CONCEPTUAL CRITICAL STUDY OF STHAULYA THROUGH AYURVEDIC TEXT W.S.R. TO OBESITY.

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ABSTRACT

Now a day every person is running after life’s goal hence does not have time to think and act for healthy life and not able to follow the proper Dincharya, Ritucharya, Dietetics rules and regulations. Obesity causes 50,000 deaths per year, keeping in view, this burning problem of present era and its associated divesting diseases. All classical texts of Ayurveda explained causes (nidana) symptoms, pathogenesis, complication, treatment, prevention of Sthaulya (Obesity). Many theories have been put forward with many new hypotheses describing this disorder in Ayurveda as well as modern science, still there as enough scope to work out on its aetiopathological and management aspect of Sthaulya, because in modern medical science its management aspect remains symptomatic with troublesome side effect. So entire world is expecting fruitful control and prevention of obesity from Ayurveda which is a life science. Keeping these facts in view paper will be going to be an effort to understand etiology, pathogenesis as well as Chikista sutra of Sthaulya w.s.r to Obesity.

Keywords – Medoroga, Obesity, Sthaulya, Dhatvaagni, Jatharaagni, Bijadoshaja.

1. INTRODUCTION

Now a day every person is running after life’s goal hence does not have time to think and act for healthy life and not able to follow the proper Dincharya, Ritucharya, Dietetics rules and regulations. Due to artificial living lifestyle, person shaves gotten so many disorders for themselves. Sthaulya is one of them. A healthy body is the only one media to achieve ultimate goal among the Chaturvigh Purusharth. Acharya Sushrut also told that Madhyam sharira the best. Atishthula and Atikrisha are always affected with some complaints. Acharya charaka has quoted a Sthaulya under the eight varieties of important which designated as Astauninditapurusha, Atishthula comprises one of them. He enlisted this under Santarpanjanitavyadhadi. i.e. Ayurhasa, Javoparodha, Alpavyavayit, Daurbalya, Daurgandha, Swedhabadha, Atitrisha, Atikshudha. Derangements of Agni or digestive power leads to the production of Ama, which disturb tissue fire of fatty tissues and blocks the proper formation of further tissues. Improperly formed fatty tissue accumulated fats causes disturbance to movement of vata¹ which in turn increases appetite, due to chala guna of vata. Patient therefore eats more. An entire food is then converted into improper fatty tissues. This article is an attempt to explore the nidan (etiology), samprati (pathogenesis), chikista sutra (treatment) of sthaulya correlating it with etiopathogenesis of Obesity.

1.1. Current status of obesity

According to WHO (Report 2016), Obesity is one of disease among top ten selected risk to the health.

♦ 400 million causes of obesity reported.
♦ 16% are of adult of total population.
♦ Total health care expenditure for obesity patients is 15-20%.

Obesity causes 50,000 deaths per year. Keeping in view, this burning problem of present era and its associated divesting diseases, it has been decided to do study Sthaulya with certain Ayurvedic classical remedies. There isn’t any effective medicine in modern medical science, so mankind hopes to search the perfect remedy from Ayurvedic by its holistic approach.

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Many theories have been put forward with many new hypotheses describing this disorder in Ayurveda as well as modern science, still there is enough scope to work out on etiological pathological and management aspect of sthualya. Because in modern medical science its management aspect remains symptomatic with troublesome side effect. On the light of above present study has been selected.

2. CONCEPTUAL REVIEW

2.1. General consideration

2.1.1. Sthaulya Vutpatti

As per Kautilya, the word Sthulata means bulkiness or largeness of the body. According to Bhavaprakash, a person having heaviness and bulkiness of the body due to extensive growth, especially in abdominal region is termed as Sthula and the state of Sthula is called “Sthaulya”. Obesity is derived from the word “obesus” which means having eaten. Obesity indicates grossly fat.

