



ROLE OF AGNI IN OBESITY (STHOULYA)

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ABSTRACT

Obesity is now so common disease within the world's population, increasing in prevalence. In modern science sedentary lifestyle, unhealthy dietary habits, and overdependence on technology have resulted in lifestyle diseases. Now a day's lifestyle modification and the use of more junk food is the leading cause of it. From in *Ayurveda* point of view, it can be considered to be one of the eight undesirable conditions (*Astha Nindita*). It is also a metabolic disorder that depends on *Agni* for its proper functioning. *Agni* is the sole cause for the existence of life and its extinction leads to death. There are four states of *Jatharagni*: *Vishma*, *Teekshna*, *Manda*, and *Sama* states. *Agni* is also responsible for the health of individuals which should be in equilibrium. *Agni* plays an important role in the manifestation of lifestyle disorders. If we want a disease-free life, we should maintain our *Agni* in equilibrium.

Keywords: Obesity, *Sthoulya*, *Agni*, Lifestyle disorders, etc.

INTRODUCTION

The World Health Organization (WHO) defines health as 'a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity' (WHO, 1948). Which is close proximity to the

definition of good health mentioned in *Ayurveda* classics - defined health as "a state of equilibrium of *Tridosha* (fundamental physiological governing principles of the body), *Agni* (metabolic and digestive processes), *Dhatu* (principles that uphold the formation of

body tissues) and waste products should have excreted well. The sense organs, mind, and the soul should be in a state of bliss." Now a day's globalization has brought in a lot of changes in the food habits of children and adolescents because availability, accessibility, and affordability lead to a still more sedentary lifestyle. By exposing oneself to these factors human beings are unknowingly affected a number of diseases, in which *Sthoulya* is one of them and now obesity is an emerging epidemic in India. Adult males and females are equally affected. ⁽¹⁾

Urban-rural difference

In India, the available information indicates the urban affluent are more at risk and have a high prevalence of obesity because of a sedentary lifestyle, consumption of junk food rich in calories, and lack of exercise. ⁽²⁾

Sthoulya (Obesity)

Acharya Charaka has described *Sthoulya* as a person having a pendulous appearance of buttock, *Udar* [abdomen], breasts due to excess deposition of *Meda* [fats] along with diminished metabolism and energy called *Atisthula*. In *Ayurveda*, *Sthula Purusha* is considered one of *Ashta Nindita Purusha*. *Sthoulya* can be correlated with obesity. ⁽³⁾ Obesity can be defined simply as the disease in which excess body fat has accumulated to such an extent that health may be adversely affected. ⁽⁴⁾

Agni

Digestive fire: the concept of *Agni* is unique in *Ayurveda*. In the external world, it is observed that solar energy is essential for any type of conversion in nature. The representative of this solar energy in a living organism is called *Agni* or *Kayagni*. *Agni* is occult power, which has the capacity to convert the substance into other form. *Agni* manifests its power through *Pitta Dosh*. The normal activities of *Agni* help the maintenance of physiological activities while its abnormal state produces *Vikruti* and its absence cause the death of the human being. *Charaka* has indicated about 13 *Agni*'s: *Jatharagni* – 1, *Bhutagni* – 5, *Dhatvagni* -7. The normal functioning, as well as the vitiation of *Doshas*, depends upon normal *Agni* and hence the maintenance of normal *Agni* is absolutely essential for health. *Jatharagni* is in the gastro-intestinal tract,

while *Dhatu Agni* is situated in tissues. It is nothing but a small- scattered portion of main *Jatharagni*. The main site of *Dhatu Agni* is however in the liver. It is responsible for the formation of all tissues in the body. ⁽⁵⁾

Four functional states of the Agni:

Mandagni: This is a state in which the action of *Jatharagni* is considerably diminished due to the dominance of *Kapha*. Hence, this state of the *Agni* is known as *Mandagni*, in this state, the *Agni* is unable to digest even a small quantity of otherwise even easily digestible food.

Tikshnagni: The action of *Jatharagni*, in this state, is influenced predominantly by *Pitta*. The *Agni*, in this condition, is said to be excessively excited and, hence, it is known as *Tikshnagni*. It easily digests even a very heavy meal, in a very short space of time. It causes voracious hunger.

Vishmagni: An erratic state of the *Agni* arises as a result of the influence of *Vata*, in the condition described as *Vishmagni*. In this state, their action of *Agni* is irregular and fitful. It sometimes helps the process of complete digestion and at other times produces distention of the abdomen, colicky pain, constipation of the bowel, dysentery, ascites, heaviness of the limbs, and loose- motion.

