

ROLE OF AYURVEDA IN METABOLIC DISORDERS

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ABSTRACT

Introduction: Ayurveda principal aims to have healthy and disease free life. Ayurveda has described an important factor of digestion and metabolism in our body as AGNI. Ingested food is to be digested, absorbed and assimilated is performed by Agni. In Ayurveda, the term “AGNI” is used in the sense of digestion of food. Ayurveda explains metabolic disorders a “AGNIVAISHAMYA” If the agni of a person is vitiated the whole metabolism in his body would be disturbed, resulting in ill health and disease. (Cha.Chi.15/4). **Method:** Ayurveda clearly indicates the correction of digestive fire by internal herbal medicinal formulations. **Samshodhana** and **Samshamana** therapy are important therapeutic measures described in Ayurveda for the management of various disease. **Samshodhana** is an eliminative therapy that deals with root cause of disease. **Samshamana** is palliative therapy. It includes **Mridu Virechana, Shodhana Vasti, and Ruksha Udvartana** which are usually effective in cases of **Agnivaishamyia**. **Conclusion:** A healthy lifestyle has to be adopted to treat metabolic disorder. The patient should do regular exercise and only ea easily digestible light food. The body is fragile sometimes and these irregularities are its cry for help. A temporary solution is not promoted in Ayurveda, but a path to a fruitful, long and healthy lifestyle. Since these symptoms may return if the patient reverts to old unhealthy habits. AGNI to associate the body with the nutritional strength. AGNI to associate the body with the nutritional strength, complexion and happy life along with providing energy.

KEYWORDS: Agni, Jatharagni, Bhutagni, Dhatvagni, Aagnivaishamyia.

Importance of agni

Ayurveda is the ancient Indian system of life sciences and medicine. Ayurveda has described an important factor of digestion and metabolism in our body as Agni. Agni is responsible for strength, health, longevity; vital breath and it determines the quantity of food to be consumed. Ingested food is to be digested, absorbed and assimilated, which is essential for the maintenance of life, and is performed by Agni in Ayurveda. The term “Agni” is used in the sense of digestion of food and metabolic products. According to the functions and sites of action, Agni has been divided into **13 types, i.e. 1 Jatharagni, 5 Bhutagni and 7 Dhatvagni**. About the importance of Agni, Acharya Charak has mentioned that after stoppage of the function of Agni, the individual dies, and when the Agni of an individual is in equilibrium condition, then that person would be absolutely healthy and would lead a long, happy and healthy life. But, if the Agni of a person is vitiated, the whole metabolism in his body would be disturbed, resulting in ill health and disease. Hence, Agni is said to be the base of life.

Ayurveda has considered AGNI a very important entity for the maintenance of good health. Ayurveda says That if AGNI is not in its normal state than it will result in The formation of a disease. The entire basics of Ayurveda are greatly different from the Modern basic sciences and the understanding of the Structure and function of human body, the pathology and Diagnostics are based on its own theories of **Triguna** (Sattva- Raja- Tama), **Tanmatra, Panchamahabhuta, Tridosha** (Vata -Pitta-Kapha), and **AGNI**. In Ayurveda, The term “Agni” is used in the sense of digestion of food and metabolic products. Agni converts food in the form of energy, which is responsible for all the vital functions of our body. This agni is not in the form of flame as the Terrestrial fire but is in the form of liquid which is called As ‘Pitta’ in Ayurveda. ‘There is no agni apart from pitta and pitta itself is agni’ asserts Caraka.

Initially Jatharagni gives stimulation to Bhutagni because consumed food is Panchabhautika, it has to undergo transformation by the respective Bhutagnis then only it becomes easy for Tissue metabolism by Dhatvagnis. Then processed Metabolic products circulate inside the

srotas continuously by the help of Vata dosha. This favours the Development, strength, complexion and happiness as well as growth of tissues. Dhatus remain in their Normally after receiving respective nutrients from Metabolized food substances.

Ayurved has described agni as an important factor for digestion and metabolism in human body. There are three sets of agnies help in the process of digestion at their own level.

- Aahar is one sub-supporters needed for daily life.
- After the digestion of aahar by jatharagni it turns into aahar rasa and kitta.
- Samana vayu brings the aahar rasa in to hridaya.

From the heart vyana vayu ejects the aahar ras forcefully continuously and simultaneously to the whole body. Bhutagni helps in transformation and dhatvagni for the synthesis and breakdown of tissue. So all these physiological process depends upon the agni. It is basically important to our overall health. Disturbance of agni lead to formation of aam which will cause diseases.

