food will not be proper. In *Mandagni*, the food will be *apaka*, in case of *Tikshanagni* it will be *dagdhapaka* and in case of *Vishamagni* it will be *pakwa-apakwa* and also different from one period of digestion to the other. In all these conditions there will be accumulation of *Ama* in the *Rasa dhatu*.

**CONCEPT OF AMA**

In *Ayurvedic* classics the concept of *Ama* is the most important and fundamental principle in understanding the physio-pathology of the diseases. *Ama* is the product of metabolic defect. It is formed due to improperly metabolized by product of food at *Jatharagni* level (macro level), *Bhutagni level* (micro level) and *Dhatavagni level*. Its importance is also reflected by the word *Amya*, which is the synonym given to *Vyadhi*. Its action is like that of toxic substances that is called *Amavisha*.

*Ama* is a generalised term, which can be applied to many malformed substances in the body like free radicals which causes many diseases. Any substance which is remained stable without any *Paka* or remained as residual during improper metabolism can be considered as *Ama*, such as ketone, uric acid, cholesterols etc. The role of these factors is already established fact in certain auto immune disorders. So in *Ayurveda* it is considered as a root cause of all disorders.<sup>[26]</sup>

**Nirukti**

The word ‘*Ama*’ is, the combination of ‘*Am*’ *dhatu* with ‘*Nich*’ *pratyaya* forms the word *Ama*, which is subjected to digestion i.e. undigested or unprocessed matter.<sup>[27]</sup>

**Definition**

Due to poor strength of *Agni (Jatharagni)*, initial *Rasa dhatu* becomes immature and improperly metabolised and this unmetabolised substance i.e. *Annarasa* is still left in stomach is known as *Ama*. This *Annarasa* undergoes fermentation (*Dushtata*) being retained in the *Amashaya* (stomach and small intestine) called *Ama rasa*.<sup>[28]</sup> It has been described as sticky, foul smelling toxin substance within the body.

**The relationship of Agni and Ama**

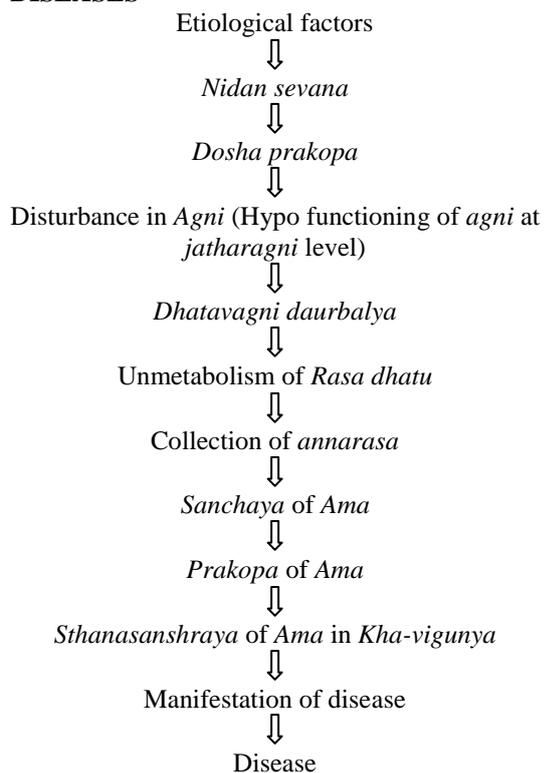
*Jatharagni* or *Koshagni*, *Panchbhutagni*, and *Dhatvagni* are the main three *Agni* present inside the body. *Jatharagni* is the digestive fire that controls the various

digestive processes within the body. When there is hypofunctioning of *agni* proper digestion is hampered resulting in the formation of *Ama*. Then *Bhutagni* have been enumerated, *bhuta* means the physicomaterial classification of food and body elements. Thereafter *Dhatvagni* have been expounded, *dhatu* here means the basic elements of the body. The functions of *Dhatvagni* refer to tissue metabolism. In sum, *Jatharagni* (gastro-intestinal metabolism secretion, enzyme), *Bhutagni* (five intermediary metabolism factors) and *Dhatvagni* (tissue metabolism) constitute the thirteen types of *Agni* or metabolic factors of *Ayurveda*. By the *Ayurvedic* literature, the food material is first digested and absorbed by the *Jatharagni* in *Amashaya* and *Grahani*. Then it is transported to the liver for *Bhutagni paka* and from there, the product of nutrition is processed in the tissues by the *Dhatvagni*. Normally digestion at all levels proper functioning of these *agni* is absolutely necessary. But, whenever *Agnivyapara* took the shape of *mandagni*, the resultant material will be unripened, undigested formation of what in *Ayurvedic* terms is known as *Ama*. In terms of metabolism, it is defective metabolism.<sup>[29]</sup>

### Symptoms of *Ama*

General characteristic of *Ama* are, *Srotorodha* (obstruction of channels), *Balabhransha* (loss of strength), *Gaurava* (feeling of heaviness), *Anilmudhata* (obstruction of *vayu*), *Alasya* (laziness), *Apakti* (indigestion), *Nisthiva* (excessive salivation), *Malasanga* (constipation), *Aruchi* (anorexia), and *Klama* (fatigueness).

### ROLE OF AMA AND AGNI IN THE PRODUCTION OF DISEASES



The pathological events associated with *Ama* are as follows.<sup>[30]</sup>

- Blocks minute channels thus affect circulatory process.
- *Ama* aggravates *tridosha*.
- Disturbs nutritional supply to the tissue.
- Diminishes potency of *dhatu*s.
- Vitiates *agni* and imparts feeling of uneasiness.
- Causes lethargy, mental sickness and lack of enthusiasm.
- Gas, diarrhea, bloating, bad smelling mouth and loss of appetite.

### CONCLUSION

After detailed discussion of *Agni* and *Ama*, it can be concluded that to understand *Ama* which is a pathological entity, in a better manner, knowledge of *Agni* is essential and inevitable. In *Ayurveda* the entire range of digestive and metabolic activity of the body takes place with the help of biological fire of the body known as *Agni*. Normal state of *Agni* should be maintained by consuming suitable diet and behaviour because longevity and strength depends on the healthy state of *Agni*. When the *agni* get vitiated, unwanted unripe byproducts of digestion and metabolism i.e. *ama* start forming and accumulating in the body at different levels from local (gastrointestinal) level to the systemic level. These pathological events ultimately lead to various gastrointestinal, allergic, auto-immune, and metabolic disorders. Hence, preservation and promotion of *Agni* and prevention from *ama* is the first and foremost step to be taken in every therapeutic endeavour and management of a patient. So, it is important to understand the concept of *Agni* and *Ama* to manage the health of a healthy individual as well as to interpret the disease process and planning the line of management of a disease.

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