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Review on understanding of *Astha Sthoulya Doshas* and *Sthoulya Lakshanas*

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ABSTRACT

Sthoulya is one among *Santarpanotta Vikara* and it is caused by *Kapha Pradhana* and *Medodhushti*. All the *Santarpanotta Nidanas* and *Medodhushti* which will lead for *Sthoulya*. *Sthoulya* mainly features *Chala Sphik Sthanah Udara Lambanam* and *Atisweda, Dhourgandy, Dourbalya* as associated symptoms and these are considered as *Sthoulya Doshas*. *Sthoulya* leads to *Kshudra Swasa* and *Alpaprana*. Which implies the effect of *Sthoulya* on *Pranavaha Srotas* i.e., impairment in respiratory function which indicates *Sthoulya* does changes in normal breathing pattern. Life style disease and non-communicable diseases are major concern of health in present era. Obesity and Overweight are the major health care challenge that occupies the first place among non-communicable diseases creating an enormous socioeconomic and public health burden in most countries and is a worldwide epidemic. The worldwide prevalence of obesity nearly tripled between 1975 and 2020. Involvement of *Meda, Agni, Kapha* and *Vata* make the vicious curve of *Samprapthi* leading to chronic symptoms and complications like *Ashta Sthoulya Doshas*. Involved *Agni* and *Ama* in different stages which will make complicity to manage the *Sthoulya* and holistic approach is needed to treat the comorbidities like *Ashta Sthoulya Doshas*.

Key words: *Sthoulya, Medodhatu, Obesity*

INTRODUCTION

Ayurveda is a holistic health approach. In present era food habit and life style where leading for hampering health of an individual. Obesity/*Sthoulya* is one such condition caused by improper life style and food habits. It is *Kaphapradhana*^[1], *Meda Pradoshaja*^[2], *Bahu Avastha, Santarpanajanitha Vikara*^[3] leading to dysfunction of *Medo Dhatwagni*^[4]. The vitiation of

Kapha and *Medo Dhatu* leads to flabbiness of hip, abdomen and breast region. The pendulous nature of the *Udara* because of increase in the *Meda* is the nearest correlation to central obesity.

Sthoulya Doshas and Lakshanas

a) *Chala Sphika Udara Stana*^[5] (Pendulous movements of buttocks, abdomen and breasts)

All the main symptom of *Medoroga* is the excessive deposition of *Meda* in buttocks; abdomen and breasts make them movable.

Central obesity: It is also referred as visceral or abdominal obesity; it is an accumulation of excess fat around the abdominal area. This type of obesity is high risk of type 2 diabetes and CVD.

Gynoid obesity: Also known as pear-shaped obesity and the accumulation of fat is around the hips, thighs and buttocks

Android obesity: It is also referred to as apple-shaped obesity, especially around the abdomen, chest region

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and upper limbs and it includes increased risk of developing type 2 diabetes and CVD^[6]

b) Aayushohrasa^[7] (Decreased life span)

It is explained by *Acharya Chakrapani* that *Meda Dhatu* obstructs the *Medovaha Strotas*. So other *Dhatus* cannot grow properly and person feels weakness, which affects the longevity.

Obesity has been linked to a number of chronic diseases, including type 2 diabetes, cardiovascular disease and other systemic diseases may result in a decline in life expectancy.^[8]

c) Krichha Vyavaya (Difficult intercourse)

Because of excessive formation of *Meda Dhatu* there less formation of *Shukra Dhatu* and there is obstruction of *Shukravaha Strotas* due to *Meda*. Visceral obesity, in particular, is characterized by increased inflammatory factors, decreased plasma TT levels and endothelial dysfunction. Obesity is associated with decreased TT, BAT (bioavailable testosterone) and FT (free testosterone) levels, as well as elevated E2 (estradiol) levels. Such a decrease in TT levels is not associated with increased gonadotropin levels; thus, a hypogonadotropic hypogonadal cycle emerges and persists. During this vicious hypogonadal state, the deposition of visceral fat ensues, contributing to central obesity. In this pathological state, aromatase activity is increased, resulting in the metabolism of testosterone to E2, contributing further to the decrease in testosterone concentrations and the preferential accumulation of abdominal fat, leading to androgen deficiency and a hypogonadal state. Thus, obesity disrupts the endocrine milieu, which produces an altered penile vascular structure by modulating vascular smooth muscle and endothelial function, resulting in an abnormal hemodynamic state and ED.^[9]

d) Javaparoda (Retarded movements/impaird body movements)

As it happens in older age same happens in *Atisthula/obese* because of *Medo Vridhhi*, there is instability, lack of strength, flabbiness and heaviness which are the properties of *Meda Dhatu*, obese person cannot withstand exertion which hampers the

movement and also increased adipocytes and impaired adipokines in obese there is decrease in fatty acid oxidation and glucose uptake in skeletal muscle which results in diminished activity.^[10]

e) Daurbalya (Debility)

It occurs due to improper nourishment of *Dhatus* except *Meda* because only *Meda* is nourished by *Ahararasa*.