JATHARAGNI-THE PRINCIPAL AGNI

आयुर्वर्णो बलं स्वास्थ्यमुत्साहोपचयौ प्रभा । ओजस्तेजोऽग्नयः
प्राणाश्चोक्ता देहाग्निहेतुकाः ॥ शान्तेऽग्नौ म्रियते, युक्ते चिरं
जीवत्यनामयः । येगी स्याद्विकृते, मूलमग्निस्तस्मान्निरुच्यते ॥
च०चि०(१५/३-४)

Jatharaagni in its inactive form leads to death of an individual, if it is in active form increases lifespan and diseases free life. If it is in abnormal form it causes various diseases. Therefore jatharagni is considered to be the root or chief among all the categories of agni. Aggravation and diminution of jatharagni results in the aggravation and diminution of other agni because they are dependent on jatharagni.

The appropriate type and amount of fuel in the form of food and drink helps to maintain jatharagni in equilibrium condition because life and strength of an individual are dependent upon it.^[1]

यदन्नं देहधात्वोजोबलवर्णादिपोषकम् । तत्राग्निर्हेतुस्यहासन्नं
ह्यपक्वाद्द्रासदयः ॥ च०चि०(१५/५)

The food which nourishes the body, metal, vitality, strength and complexion etc., in which Agni (Jatharagni) is the main reason; Because due to uncooked food, juices etc. metals are not produced in proper form.

BHUTAGNI: The Transformer of Mahabhutas

भौमाप्याग्नेयवायव्याः पञ्चोष्माणः सनाभसाः ।
पञ्चाहारगुणान्स्वान्स्वान्पार्थिवादीन्पचन्ति हि ॥ च०चि०(१५/१३)

Consumed foods undergo metabolic transformation by the action of jatharagni, bhutagni, and dhatvagni. Initially jatharagni kindles the bhutagni. So in the gastrointestinal tract (GIT) both jatharagni and bhutagni acts simultaneously in the food materials. After the digestion of food by jatharagni in the GIT, bhutagni's

action still continues and it transforms vijaatiye panchbhautik elements of aahar rasa in to sajaatiye panchbhautik elements which nourishes their own specific bhautika elements of the body. This ultimate change in aahar ras that occurs at the end of digestion of jatharagni paka is performed by bhutagni. This process is called vipaka^[2] Bhutagni is five in number. They are innate in the food articles. Every panchbhoutik dravya has five basic elements and has their respective five bhoutika agnies. One bhoutika agni is present in each element and are named accordingly. Bhoumyagni (agni of prithvi element), apyaagni (agni of apya element), tajasaagni (agni of tajasa element), vayavya agni (agni of vayavya element), akasheeya agni (agni of akasha element).^[3]

BHUTAGNI AND JATHARAGNI: A controversy

Human body consists of 100 trillions of cells and every cell in our body is composed of five mahabhutas. Naturally each cell also consists of these five bhutagnies. As the dravya present in the world that we consume also consist of same five basic elements with their respective bhutagni. The body sustaining element which are seven in number undergo metabolic transformation into two different ways viz. Kitta bhag (transformation of waste product) and prasada bhag (transformation of nourishing material).

This process occurs with the help of seven dhatvagni corresponding to its own dhatu. This transformation process supports **Ksheer Dhadhi Nayaya given by Chakrapani. Jatharagni** acts upon food which leads to the formation of aaharras.

After that rasagni acts upon these aaharras and leads to formation of rasa dhatu which is panchabhoutik in nature. Every material in the universe is panchabhoutik in nature and each material is having five individual bhutagni inside it. In general bhutagni remains present inside the panchabhoutik dravya in dormant form. These bhutagni inside the dravya got activated after getting activation energy from external sources in two ways.

1. In one way the bhutagni inside the unripened dravya got activated after getting energy from sun light as external sources and transform that unripened dravya into ripened dravya. On the other hand, if the fruits are remain unused for further purpose the panchbhautik dravya into its individual component.

2. In another way, during cooking, by using external heat in the form of fire, the bhutagni inside the panchbhautik Dravya gets activated that ultimately results in breakdown of composition of panchbhautik dravya.^[4]

This proves that the activation of bhutagni depends upon both external and internal source of agni. In cooked panchbhautik dravya, bhutagni is already in activated form and after ingestion when cooked panchbhautikdravya reaches to grahani, jatharagni comes in action with the help of saman vayu and converts it into

the most nutritious part called sara and waste part called kitta. In lok when an individual dies, panchbhautik sharer starts to decompose and decomposition processes continue until it is converted into basic five elements. This is because when dehagni stops functioning, the individual dies but the bhutagni inside panchbhautik sharir is still in activated form and it remains in active form until panchbhautik sharer is decomposed in to individual panchbhautik component i.e. from sajaatiye to vijaatiye dravya. Decomposition of panchbhautik sharer there after contradictory to the part that bhutagni depends upon jatharagni.

