A Meticulous Sight on Agni and Obesity and Its Interrelation

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ABSTACT

Ayurveda can be defined as a system, which uses the inherent principles of nature to maintain health in a person by holding the individual’s body in perfect equilibrium with nature. Ayurveda has described an important factor of digestion & metabolism in our body as Agni. Healthy Agni helps to promote steady weight & in other side when Agni is in impaired condition weight deliberately changes. Health, sturdiness, strength & life itself depends on the digestion. Usual activity of digestion potential maintains good trim of health while unusual activity leads to illness. A person with good digestive potential will have good appetite; can digest even heavy food without having symptoms of indigestion. Imbalance of Agni (digestive fire) leads to begin obesity. In Ayurvedic texts, ‘Charakacharya’ has described eight ‘Nindya Prakraties’ (undesirable constitution) according to the body constitution. Among them he also mentioned obesity. Obesity is described as ‘Medoroga’ in Ayurved. It is said that it is comparatively easy to help an underweight person, rather than an overweight person. The overweight problem can be due to an actual increase in the fat component (Meda Roga), or it can be due to malfunctioning. These, accordingly, will need different approaches. In very few cases it can be an offshoot of other metabolic disorders. It is clearly indicated in classical texts. So, this study revealed any relationship between Agni & Sthoulya Roga if any & for the prevention of this disease one should follow the daily regimens.

Key words: Agni, imbalance, Sthoulya, Meda-Roga, prevention, metabolic disorders.

INTRODUCTION

Ayurveda is a clinical science & the concept described in it has their respective practical utility. One of the valuable perceptions of Ayurveda is Agni. Being the biological fire that governs metabolism, Agni encompasses all the changes in the body and mind from the dense to the more subtle. Such changes include the digestion and absorption of food, cellular transformations, assimilation of sensory perceptions and mental and emotional experiences. Agni therefore covers whole sequences of chemical interactions and changes in the body and mind. Digestive abilities being related to the strength of Agni. Agni converts food in the form of energy, which is responsible for all the vital functions of our body. Agni is key factor in transformation of consumed Ahara Dravyas of Vijatiya (heterogeneous) nature to Sajatiya (homogenous) nature. Agni is derivative of Tejas (fire) Mahabhuta, it carries metabolic transformation in which the inherent features is changed. A balanced Agni therefore is vital for health. The strength of the body to resist disease and also its physical strength are directly related to its heat energy determining the metabolic processes of the body.

The concept of fire is critically important to our overall health. Agni is the force of intelligence within each cell, each tissue, and every system within the body. Ultimately, it is the discernment of Agni that determines which substances enter our cell and tissue, which substance should be removed as waste. In this way, Agni is the guard of life. Ayurveda identifies a vast range of functions for which Agni is directly responsible, but it also teaches us that impaired Agni is at the root of all imbalances and diseases. Hold on. Let’s just let that drop in for a moment: impaired Agni is at the root of all imbalances and diseases! This resource is meant to help you understand why

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Agni is so important, it learn to recognize the signs and symptoms of both healthy and impaired Agni, and to direct you to some practical tools for tending to your own Agni. The nation now has to deal with a new breed of developed world that is obesity. We can utilize this approach in the prevention and management of Meda-Roga, especially in the case of Manda or Vishma Agni persons, & make life pleasant & disorders free.

AIM AND OBJECTIVE
1. To work on the concept of Agni in context of Obesity.
2. To confirm & establish the interrelationship between Agni & obesity.

MATERIALS AND METHODS
1. Only textual materials have been used for this study, from which various references have been collected.
2. Modern texts & related websites have also been searched.

CONCEPTUAL STUDY
Concept of Agni:
Agni converts food in the form of energy, which is responsible for all the vital functions of our body. In Brahma Sutra, Agni has been meant to be a sign of life in the body. Great value of Agni has been shown by classical literature. Acharya Yasaka has given the etymology of the term “Agni,” which is as follows: Agni = A + G + Ni. The word “A” denotes root “I,” meaning “to go”; “G” denotes the root “Agni,” meaning “to glitter” or root “Agni,” meaning “to burn” and “Ni” means “to carry.

