



INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY HEALTH SCIENCES

ISSN: 2394 9406

“MANAGEMENT OF STHAULYA (OBESITY) THROUGH AYURVEDA AND YOGA”

Dr.Pragati Markad¹ Dr.Sandip Patil² Dr.Gouri Mulik³

1)PG Scholar Department of Rognidan Avum Vikritividnyan , L.R.P. Ayurved Medical College, Islampur Maharashtra

2)Professor Of Department of Rognidan Avum Vikritividnyan , L.R.P. Ayurved Medical College, Islampur Maharashtra

3)H.O.D. Of Department of Rognidan Avum Vikritividnyan , L.R.P. Ayurved Medical College, Islampur Maharashtra

Corresponding Author email id:

pragatimarkad544@gmail.com

Abstract

Sthaulya (obesity) has become so common in the World's population that it is beginning to replace under nutrition and infectious diseases as the most significant contributor to ill health. It exacerbates a large number of health-related problems, both independently and in association with other diseases. Therefore, this study was carried out to evaluate effect of *Agnimanthadi* compound in the patients of *Sthaulya*. For this purpose 83 patients of *Sthaulya* were selected out of which 15 patients were dropped out. Remaining 68 patients were treated in two groups. Among these, 38 patients of *Sthaulya* were treated with *Agnimanthadi* compound administered orally in the dose of four capsules of 500 mg three times a day with lukewarm water before meal. Remaining 30 patients of *Sthaulya* were kept as placebo control and were administered orally two placebo capsules of 500 mg filled with starch, three times a day with lukewarm water before meal. The duration of the treatment in both the groups was 7 weeks with follow-up for 2 months. Analysis of overall effects of both the groups showed that *Agnimanthadi* compound provided markedly better reduction in weight, BMI and other signs and symptoms in the patients of obesity in comparison to the control group.

sciences and to provide suitable management protocol either by pharmacological or non-pharmacological method to fulfill the global demand. Entire world is expecting a fruitful management protocol and prevention of obesity through Ayurveda and Yoga. Keeping this fact in view, this paper is an effort to understand etiology, pathogenesis and treatment strategy of obesity through Ayurveda and Yoga.

Keywords: *Sthaulya*, obesity, *Agnimanthadi* , management protocol etc.

INTRODUCTION

Obesity is one of the most serious public health problems of the 21st century. It is a complex, Multi factorial, and largely preventable disease, affecting, along with overweight, over a third of the world's population today.[2, 3]If secular trends continue, by 2030 an estimated 38% of the world's adult population will be overweight and another 20% will be obese.[4]Obesity is typically defined quite simply as excess body weight for height, but this simple definition belies an etiologically complex phenotype primarily associated with excess adiposity, or body fatness, that can manifest metabolically and not just in terms of body size.[5] Obesity greatly increases risk of chronic disease morbidity—namely disability, depression, type 2 diabetes, cardiovascular disease, certain cancers—and mortality. Childhood obesity results in the same conditions, with premature onset, or with greater likelihood in adulthood.[5]Thus, the economic and psychosocial costs of obesity alone, as well as when coupled with these co morbidities and sequelae, are striking.

AIMS AND OBJECTIVES

□ To find out the factors involved in Obesity as per Ayurvedic principles.

□ To develop the concept of Obesity along with management strategies in terms of Ayurveda.

MATERIALS AND METHODS

This study based on the literature review of the relevant Ayurvedic original texts with commentaries, necessary and valid interpretation, analysis made by different scholars. The pathogenesis of Sthoulya (Obesity) is obtained by searching various medical research databases like Pub Med, Google scholar and other national research databases. The study of various Ayurvedic texts were made critically and an effort is made to understand the concept of obesity along with management strategies.

Obesity is a chronic disease that is highly prevalent and that poses a serious risk for the development of diabetes mellitus, hypertension, cardiovascular diseases, musculoskeletal disorders especially osteoarthritis, and certain forms of cancer.[6] It develops gradually and often persists throughout life.

Obesity is not only medical risk factors but also a serious social, psychological & economic problem. Obesity has taken place of an epidemic, still majority of people are not aware of the factors that welcomes this problem and the results that are obtained after one gets into this problem. At least 2.6 million people each

year die as a result of being overweight or obese.[7]

According to the W.H.O., overweight and obesity are the fifth leading risk for global deaths.[8] Overall more than one in ten of the world’s adult population are obese and women are more likely to be obese than men.[9]

It is the consequence of intake of energy exceeding its expenditure over a considerable period. The mismatched habit of eating & exercise leading to abnormal accumulation of fat within the body is the prime cause behind the vicious circle of obesity. Facts about overweight and obesity[10]

Some recent WHO global estimates follow.