2.1.2. Synonyms of Sthaulya

Amarkosha has given synonyms of Sthula as Vipula, Pina, Pinvi, Pivara which indicates over nutritional condition of the person’s weight.

2.1.3. Synonyms of Obesity

Overweight, Adiposity, Turgidity.

2.2. Definition

2.2.1. Sthaulya

Acharya Charaka has mentioned that a person in whom excessive and abnormal increase of Medodhatu along with Mansa dhatu is found. Which results into pendulous appearance of buttocks, belly and breasts and whose increase bulk is not matched by a corresponding increase in energy is called Sthula Purusha.

2.2.2. Obesity

♦ Excess deposition of adipose tissue in the body is known as obesity.
♦ Obesity exists when body weight is 20% above ideal body weight.

2.3. Pathophysiology of Medodhatu

Sthaulya is a Dushya dominant Vyadhi. Meda plays a major role in pathogenesis of Sthaulya. Therefore, it is very important to know different aspects of Meda. Literally, the word Meda is derived from root “Jhimida Snehana”, which stands for Sneha, Fats, Oil etc. It means the substance, which has snigdhatva property, is called Meda. There are many oily substances in the body like Vasa, Majja etc. Total Meda approximately constitutes 11-12% of the body composition, which is in accordance with recent modern physiology as well.

2.4. Classification

2.4.1. Sthaulya classification

For the purpose of diagnosis, prognosis and easy management, disease should be classified as per severity as well as chronicity. Hence, classification of Sthaulya is essential but there is no such clear classification is found in our classics. Astang Samgraha, Astanga Hridaya and Sharangadhara have thrown light regarding classification of Sthaulya. Asthang Sangrah and Ashtang Hriday both mentioned three types of Sthaulya i.e. Adhika, Madhya and Hina for better management while narrating the indication of Langhana Upakrama.

2.4.2. Obesity classification (On the basis of BMI)

♦ Overweight – 25 – 29.9 Kg/sqm
♦ Obesity (class-I) 30 – 34.9 Kg/sqm
♦ Obesity (class-II) 35 – 39.9 Kg/sqm
♦ Severe or morbid obesity (class-III) > 40kg/sqm

2.5. Assessment of Obesity

Obesity can be assessed by following tools:
♦ Body Mass Index
♦ Waist circumference
♦ Waist / Hip ratio
♦ Relative Weight (RW)
♦ Ponderal Index
♦ Skinfold thickness

2.6. Etiological factors

2.6.1. Sthaulya etiology and correlation with modern science

Etiological factors along with modern correlation are mentioned in Table No. 1.
2.6.2. Factors responsible for Obesity

A. Diet Pattern and Physical Activity

B. Childhood over Nutrition

The rate of formation of new fat cells is rapid in the first few years of life, when excessive fat is consumed by child it also increases the number of fat cells. Therefore it has been suggested that over nutrition of children especially in infancy and to lesser extent during the starting few years of childhood can lead to lifetime obesity.

C. Drugs

Some drugs when taken over a long period can result in unwanted weight gain. This is especially true of some of the hormonal preparations taken by women. Such as the oral contraceptive pills and hormone replacement therapy, weight gain is a common side effect of oral contraceptive pills.

D. Endocrine factors of Obesity

- Cushing’s syndrome
- Thyroid Disease
- Polycystic ovarian syndrome

E. Genetic factors

F. Psychogenic obesity

2.7 Correlation of pathogenesis of Sthaulya with the pathogenesis of Obesity

There are three main factors in the pathogenesis of obesity.

- Excessive lipid deposition (medo vriddhi) due to increased shleshma dhatu.
- Diminished lipid mobilization due to disturbance in movement of vayu towards kosta, increased appetite abnormally faster digestion, assimilation and excessive eating.
- Diminished lipid utilization due to srotoradha leads to medodhatvagnimandya excessive disposition of medodhatu resulting in sthoulya i.e. Obesity.