Shabdakalpa Druma, 61 synonyms of Agni has been compiled. These synonyms help in explaining the nature and functions of the Agni, e.g., Vaishvanara, Sarva Paka, Tanoopata, Amivachatana, Damunasa, Shuchi, Vishwambhar, Rudra etc.

SITE OF AGNI:
Graini, which is the site of Agni is so called because of its power of restrain of food. It is located above the umbilical region, and is supported and nourished by the strength of Agni. Normally, it restrains the downward movement of undigested food and after the digestion; it releases the food through the sides of its lumen. In the abnormal condition, when it gets vitiated because of weakness of Agni, it releases the food in undigested form only.

The sixth Kalा is called Pittadhara –Kalा situated in between Amashaya and Pakvashaya considered as the site of Agni.

Types of Agni:
Agni is unnumbered because of its presence in every single Dhatu Parmmanu (cell) of the build. But, index of the number of Agnis varies in various classical Ayurvedic texts, as shown below

- Charaka has indicated about 13 Agnis. Jatharagni – 1, Bhutagni – 5, Dhatvagni – 7.
- Sushruta, has indicated (5) Agnis viz. Pachakagni, Ranjakagni, Alochakagni, Sadhakagni and Bhrajakagni. However, there is an indirect reference of five Bhutagnis underlying in the brief description made to the transformation of food stuff.
- Vagbhata has described different types Agni, viz. – Bhutagnis –5, – Dhatvagnis –7, – Dhoshagni –3 and Malagni –3.
- Sharangadhara has recognized five pittas only (Pachak, Bhrajak, Ranjak, Alochaka and Sadhak).
- Bhavamishra has followed Acharya Charaka and Vagbhata.

Agni has been divided into 13 types according to the function and site of action. These are:

1. Jatharagni – one Agni present in the stomach and duodenum.
2. Bhutagni – five Agni from five basic elements.
3. Dhatvagni – seven Agni present, one in each of the seven Dhatus.

Accordingly, they are classified into three groups, namely Jatharagni, Bhutagni and Dhatvagni

JATHARAGNI:
Agni in our body is generally called as Jatharagni, which is considered to be the life of a living being. The metabolism of all the tissues of the body depends upon the Jatharagni. Jatharagni is also called as kayagni (that which is present in the body). The functional variations of digestive power can only be inferred by the digestive capacity of the individual. Agni is classified into 4 according to Dosha predominance.

1. Samagni: Samagni is considered to be the normal Agni, which denotes the equilibrium of Tridoshas and a healthy digestive system.
2. Vishamagni: Food gets digested normally on some occasions and poorly digested in other occasions though the food is taken normally. This occurs in case of predominance of Vata. Persons suffering from this type of Agni are more prone to Vata Vyadhis.

3. Teekshanagni: the person suffers from excessive hunger and thirst and is more prone to Pitta diseases as it occurs when there is predominance of Pitta. Persons with this type of Agni are more prone to Kapha Vyadhis (e.g., Meda-Roga).

- **Mandagni** = Hyposecretion of digestive enzymes
- **Triksagni** = Hypersecretion of digestive enzymes Pathological State of Agni
- **Vishamagni** = Irregular secretion of digestive enzymes

**Dhatwagni:**

All the seven Dhatus (seven element tissues of the body) contain their own Agni to metabolize the nutrient materials supplied to them through their own Srotas.

1. Rasagni present in the Rasa Dhatu.
2. Raktagni present in the Rakta Dhatu.
3. Mamsagni present in the Mamsa Dhatu.
4. Medagni present in the Meda Dhatu.
5. Asthagni present in the Asthi Dhatu.
7. Shukragni present in the Shukra Dhatu.

Each Dhatvagni or the bioenergy present in each Dhatu synthesizes and transforms the essential Rasa Dhatu required for that particular Dhatu or cell from the basic nutrients present in the Anna Rasa or essence of the diet that we consume. Each Dhatvagni has got a specialty to synthesize and transform the constituents suitable to its particular Dhatu. This action is a sort of selective action. Acharya Charaka has mentioned the fact that that the 7 Dhatus that are a support of the body contain their own Agni, and by their own Agni they digest and transform the materials supplied to them to make the substances alike to them for assimilation and nourishment.