Obesity is a state of malnutrition by excess that leads to defective immune function. Excess body fat is associated with changes in leukocyte count such as monocyte, lymphocyte, and neutrophil counts but lower B and T-cell mitogen-induced proliferation. Based on current research, it is too early to say that an altered immune system underlies the onset of obesity; immune dysfunction involves obesity-associated alterations like inflammation and insulin resistance. Macrophage aggregates grew larger with increasing degree of obesity, similar to those observed in other inflammatory conditions, led to the idea that macrophages aggregate could explain the obesity-related inflammatory state to a certain extent. There are two types of phenotypic macrophages described that have been related to obesity: M1 (classically activated) acts as pro-inflammatory, and M2 (alternatively activated) acts as an anti-inflammatory. In obesity, there is a switch from M2 to M1 phenotype, which is pro-inflammatory. Furthermore, most of the research findings showed the lack of M2 phenotype correlated to obesity and inflammation.^[11]

f) Dauragandhya and Swedabhada (Bad odor of the body and excessive sweating)

It is due to *Meda Dushti* as *Sweda* is produced by *Meda Dhatu*. When sweat mixes with *Kapha*, it results in *Swedha* and *Daurgandhya*. Excess body fat can act as an insulator, making it harder body to release heat through skin. It means that body has to work harder to maintain a normal body temperature, which can lead to increased sweating. In addition, body fat produces a hormone called leptin, which regulates body temperature. When body temperature rises, leptin signals brain to increase metabolism and release heat through various means, including sweating.^[12]

g) Kshudati Matra and Pipasatiyoga (Excessive hunger and increased thirst)

Because of movement of aggravated *Vata*, it is confined to *Koshtha* resulting in the stimulation of digestive fire (*Agni*) and absorption of food. So, person digest food very quickly and becomes a voracious eater and also drinks water frequently due to increased appetite. Leptin resistance is a condition in which the body does not respond properly to leptin. This may result in a person not feeling full after eating a meal. Many individuals who are overweight or obese develop leptin resistance, which can make them feel hungry more often and obese individuals have higher water needs than nonobese individuals because water needs depends upon metabolic rate, body surface area and body weight, water requirement increase with BMI based on high energy requirement, greater food consumption and high metabolic production.^[13]

Ayathopachaya^[14]

It means improper deposition of fat in abdomen, thigh and breast. It is due to the obstruction of *Medovaha Strotas* that *Meda* accumulates in these organs disproportionately.

Kshudra Swasa^[15]

Means increased respiratory movement after slight exertion which is relieved by rest. It occurs due to aggravation of *Vata* and *Kapha*. The process of respiration is mainly due to the contraction and relaxation of diaphragm muscles but in *Medoroga* due to the fat deposition to the contraction and relaxation of diaphragm muscles are decreased and as a result dyspnea occurs. The mechanical properties of the lungs and chest wall change significantly in obesity due to fat deposits in the mediastinum and abdominal cavities. These changes decrease the compliance of the lungs, chest wall, and the entire respiratory system. This reduction in compliance likely contributes to respiratory symptoms such as wheezing, shortness of breath, and difficulty breathing while lying down. The decreased respiratory system compliance (increased stiffness) also affects breathing pattern. In obesity, intra-abdominal and pleural pressures are slightly increased, as the movement of the diaphragm and

chest wall is restricted by fat accumulation in the thoracic and abdominal cavities. This alters the breathing pattern, leading to a substantial reduction in lung volume and capacities.^[16]

Shaithilya and Gatrasada^[17]

It means looseness of muscles and joints which occurs due to increase *Kapha* and *Meda*.

Obesity contributes to initiate the osteoarthritic joint process, via excessive mechanical loading of the joint. The isolated and combined effect on the osteochondral unit and surrounding connective tissues Obesity can cause deteriorating bone density and muscle mass. This is referred to as *osteosarcopenic* obesity. Osteosarcopenic obesity can lead to a higher risk of fractures, physical disability, insulin resistance, and poorer overall health outcomes.^[18]

Gauravata^[19]

Due to the heaviness property of *Kapha* and *Meda*, increased *kapha* and *Meda* produced heaviness in the body. Obesity is an excess fat accumulation in a subcutaneous that is underneath the skin, cushioning the bones and joints, and also tend to accumulate in waist, hips, upper back, buttocks and thighs. Visceral or belly fat or central obesity accumulates deep in the abdominal cavity, around the visceral organs. These changes in obese person feel the body heaviness.

Krathana^[20]

Obesity can cause *Kapha* to obstruct the respiratory system, leading to symptoms such as stridor and stammering or stuttering voice (*Gad-Gad Vakya*). In *Medoroga*, aggravated *Kapha* in the *Pranavaha Strotas*, along with fat deposition in the trachea and nostrils, can hinder normal voice production, resulting in unclear speech. Abnormal respiratory sounds can include attenuated or increased abnormal sounds. Bronchovesicular lung sounds may be caused by thoracic masses, pleural effusion, obesity, and other factors.

DISCUSSION

Sthoulya is a *Kapha Medo Janya Vikara* leading for different signs and symptoms and complications. In

this condition involvement of *Meda Agni Kapha* and *Vata* make the vicious curve of *Samprapti* leading to chronic symptoms and complications like *Ashta Sthoulya Doshas*. The impaired metabolism in the body, in obesity has various negative health effects in an individual.

Easy fatiguability, reduced movement and excessive deposition of fat will reduce the quality of life and life expectancy.

CONCLUSION

The understanding of *Dosha Dushyas Agni* involvement in *Samprapti* of *Sthoulya* is important. The assessment of signs and symptoms comorbidities and complications of *Sthoulya* is important to choose the treatment protocol. As this condition is *Bahudosha Avastha* and involved *Agni* and *Ama* in different stages which will make complicity to manage the *Sthoulya* and holistic approach is needed to treat the comorbidities like *Ashta Sthoulya Doshas*.

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