2.8. Correlation of Complications of Obesity and Upadrava of Sthaulya mentioned in classical text

Correlation of Ayurvedic and Modern aspect regarding complications of Obesity is shown in Table No. 2.

2.9. Sadhyasadyata (Prognosis)

2.9.1. Sadhyasadyata Sthaulya

Sthaulya is a KricchasadyaVyadhi. Acharya Charaka has mentioned the bad prognosis of Sthaulya. If an obese person is not duly managed, he is prone to death due to excessive hunger, thirst and complications. Sahaja Sthaulya is considered as Asadhy. As per the enumeration of Vagbhata Medogata diseases are curable only in uncomplicated patients with more bala and less chronicity. So, Vagbhata has mentioned Sthaulya as Asadhy Vyadhi due to its relapsing and challenging nature. Sudden drastic weight reduction is considered as Arishta. Yogaratnakar has clarified that sudden weight loss or gain could be fatal within six months. Sadhyasadyata of Sthaulya can be constructed on the basis of general principles of Sadhyasadyata depicted in Ayurvedic Texts as follows-

A. Sukhasadya

Jatotarhina Sthaulya having duration of 1 to 5 years, without any complications or secondary disease.

B. Kricchasadya

JatotaraMadhyamaSthaulya having duration of 5 to 10 years with least complications but without secondary diseases.

C. Asadhy

Sahaja Sthaulya is Asadhy. JatotarAdhikaSthaulya having duration of more than 10 years, in the presence of complication and secondary diseases can be considered as Asadhy.

2.9.2. Prognosis of Obesity

Obesity is such a disease which provide platform for so many hazards like HT, CHD, DM, OA, Infertility, Impotency as well as Psychological disorder like Stress, Depression etc. Thus, mortality and morbidity are more in obese person compared to others.

2.10. Treatment

2.10.1. Sthaulya Chikitsa
Chikitsa aims not only at the radical removal of the causative factors of the disease, but also at the restoration of the Dosha equilibrium. Chikitsa comprehends following measures in Ayurveda viz. Preventive or Prophylactic therapy and Curative therapy.8

2.10.1.1. Samshodhana Therapy

A. Bahya Samshodhana
- Udavartana
- Avagaha
- Pariseka
- Lepana

B. Abhyantara Samshodhana
- Vamana
- Virechana
- Nasya
- Niruha

2.10.1.2. SamshamanaTherapy
- Lekhaniya gana [10 drugs viz. musta, kustha, haridra, vacha, ativisha, katurho, chitrak, chirabilva, daruhari, haimavati and karanja] causes weight reduction.
- Mustadi yoga churna [musta, aragvadh, patha, trifala, devdaru, shvandrestha, khadir, nimb, tvaka, vatsak, daruhari, haridra] or its use as decoction as well as local application (udhvartana) also causes weight reduction, reduction of abdominal circumference.
- According to Acharya Sushruta, Udavartana i.e rubbing, helps to restore the deranged vayu to its normal condition and also liquefies kapha and meda in the body by giving cleanliness and smoothness to the skin. It also dilates orifices of sira and increase twakgat agni (bhrajak agni).

2.10.1.3. Nidana Parivarjana (preventive measures of sthauya)

Aharatmaka, Viharatmaka, Manasika and Anya Nidana, which are responsible for the disease, should be avoided as a Nidanparivarjana chikitsa. Following of Dinacharya (daily regimen) Ritucharya (seasonal regimen), Sdavritta palana is also beneficial.

2.10.1.4. Pathya-Apathya (healthy -unhealthy food)

The list of Pathya-Apathya described by various Acharyas is mentioned in Table No. 3.