**Location of Jatharagni:**

Grahanī is the location where Jataragni is situated and hence called as Agnivāsha (the one that holds Agni). It is called Grahanī since it holds the food for digestion. Ayurvedic scholars have universally accepted that the Dhatu’s Role of Agni in formation of Dhatu: all the (tissues) are nourished one after another from first Dhatu (Rasa) to the seventh Dhatu (Sukra) and food is the main source for the nourishment of all the Dhatu. Digestion of food is important as transformation of Dhatu depends on proper digestion of food. Dhatu plays an important role in maintaining the equilibrium (health) of the body. Hence digestion (Agni) has a vital role in the proper transformation of Dhatu. Agni is praised as God itself in Ayurveda. Agni is subtle in nature and transforms the food substance sun unexplainably to suit the physiological and psychological requirements of the individual. Maintenance of health depends upon the power of digestion, as proper digestion of food only can form proper formation of seven Dhatu and Tridoshas, which are the composition of the body. The food that we take should be properly digested by the power formation of the composition of the body. The food that we take should be properly digested by the power of digestion – the Agni that could help in proper formation of the composition of the body. Improper digestion will lead to improper formation of Dhatu, which further lead to many diseases in the body. Moreover, if digestion is good, only then proper assimilation and absorption of food can happen. In case of any disease the power of digestion is taken into account for proper assimilation and absorption of medicine that is administered, to serve the purpose. Hence Agni is important in every individual for healthy long life.

**CONCEPT OF OBESITY**

Sthaulya is included under eight undesirable conditions Ashtau Nindita, Shleshma Nanatmaja, Samtarpana Nimittaja, Atinindita, Ati Brihmana Nimittaja and Bahu Dosha Janita Vikara. Moreover Sushruta has emphasized on metabolic disturbances (Dhatvaagnimandya) in the etiopathogenesis of Sthaulya. The patient of Sthaulya exhibits very strange phenomenon. Their appetite is excessive and whatever they eat is quickly digested, which indicates hyperfunctioning of the Jatharaagni. Besides this, the patient suffers from laziness, may be due to under supply of energy, which may be due to hypofunctioning of Bhutaagni. Further Dhatvaagni also seems to be disturbed, as in Sthaulya patient mainly Meda-Dhatu is formed and there is deficiency of
other Dhatu. Hence, it can be inferred that in Sthaulya, Jatharaagni is Tikshna, Bhutaagni is Manda and Dhatvaagni is disturbed in their respective functions. The oldest metabolic disorder is Sthaulya (obesity). Sthaulya (obesity) is demoralize the society for social as well as medical reason.

As per Bhavaprakach, a person having heaviness and bulkiness of the body due to excessive growth, especially in abdominal region is termed as Sthula and the state of Sthula as called as Sthaulya [11]. According to modern concept ‘Obese’ means ‘Extremely fat’ whose Synonym is fat. On the same case Obesity means “Abnormal amount of fat”. The word Obesity is derived from Latin word “Obesus” from “Ob” by reason of and “endo” I eat which means having eaten.

DEFINATIONS OF STHAULYA
Maharshi Charaka was the first person to give the appropriate and precise definition of Sthaulya. He defined Atishthaulya as, a person who on account of the inordinate of Meda & Mamsa, having Pendulous Buttocks, Abdomen and Breasts; whose increase bulk is not matched by a corresponding increase in energy. In other words the person is called as obese, due to excessive increase of fat and muscles, has pendulous buttock, abdomen & breast and suffers from deficient metabolism and energy [12].

Abnormal or excessive fat accumulation that may impair health. Body mass index (BMI) is a simple index of weight-for-height that is commonly used to classify overweight & obesity in adults. Few years’ hindmost National Institute of Health Consensus conference defined Obesity as BMI greater than 27kg/m². But now a day Obesity is defined as BMI ≥ 25kg/m². Overweight 25-29.9 kg/m² Obesity (class-1) 30-34.9 kg/m² Obesity (class-2) 35-39.9 kg/m² Obesity (class-3) > 40 kg/m²

It is defined as a person’s weight in kilograms divided by the square of his height in meters (kg/m²). (WHO) [13]. The WHO definition is:

- A BMI greater than or equal to 25 is overweight.
- A BMI greater than or equal to 30 is obesity.