□ WHO declared obesity as global epidemic giving rise to new term —Globosity”.

□ In 2016, more than 1.9 billion adults aged 18 years and older were overweight. Of these over 650 million adults were obese.

□ In 2016, 39% of adults aged 18 years and over (39% of men and 40% of women) were overweight.

□ Overall, about 13% of the world’s adult population (11% of men and 15% of women) were obese in 2016.

□ The worldwide prevalence of obesity nearly tripled between 1975 and 2016.

□ In 2016, an estimated 41 million children under the age of 5 years were overweight or obese.

□ Once considered a high-income country problem, overweight and obesity are now on the rise in low- and middle-income countries, particularly in urban settings.

Classification of Body Weight in Adults

The current most widely used criteria for classifying obesity is the body mass index (BMI; body weight in kilograms, divided by height in meters squared), which ranges from underweight or wasting (<18.5 kg/m²) to severe or morbid obesity (≥40 kg/m²). In both clinical and research settings, waist circumference, a measure of abdominal adiposity, has become an increasingly important and discriminating measure of overweight/obesity.[11]

Abdominal adiposity is thought to be primarily visceral, metabolically active fat surrounding the organs, and is associated with metabolic dysregulation, predisposing individuals to cardiovascular disease and related conditions.[12]

Per internationally used guidelines of metabolic syndrome—a cluster of dysmetabolic conditions that predispose individuals to cardiovascular disease of which abdominal adiposity is one component—a waist circumference resulting in increased cardiovascular risk is defined as ≥94 cm in European

men, and ≥ 80 cm in European women, with different cut points recommended in other races and ethnicities (e.g., ≥ 90 and ≥ 80 cm in men and women, respectively, in South Asians, Chinese, and Japanese).[12,13]

Concept of Sthaulya Roga in Ayurveda[14]

Sthaulya Roga of Ayurveda comes under the heading of Medaroga which results due to dysfunction of Medadhatvagni (factor responsible for nourishment/ metabolism of Medadhatu). Further, its description is available in Ashtaunindita Purusha Adhyaya of Charak Samhita (chapter dedicated to 8 types of undesirable physiques where obese are criticized by society because of inappropriate body size). Ayurveda also highlights Sthaulya as

1. Kaphapradhanaja (predominately caused due to vitiated kaphadosa)
2. Medapradoshaja (Meda is dhatu/ tissue which is predominately affected)
3. Bahudosaavastha (multi-factorial condition)
4. Santarpanjanya vyadhi (disease caused due to affected anabolism/ over nutrition).Mythological background[14]

In ancient Indian literature, the auspicious figure of Lord Vinayak (Ganesh) i.e. huge abdomen and short stature has been

considered as one of the first representation of Sthaulya.

The later reference of Sthaulya can be traced to Rakhsasa (demonic character). All the Rakhsasas were possess to a Sthaula Deha (Obese/ huge body size).

Atisthauya (obesity) is considered as one of the eight despicable conditions as described by Acharya Charaka.[15]

A person in whom there is excessive accumulation of Meda (fat/adipose tissue) and Mamsa (flesh/muscle tissue) leading to flabbiness of hips, abdomen, and breast has been categorized as Atisthula.[16]

Medas is body tissue predominant in Prithvi and ApaMahabhutas similar to KaphaDosh[17] It is characterized by Snigdha (unctuous), Guru (heavy), Sthula (space occupying), Picchila (slimy), Mridu (tender/soft) and Sandra (dense) Guna (qualities).[18] Sneha (oleation), Sweda (production of sweat), Drudhatva (compactness), and Asthipushti (nourishment of bones) are the main function of Medodhatu.[19] Consumption of Guru (heavy to digest), Sheeta (cold), Snigdha (unctuous), Madhuradi Kaphavar dhaka (sweet and Kapha increasing) drugs along with lack of exercise and sedentary life style result in excessive nourishment of Medas while other bodily elements (Dhatus) are deprived of nourishment. Disproportionately increased Medas is

accountable for several serious consequences reported in Charaka Samhita like Ayuhrasa (decrease of life span), Javoparodha (decrease in enthusiasm and activity), Krichravayavayata (difficulty in sexual act), Dourbalya (decrease of strength), Dourgandhya (bad odor), Swedabadha (excess perspiration) and Kshut Pipasadhikya (excessive hunger and thirst)[20] Mandotsaham (less activity referring to sedentary lifestyle), Atisnigdham (excessive intake of fatty substances), Atisthauilyam (gross obesity), and Mahashanam (excessive eating) constitute for causation of Prameha,[21] (urinary diseases including Diabetes) and these etiological factors may also initiate Dyslipidemia.