A. Pathya
Shrama, Jagarana, Vyavaya, Ashwarohan.

B. Apathya
Sheetal Jala sevan, Avayayam, Dwayswap, Atyashana, Avayavaya, Sukshaiyya.

2.10.2. Treatment of Obesity

Obesity is multi factorial disorder but chief factor is energy imbalance i.e. when caloric intake exceeds the metabolic expenditure, the excess energy stored in the form of fat. Weight Reduction can be achieved only by reducing energy in take or by increasing output or by combination of both. There are two aims during management of obesity. First aim of therapy is to reduce weight, second aim of therapy is prevention of further weight gain. The strategy for treatment of obesity includes following phages:
- Patient counseling.
- Dietary management.
- Exercise therapy.
- Weight loss surgery

3. RESULTS AND DISCUSSION

In the Sthauyla, etiological factors mainly vitiates the Meda-Kapha. This vitiated Meda obstruct the path of Vata, which results in to precipitation of Vata. In the Samprapti two factors are of prime importance, Tikshna Jatharagni and Medodhatvagnimandya. Irrationality between two levels of Agni makes the disease KrichhaShadhya. In Ayurveda texts different Shodhna procedure i.e. Vamana, Virechana, Lekhana Basti, Raktamokshana are mentioned for the treatment of Sthauyla. It was thought at that time that being a Visesha for Medodhatu, apatarpan chikistha will cause kshaya of increased Medodhatu in Sthula patients. To manage such a disease Langhana Karma is indicated which mainly induces Lekhana, Shoshana and Kaphahara properties in the body.

The classical Ayurveda Literature is sufficient with plenty of description of sthaulya and discussion regarding to pathophysiology, symptomatology and the treatment modalities. Physiological and pathological aspects of Dosha and Dushya regarding sthaulya are available in detail. Acharya Sushruta, mentioned
that Karshya is better than Sthaulya because there is no perfect remedy for the Sthaulya. Acharya Charaka has illustrated that Krishata is better than Sthaulya because Sthulapruṣa affected by disease suffers more due to it as compare to Karshya. According to the modern science, obesity precipitates the disease like HTN, OA, CHD, DM etc. Acharya Charaka included Atisthūla Purusha under the eight verities of impediments, which are designated as Nindita Purusha.

3.1. General Discussion

3.1.1. Age

According to Ayurveda, in Madhyama kala all Dhatus reach to Paripurnata. It’s also highlighted by modern texts that obesity is more prevalent in adolescent age.

3.1.2. Sex

Females are more prone to obesity than male. It may be due to aggravating factors like oral contraceptive as well as I.U.C.D, Menopause etc.

3.1.3. Socioeconomic status

It is believed that obesity is disease of rich and upper middle class due to luxurious life, less mental work and physical activity. But at the same time middle class persons are less conscious about their weight gain and food intake, which leads to obesity.

3.1.4. Marital status

Because the obesity is more, frequent in the middle age group. After marriage, obesity is more common in female due to aggravating factors like Delivery, Miscarriage, Oral contraceptive pills, I.U.C.D.

3.1.5. Prakriti

More prevalence of Sthaulya in patients having Kapha predominant Prakriti pointed towards involvement of Kapha Dosha in pathophysiology of Sthaulya. Properties attributed to Kapha and Meda are almost similar. People having Kapha predominant Prakriti have stout physique, so they are more prone to obesity. Bhavapraksha has considered increased Tamoguna and declined Satvaguna for occurrence of Sthaulya. Bhavapraksha has advocated Satva, Audraya and Tamojaya as a line of treatment for Sthaulya. In practice, it is also observed that Rajas-Tamas prakriti peoples are more inclined towards enjoyment of eating and worldly pleasures.

3.1.6. Kostha

It indicates that Madhyama Kostha found in Kapha predominance prakriti, which increases prevalence of Sthaulya.

3.1.7. Family History

Acharya Charaka has mentioned Beeja Dosha Swabhavat as Nidana of Sthaulya. It also shows that genetic predisposition plays an important role in precipitating Sthaulya.

3.2. Discussion on clinical parameters

3.2.1. Role of apatarpan chikista correlated with Weight gain (Bhar vriddhi)

Kapha dosha vikruti in Atisthāulya - Transformation of Sthīra Gunā into Asthirgun - Meda dhatu vitiation (quantitatively + qualitatively)10 - i.e. bhara Vriddhi (weight gain).