Ark defined Obesity as an abnormal growth of adipose tissue which is in three ways:

(a) Hypertrophic Obesity – Enlargement of fat cell in size.
(b) Hyper plastic Obesity – Increase the no. of fat cells.
(c) Combination of both.

This is a condition of excessive accumulation of fat in fat depots. This is an important nutritional disorder in the rich communities of the world and is not a problem in our country. (14) Obesity, are increasing to epidemic proportions globally. There are 400 million clinically obese adults worldwide. The global impact of these disorders is immense in terms of human suffering and economic burden. Obesity increases the likelihood of various diseases, particularly heart diseases, type 2 DM, obstructive sleep apnea, certain types of cancer, and osteoarthritis. Obesity is most commonly caused by the combination of overeating, excessive intake of heavy or cold food and drinks, oversleeping, lack of exercise, frequent snacking, eating processed food and leftovers, eating while multi-tasking and eating food that is not suitable to one’s body type, although a few cases are caused primarily by genes, endocrine disorders, medications and psychiatric illness. Evidence to support the view that some obese people eat little yet gain weight due to a slow metabolism is limited. On average, obese people have greater energy expenditure than their thin counterparts due to the energy required to maintain an increased body mass.

Obesity is a leading preventable cause of death worldwide, with increasing rates in adults and children. Authorities view it as one of the most serious public health problems of the 21st century. Obesity is stigmatized in much of the modern world (particularly in the Western world), though it was widely seen as a symbol of wealth and fertility at other times in history and still is in some parts of the world. In 2013, the American Medical Association classified obesity as a disease.

Interrelationship between obesity and Agni:
Ayurveda is 5000 year old and has a holistic approach to life. In Ayurveda, obesity is regarded as Medoroga, a disorder of Meda Dhatu, which includes fat tissue and fat metabolism. According to Ayurveda obesity begins with imbalance of Doshas (Vata, Pita, and Kapha), an imbalance of Agni (digestive fire), an imbalance of the Malas (waste products) or an imbalance of Shrotas (microcirculatory channels). This collection of imbalances then interferes with the formation of
tissues or Dhatus and leads to a tissue imbalance that we experience as excess weight. Classics perspective, the key cause is found in lifestyle and diet choices that disrupt balance. Views weight imbalance and obesity as something that should be corrected before it can contribute to other health problem.

Ayurveda word for digestion and metabolism is Agni. Agni, when loosely translated means fire. It actually signifies something much than just fire & includes the idea of a precise & powerful functioning intelligence. Agni has remarkable transformative qualities. All the food we take in must be transformed into that which can be made useful by the body (nutrients) & that which is not needed (waste). The nutrients, or most refined products of our Agni, are used to create the body’s tissues (Dhatus).

Manda Agni:
In which the Dhatu’s (tissue elements) are stated to undergo Vridhi (increase, growth or hypertrophy) is comparable to hypo metabolism, usually associated with, a) hypo-thyroidism, b) Simmonds disease, hypo-metabolism associated with hypo-thyroidism is stated to occur due to low thyroidism availability. It will be recalled that thyroxin activates cellular oxidative process throughout the body. Thus, in the condition, under reference, there is seen to be a reduction in the oxidative reactions & the basal metabolic rate has been shown to fall to – 25. It exhibits the following symptoms:- the development of myxodema, reduction the mental & bodily vigor, abnormal thickening of the skin, as if much water has been accumulated in it- oedema Shotha which latter leads to an increased body-weight, since less of food is burnt in the cells & much of it is stored up as fat – a condition which closely resembles the description of Medo-Vridhi.