The various etiological factors like Madhura Rasa (sweet objects), Mamsa (meat), Avyayama (lack of exercise), Divaswapna (day sleep) causes increase of MedhoDhatu in our body, and as a result Srotoavaroda occurs. Vata is specially confined to Kosta and causes JatharagniVridhhi and the symptoms of Sthulata (obese) i.e, Atipipasa (excessive thirst) Atikshudha (excessive hunger), Alasya (lethargy) occurs which are very similar to the symptoms as described in obesity.[20]

Management of Obesity (Chikitsa of SthaulyaRoga)

Line of Treatment

Shamana (Palliative) Treatment[22]

- Langhan (Fasting).
- Amapachan (oral use of digestives to augment the fat metabolism).
- RukshaUdwartan (Dry medicated powder massage).
- Heavy and non-nourishing diet/items like Honey, salad etc are advised.
- Physical exercises, Yogasana&Pranayam is also recommended.

SamshodhanaChikitsa (Purificatory procedures)[22]

- Vaman (Therapeutic emesis).
- Virechan (Therapeutic purgation).
- Lekhanvasti (Medicated enema) are advised for the management of Sthaulya.

Acharya Charaka has mentioned Lekhaniya dashemani Dravyas[20]

– a group of 10 drugs, these drugs principally perform the Lekahana Karma of excess and abnormal Meda, causing weight reduction as well as relief in other signs and symptoms. These drugs are given below

1. Mustaka
2. Kustha
3. Haridra
4. Vaca
5. Ativisha

6. KatuRohini

7. Chitraka

8. Chirabilva

9. Daruharidra

10. Haimvati (Karanj)

Some useful herbs/ classical formulation which are useful for the management of Sthaulya (Obesity):

Triphala[23] : It is combination of 3 healings herb, their fruits are used. They are as follows -

Amalaki (Embliaofficinalis), Haritaki (Terminalia chebula) and Bibhitaki (Terminalia belerica).

Effects of Triphala - all dosha balancing, very good bio-cleanser, purify blood and a rejuvenating herb. It decreases excessive Meda, reduces serum cholesterol, reduces the plaque formation in the arteries, high blood pressure, provides remarkable protection in CVD.

Guggulu (Commiphoramukul)-Useful part is Resin, Old Guggulu- scraping quality. It is strong detoxifying & cleansing & rejuvenating herb. Lower cholesterol and triglycerides and maintain or improve HDL/LDL ratio, anti-inflammatory effects. Guggulu is mentioned as the best for the disorder of Vata and Meda. So, Guggulu can be used for the treatment of Medavrita Vata condition.

Vidanga (Embelia ribes) - Vatakapha pacifying, agni stimulating, Vidanga allays

vata, it is diuretic, a mild purgative and kills worms, it is an appetizer, digestive, blood purifier and rejuvenator.

Vrikshamla (Garcinia indica)[24]

Vrikshamla helps in controlling

cholesterol and triglycerides. One of its compounds, hydroxycitric acid, blocks the key enzyme ATP-citrate lyase which converts carbohydrates into fatty acids. It supports healthy weight by stimulating fat and carbohydrate metabolism. Vrikshamla also prevents unhealthy accumulation of fat in the body. Serotonin, is an important chemical in weight control as it gives a feeling of satiety and fullness, thus reducing overeating. Vrikshamla is an herb that helps increase the availability of serotonin in the brain.

Shilajatu-Mineral pitch Mainly Vata and Kapha balancing. It decreases excessive fat, very helpful in enhancing sexual powers. It is anti inflammatory and antioxidant.

Madhu (honey) has Guru and Ruksha properties; hence it is ideal one for management of Sthaulya.

Some common classical preparations used in obesity

- NavakGuggulu
- MedaharaGuggulu
- TriphalaGuggulu
- Arogyavardhini
- Laoharista (B.R)

- LohaRasayan (B.R)
- Vidangadiloha (B.R)
- Shilajit (R.R.S.; A.H)
- Traysunadyaloha (Y.R)
- Trimurthi Rasa (Y.R)
- Agnikumar Rasa (R.R.S)
- Medahara Rasa (Rasakamdhenu)
- MustadiKwath
- VidangadiChurna

Note: Adjuvant (Anupan) - lukewarm water and honey.