As Apatarpan chikista is kledashoshak it works on Asthir guna. Due to laghu & ruksha property, it reduces guruta of kapha dosha & meda dhatu.

3.2.2. Role of apatarpan chikista correlated with kshudrashwas

Exaggerated Meda & kapha (sthīra & slaksna guna) - Obstruction to Vyan Vayu gets vitiated - Dhatukshaya - Kshudrashwas.

As drugs used for Apatarpan chikista is tikta rasatmak, katu vipaki and having laghu, ruksha property. It reduces Meda dhatwagnimandya and it acts as strotoshodhak. And also with the help of tikta and kashay rasa it does pittashaman. So it is useful in avaranjanya kshudrashwash.

3.2.3. Role of apatarpan chikista correlated with Ksudha ativriddi

Avarana to Kosthagata varyu due to exaggerated meda11 - Early Aahar shoshana due to Agni Sandhukshana by aavritta varyu - Early Jarana of aahar Kshudha pravritti.

As contents use for Apatarpan chikista are tikta rasatmak, katu vipaki and having laghu, ruksha property. It reduces medadhatwagnimandya and it acts as strotoshodhak. So, it is useful in avaranjanya kshudha vridhdi in sthaulya.
3.2.4. Role of apatarpan chikista correlated with Daurbalya

Due to kapha pradhan ahar, Manda, Sthira, Sandra guna of kapha increases. Resulting in Mandagni and Rasadusthi - an nourishment of the Dhatus. Experience of generali-zed weakness (Daurbalya).

As contents use for Apatarpan chikista are tikta rasatmak, katu vipaki and having laghu, ruksha property. Firstly it acts on mandagni and improves jathraagni bala leads to nourishment of all dhatus. Properly nourished dhatus increases deha bala. Also Apatarpan chikista reduces gauravata by its laghu guna. Hence it reduces durbalya in sthaulya.

3.2.5. Role of apatarpan chikista correlated with in Sweda Atiapravrtti and Daurgandhya

Sweda is morbid form of Meda - Due to vitiation of Kapha and Meda - Production of sweda increases.

As contents use for Apatarpan chikista are tikta rasatmak, katu vipaki having laghu, ruksha property it acts as strotoshodhak, Medoghara, kaphaghna and Pittashama, reduced swedatipravrtti ultimately reduces daurgandhya.

3.2.6. Role of apatarpan chikista correlated with Alasya

Exaggerated Manda & sthira guna of kapha and meda - Resulting in alasya.

As contents use for Apatarpan chikista are tikta rasatmak, katu vipaki having laghu, ruksha property it acts as strotoshodhak, Medoghara, kaphaghna so reduces alasya.

Bahya chikista - Udhavratan corrects the Medodhatvagnimandya and checks the process of Medovriddhi. But Abhyamtar chikista by its Lekhana Karma reduces Meda more effectively than Bahya chikista. So, good results will be obtained by doing both therapies together.

4. CONCLUSION

Veda and all Samhita has explained about Sthaulya. Kashyapa has given some new aspects of management while narrating. Medasvadhatri Chikitsa and suggested Raktamokshana (bloodletting) as one of the best treatment for Medasvirdhi. Ayurveda is a rich source of therapeutic majors. ‘Sthaulya’ described in our Samhitas is comparable with Obesity in modern medicine up to some extents. Regarding causative factors, it is observed that most of the exogenous type Nidana are mentioned by Acharya Charaka, while endogenous type Nidana are mentioned by Sushruta. Beejadosha Swabhava is only mentioned by Acharya Charaka. Hence following Dincharya and Rutucharya in day to day life helps in prevention of the disease & further complications. Sthaulya is ‘Santarpanjanya’ Vyadhi in classical texts ‘Guru Apatarpan chikista’ is stated for it. It is observed that the drugs described in the Various principles of management of Atishthaulya are with Medoghna, Kaphaghna and Kledaghna properties, so as to correct Agniavishamya ultimately leading to ‘Rasayana Karma’ by Dhatupushpi. It is suggested that there are significant results is obtained for Ayurveda management. This shows that Anta parimarjan chikista (Mustadi kwath /Apatarpan kwath, lekaniya gana, lekhaniya basti) and bahiparimarjan chikista (Udhvar tana) are more effective in relieving sign & symptoms of sthaulya i.e Obesity. Longer duration assessment is required for that. But Anta parimarjan and along with Bahiparimarjan Chikista definitely give us hope in the Management of sthaulya i.e Obesity.