Samagni: In the well- equilibrated state of the functioning of *Tridoshas*, the *Jatharagni* is also stated to function normally. This state of its function has been described as *Samagni*. In other words, *Jatharagni* ensures complete digestion of the food ingested at the proper time without any irregularity, when *Tridoshas* are in an equilibrated state of functioning. ⁽⁶⁾

Effect of abnormal digestive fire:

The inconstant digestive fire gives rise to *Vatika* diseases, the hyper-functioning one to *Paittika* disorders and the hypo-functioning state produces *Kaphaja* ailments. ⁽⁷⁾

Role of Agni in obesity (Sthoulya)

The absence of physical activity, sleeping during the day, and intake of food which increases *Kapha*, make the end product of digestion become (abnormally) *Madhur Vipak* which in turn causes an increase of

Meda (fat). This *Kapha* is somewhat similar to the character of *Meda*, so *Meda* gets an increase which obstructs the nutrient channels of the remaining tissues depriving them of nutrition. So only fat accumulates in large quantities in the body making the person incapable of all activities. The channels of *Vata* become obstructed by the increased fat inside the abdomen. The *Vata* then begins to act briskly inside the abdomen, increasing the digestive activity, making for voracious hunger and craving for a large quantity of food. In course of time, many more distressing symptoms develop.⁽⁸⁾

Concept of *Dhatu-Agnimandya*

Tissue fire plays an important role in the process of formation of tissues from the nutrient substances (of the particular *dhatu*). Hence when the power of the tissue fire of a particular tissue is diminished, either in the liver or in a particular channel, hence the normal functional activities of the tissues are hampered. In obesity, a similar type of fat tissue is produced due to low tissue fire (*Dhatu-Agnimandya*) of fat tissue.⁽⁹⁾ The majority of lipids in the human body from ingesting food are triglycerides and cholesterol. Lipid metabolism is often considered the digestive and absorption process of dietary fat. Lipid metabolism begins as hydrolysis with the help of various enzymes in the digestive system. The complete metabolism of fat is also regulated by hormones of the thyroid, pituitary body, suprarenal, testis, and pancreatic cell secretions. Any abnormality either intake of fatty substances or lack of physical activity or diminished activity of hormones, enzymes, etc. may lead to a pathological basal metabolism of fat and accumulation of fat in the body. In most fat people, obesity is caused by overeating and lack of exercise. In some, the hypothalamic centers that regulate eating are abnormal. More often, overeating is caused by psychological or social factors. Lack of exercise makes it easier to gain weight but is not usually a major factor. Obesity is more likely to cause indolence due to lack of exercise.⁽¹⁰⁾

Etiopathogenesis: An *Ayurveda* concept

In a person doing no physical exercise, enjoying day sleep, and taking a *kapha*-provoking diet, sweet substances in the food juice are generally converted into

Sneha which leads to an increase in fat. Consequently, other body tissues do not get properly nourished in him because of the channels being blocked with fat.⁽¹¹⁾ As the channels are blocked by *Meda*, *Vayu* is especially active in the abdominal cavity, which stimulates the digestive fire and increases the absorption of food. Consequently, the food is digested very quickly, and the person craves more food. In due course of time, many serious diseases may develop. *Vayu* and the digestive fire are the main culprits for producing the complications. They burn the obese as the *Jungle* fire burns the forests.⁽¹²⁾ *Amaloudghar*, (hyperacidity), *Pipaasadhikya* (Polydipsia), and *Paridah* (Burning Sensation) are generally present in obese persons. These symptoms indicate *Pitta Dushti* in obesity. Due to disturbed *Medoagni*, a huge amount of *Abadh Meda* (compact fat) is formed which causes obesity. This *Abaddh Meda* is difficult to metabolize and plays the role to obstruct the activity of *Vayu* and is also responsible for further *Mandagni*.

Health penalties in obesity

Increased mortality indices, reduced quality of life, reduced physical fitness and mobility, hypertension and ischemic heart disease, diabetes mellitus, osteoarthritis, hiatus hernia, gall stones, increased risk of cancer: cancer of the breast⁽¹³⁾

Measuring obesity:

1. Body mass index (BMI)
2. Skin fold thickness

Body mass index (BMI): is calculated from the formula = weight (kg) / height(m)²

Normal range: - men – 20-25

Women – 18-24

Table 01: International classification of adult overweight and obesity according to BMI

Classification BMI Kg / m ²	
1. Normal range	18.5-24.99
2. Overweight	≥25
3. Pre-obese	25 – 29.99
4. Obese	≥30
Class 1	30-34.99
Class 2	35- 39.99
Class 3	≥40

Skin fold thickness

Measuring skin fold thickness indicates the deposition of fat and indirectly measures the level of obesity in a person. Triceps skin fold and subscapular skin fold thickness are measured commonly. Harpenden calipers are used for this purpose.⁽¹⁴⁾

DISCUSSION

The inter-relationship between *Agni* and *Sthoulya* is to be studied in detail for a healthy life of a person. The most common causative factor of *Sthoulya* is unhealthy diet habits and sedentary life which ultimately result in the vitiation of *Agni*. Among the four states of *Agni*, *Samagni* is considered a normal one, and the other three are the abnormal state of *Agni*. *Sthoulya* is caused by *Medodhatwagni Mandya* which causes the excessive formation of *Dushta Medo Dhatu* and results in obesity. *Acharya Charaka* explained *Sthoulya* as a metabolic disorder.

CONCLUSION

After the brief discussion on the relation between *Agni* and *Sthoulya*, it shows that *Agni* is one of the basic phenomena of life in which the healthy state of the body and diseased condition entirely depends on *Agni*. For disease free life it should be maintained at any cost. *Agni* not only digests food but is also responsible for metabolism at the cellular level. In developed countries, lifestyle disorders like obesity are having prevalence rate than infectious diseases. Hence for a healthy life, we should maintain our *Agni* in the normal state which also prevents *Sthoulya*.

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