DHATVAGNI: THE SYNTHESIZER OF DHATUS

Dhatvagni is the most important agni in human body. It is responsible for the formation of dhatus well as increase or decrease of dhatu. When the dhatvagni is in normal stage it leads to the formation of proper dhatu. The nutrient portion of rasa provides growth and nourishment to subsequent rakta dhatu, rakta to subsequent mamsa, mamsa to subsequent meda dhatu, meda to subsequent asthi dhatu, asthi to subsequent majja dhatu and the nutrient fraction of majja provides nourishment to subsequent sukra dhatu^[4] Tej portion of rasa dhatu, undergoes transformation by the usmā of pitta and gets converted into rakta dhatu. Due to the action of usma of rakta along with the vāta, ambu (water) and tejas, rakta attains compactness and get transformed into mamsadhatu after being acted upon by mamsadhatvagni. These vayu, ambu and teja are the abhyantara mahabhuta which are formed by the action of panchabhutagni. So the bhutagnipaka is important among the pakas because it provides raw materials in the form of vayu, ambu and tejas etcfor dhatu formation.

Malfunction of bhutagni causes malformation of mahabhuta (substrate) and subsequent malformation of dhatu. Dhatu then the fruits started to decompose because once the bhutagni is activated it transforms is an important basic component of shareer. Shareer develops because of nourishment of seven dhatus which are also a combination of panmahabhutas. Health of living beings depends on wholesome food and disease is caused by unwholesome food. Intake of delicious and wholesome food associated with smell, taste, color, touch and sound nourishes the olfactory, gustatory, optic, tactile and auditory sense organs in the body, respectively. These functions are happened with the help of bhutagni Generally all diseases are produced by mandagni (weak digestive activity) especially so the udara (enlargement of the abdomen). Aahar rasa formed because of mandaagni is not fit for subsequent dhatu formation. The first dhatus, rasa which has not been transformed properly due to mandagni (of digestive fire) and which is vitiated and remains in the amasaya is known asaam. These free radicals are present in body due to disturbances in bhutagni as well as jatharagni as bhutagni principally depends upon jatharagni.^[5]

IMPORTANCE OF PACHAKAGNI

अन्नस्य पक्त्वा सर्वेषां पक्त्वाणामधिपो मतः । तन्मूलास्ते हि तद्दृष्टि
क्षय वृद्धि क्षयात्मकाः ॥

तस्मात्तं विधिवद्युक्तैरन्नपानेन्धनैर्हितैः । पालयेत् प्रयतस्तस्य
स्थितौ ह्यायुर्वलस्थितिः ॥ च०चि०(१७/३३-४०)

We are talking about (13) types of fire, Pachaka Agni is understood, Pachaka Agni is the origin of the remaining 12 types of fire. When each fire increases, the intensity (intensity) of the remaining fires increases and if each fire becomes visible, then the remaining fire also becomes visible. Therefore, after gathering food, the fire will have to be protected every now and then by the swarup udhan (cloth). By living in the proper form of Paachak Agni, he has come and is happy in sharing his state.^[6]

AYURVEDA AND METABOLIC DISORDERS

Ayurveda is the life science and its the correct choice for metabolic disorders. Ayurveda explains metabolic disorders as agnivaishamya (problems in digestion, absorption). This condition occur due to vitiation of digestive fire, this can happen due to doshic imbalance a condition occur due to blockage in the individual channels of metabolism, as a result of this excess or improper digestion and absorption occur, and results in disease.

Ayurveda clearly indicates the correction of digestive fire by internal herbal medicinal formulations, along with correct diet regimes, physical activities and sudative external treatment modalities which removes the channel blockages, detoxifies the body and internal organs.

Effective ayurvedic formulation are there for controlling the serum cholesterol and serum glucose levels, special decoctions acting as cardiac protective along with immunity boosters control the body functions.^[7]

CONCLUSION

It may be concluded that Agni is responsible for digestion and metabolism in human body. The healthy state of agni depends upon nature and quantity of food intake. A wholesome diet is essential for good health and prevention of disease. Malfunction of agni occurs due to intake of unwholesome and improper quantity of food intake and other factors which leads to formation of aam. It causes sroto dusti and leads to several diseases. So wholesome combination and appropriate quantity of food should be taken. Yoga and meditation should be done in mental disturbances.

According to modern medicine, metabolic processes, division and multiplication are going on in all cells (*dhatu paramanu*) of our body from birth till death. The cell is the functional unit of the body.

According to Charak, the constituent parts of the body, if further divided into the atoms, are sure to become innumerable, as such cells or atoms are exceedingly numerous, very minute and ultrasensory.

In the conjunction and disjunction of cells, the activating factors are *Vata* and the nature of action (Cha. sha.7/17).^[5]

In Shushrut, we can see how the “Avayavaas” are formed from “various *dhatu*s” (Su.Sha.4/25-30).^[6]

Thus, based on Charak and Shushrut, the above cells can be considered as “*dhatu paramanus*.” For these constant processes in all cells, a biological energy is constantly essential, without which the survival of our body will be quite impossible. The same biological energy is provided by *Agni* in Ayurveda. This *Agni*-provided biological energy in the cells (*dhatu paramanu*) of our body is of two types: potential and kinetic.

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