In sthaulya, main Udarasta Smprapti bhang is takes place due to Antarpimarjan chikista. Antaparimarjan chikista not only eliminates Dosha from the body but through the colon (Pakvasaya) drug is absorbed and reaches up to the micro channels of the body, which performs the action of Smprapti Vighatana at cellular level. It is also supported by our classics. Based on above observations we finally conlude that obesity and its related consequenc-es of biomedical science are well conceived in age old system of medicine Ayurveda. So, while treating obesity one must consider age of patients, desire of taking food, season, desh (land), working capacity of patients, dietary habits and state of disease. Certain Ayurveda modalities bear close resemblance with nondrug approaches of modern medicine.

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6. TABLES

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<td>Excessive eating</td>
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<tr>
<td>Guru Aharasevan</td>
<td>Fatty food which are heavy to digest</td>
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<tr>
<td>Madhura- ahar sevana</td>
<td>Over sweet food eating</td>
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<td>Navannasevana-</td>
<td>Eating of grains –rice-wheat-pulses which are formed within a period of 6 months</td>
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<td>Mamsamadyasevana-</td>
<td>Over eating of meat and drinks</td>
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<td>DadhiSevana</td>
<td>Curd</td>
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<td>Shleshmasnighaahar</td>
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<td>BhojanotaraJal-pana—</td>
<td>Excessive water intake after meal</td>
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<td>Divasvapn</td>
<td>Obesity sleep apnea</td>
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<td>Asana Sukha</td>
<td>Luxurious sitting</td>
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<td>Achintanat-</td>
<td>Lack of anxiety</td>
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<td>Bijadoshaswabhavat</td>
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Table No. 1. Aetiological factors of Sthaulya
Table No. 2. Updrava of Sthaulya

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<tr>
<th>Sr. No.</th>
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<th>Pathya</th>
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<td>1</td>
<td>SukaDhanya</td>
<td>PuranShali, Kodrava, ShyamakGodhumKoradushaka, Jurna, PrashatikaYava, Priyangu, Laja</td>
<td>NavinDhanya (Shali)</td>
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<td>2</td>
<td>ShamiDhanya</td>
<td>Mudga, Rajamasha, KulathaChanaka, Masur, Adhaki, Makusthaka</td>
<td>Masha, Til</td>
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<td>3</td>
<td>ShakaVarga</td>
<td>Patol, Patrashaka, Shigru, Vruntaka, KatektaRasatmakVastuka, Trapusha, VartakaEvaruka, Adraka, Mulaka, Surasa.</td>
<td>Kanda Shaka</td>
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<td>4</td>
<td>PhalaVarga</td>
<td>Kapittha, Jambu, Amalki, Ela,BibhitakiHaritaki, Maricha,Pippali, Erand</td>
<td>Madhurphal</td>
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<td>5</td>
<td>Drava Varga</td>
<td>Honey, Takra, Ushnajala, TilaSarshapa Tail, AsavaArishta,Surasava, Jeerna Madhya</td>
<td>milk,ikshuvikar</td>
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<td>6</td>
<td>Mamsavarga</td>
<td>RohitaMatsya</td>
<td>Aanupa, aadhak</td>
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Table No. 3. Pathya & Apathya ahara for Sthaulya

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