The Savage Cycle:
There are seven Dhatus, and they are created sequentially. The creation of Dhatus is an ongoing complex process. The key word is sequential. If at any stage there is an imbalance, this disrupts the whole sequence of tissue formation. The Shrotas or channels play a big role, because they carry the information required to properly form the tissues step by step. If blockages occur in the Shrotas due to toxins (Ama), an imbalance starts. According to Ayurveda to maintain balance and health strong Agni and clear Shrotas are essential. From Ayurvedic perspective the cause of weight gains is cyclical. It begins with balance reducing choices in diet and lifestyle that weaken the digestive fire, which in turns increases toxins, clogging the communication channels Shrotas and thereby disrupting the formation of tissues. The poorly formed tissue layers increases Meda Dhatu and an imbalance in Kapha Dosha. This in turn increases accumulation of toxins (Ama), which leads to imbalance in Meda Dhatu.

Accumulation of Ama in Shrotas causes an imbalance in naturally-flowing Vata energy. Restricted or imbalanced Vata energy ends up increasing Agni –the digestive fire–leading to an increase in appetite and thirst. This leads in turn to an increase in Kapha Dosha and Meda Dhatu and the whole cycle starts again.

To break the cycle, the Ayurvedic expert determines the unique nature of the individual (Prakriti) and the nature of imbalance (Vikriti). The essence of recommendation is generally comes down to addressing a few core issues: strengthening digestion (balance Agni), removing Ama, improving dietary habits and adjusting inappropriate daily routines for which Agni stables so that Ahara Pachana occurs properly without any hurdle due to Agni Vikriti.

DISCUSSION
Ayurveda takes into account an individual in his entirety & advices to follow daily regimens & adopt fixed rules conduct of life accordingly. But today’s irregular & fast lifestyle, irregularities in diet, sleep, high stress levels at the workplace & emotional factors can enhance indigestion factor which leads to metabolic disorders like overweight. It occurs due to deficiency in quality & quantity of digestive juices, which is termed as Mandagni (deficient digestive fire). Obesity is a complex disorder involving an excessive amount of body fat. Obesity isn’t just a cosmetic concern. It increases your risk of diseases and health problems such as heart disease, diabetes and high blood pressure.

In Ayurvedic compendia, relation between Meda-Roga & Agni is not quoted directly as in Manda or vishma Agni, if it quoted indirectly (Anukta) elsewhere in Ayurvedic texts then it should be enlightened. Hence the concept of Agni, Sthoulya its inter-relation is vital factors which are to be studied in detail for wellbeing of a person.‘Ahara’ as most common pathogenic factor for Medovridhhi. On the other hand Ama Dosha. Because of obstruction of Srotas by Meda, the Vata moving mainly into stomach, whips up the
Agni and absorbs the food. The obese person digests food speedily and craves for food inordinately. Over eating produces more Upadana Rasa which causes over growth of Medo Dhatu, leads to Sthulata. Aama Rasa is produced due to Kapha Vardhaka Ahara, Adhyasan, Avyayama, Divaswapna. The Madhur Bhava Ama Rasa moves about within the body. The Snigdhansha of that Ama Rasa causes Medo Vriddhi, which produces excessive stoutness. Following points can be concluded on the basis present article.

- Sthaulya is a metabolic disorder, described by Charaka in Astauninditiya chapter. Habits of junk food, sedentary life style, Achintanata, Divaswapna etc. along with genetic predisposition play a major role in etiopathogenesis of Sthaulya.

- One more thing cause of obesity is changing now: Increasing stress, dependability on machine, faulty dietary habits are becoming the cause of obesity.

- Sthaulya is a Dushya dominant disease.
- Etiological factors mainly vitiate Kapha-Meda. This vitiated Meda obstruct the path of Vata and causes its Avarana which results into provocation of Vata. Thus remaining in the Kostha, Vata causes Atikshudha which is the major cause of Sthaulya.

- Meda Dhatvagni Mandhya leads to excessive formation of improper Meda Dhatu and ultimately Sthaulya.

- For preventive measures mindful full eating, Agni Vardhakabhav Dravya in food, free & good thoughts, exercise so that Agni remains normal & activity of biological fire remains helpful for average weight. In order to be healthy and increase the digestive power (Agni) while losing weight, the following steps should be followed: Eat according to your body constitution, eat fresh seasonal fruit, from all this Agni is helpful to built new Dhatu’s & give strength. For Agni level Yoga helps to attain energy level & helps to lose weight. Above all, people need a sense of his self awareness.

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REFERENCE


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