LekhanBasti in Obesity

- LekhanBasti is a type of enema (given through the ano-rectal route) which cause the excoriation of the excessive fat from the body.

The drugs which are used in the preparation of LekhanBasti are Triphala decoction, Honey, Gomutra, Saindhav salt, Hing, Yavakshar, Kasis, Shilajatu which are all fat-reducing by virtue of their properties etc.

- LekhanaBasti has Sneha, Meda, KledaUpashoshana, Deepana, Pachana, Tikshna, Lekhana, Ruksha, and Kapha-Vatahara properties by virtue of its Rasapanchaka dominance, which has resulted in the reduction of the following:

flabbiness in hip-abdomen-breast (Angachalatva), laziness/lack of enthusiasm

(Alasya/Utsahahani), excess sleep (Nidradhikya), excess sweating

(Swedadhikya), body odor (Daugandhya), oily body luster (Snigdhangata), heaviness in the body (Angagaurava), and fatigue (Gatrasada). Reduction in dyspnea on exertion (Kshudrashwasa) and joint pain (Sandhishoola) can also be attributed to the Srotoshodhana (cleansing of body's micro-channels) caused by Basti,[24]thus removing Avaranajanya Vataprakopa. Weakness (Daurbalyata-AlpaVyayama) is associated with increased weight.[25]

Thus, reduction in the weight significantly has contributed to the reduction in weakness. The superiority of the standard control drug in reducing excess sleep may be due to its dominance of Laghu-RukshaGuna, Katu-Tikta-

Kashaya Rasa, and UshnaVirya, causing reduction in excess sleep by reducing Kapha. Basti being best Vatahara.[25]

treatment the reduction in excess thirst (Atipipasa), excess hunger (Atikshudha) may be attributed to correction of vitiated Vayu which is known to cause JatharagniSandhukshana,[25]and Trisha. Yoga/ Exercise Prescription[26]

- What kind of Yoga/ exercise? – Best exercise is Asana/ Pranayama, brisk walking, jogging, bicycling, swimming etc.

• How often? – 5 times per week is preferable with not more than 2 days rest between exercise day.

• How long? – 15 to 60 minutes is advised depending on the person capacity and the type of yoga asana/ exercise.

Benefits of Yoga/ Pranayam and exercise[26]

• Increase burning calories so reduce body weight.

• Improves circulation. Toning of heart muscles.

• Lowers plasma glucose levels and increase insulin sensitivity.

• Lowers blood pressure.

Improves cardiac fitness.

• Lowers lipid levels.

• Relives STRESS – Mental sense of well being and Relaxation.

Yogic breathing or Pranayama for Obesity[27]

• It is said in the yogic text Hatha Yoga Pradeepika and others that practice of pranayam make the body slim and fit. Pranayama can help to burn excessive fat in the body.

• There are two pranayama practices that are good for weight reduction – Kapalabhati and AnulomVilom Pranayama.

• Kapalabhati or the skull cleansing breath involves forceful exhalation and normal inhalation. This is done in a comfortable

sitting posture with erect spine. The belly is drawn in with every forceful exhalation and filled again with normal inhalation. This is known to reduce the fat around the belly.

• AnulomVilom Pranayama or the alternate nostril breathing technique also helps to reduce weight. This pranayama is said to generate heat in the body and to burn down excessive fat.

Yoga Asana[27]

Suryanamaskar, Pawanmuktasana, Bhujangasana, Shalabhasana, Dhanurasana, Pachimottanasana, ArdhaVakrasana, Halasana, Ardachakrasana, Naukasana, Trikonasana, Veerbhadrasana, Ustrasana etc.

Shatkarma[27]

The other hatha yoga practices which are most helpful in obesity are the

Shatkarmas, or internal cleansing techniques. These include:

Shankhprakashalana (cleansing of the entire alimentary canal, laghu (short) Shankhprakashalana, Kunjal (cleaning practice for the stomach), and Neti

(cleansing of the nasal passages). These practices clean our body internally and

keep it free from pollutants which are absorbed from the air, food and water. If

done regularly, they also balance our bodily rhythms at a subtle level. The

Shatkarmas also help to balance our

emotions and produce a feeling of lightness and satisfaction with our body. After practicing the Shatkarma, we feel as if the body/mind system is rid of extra weight, physically as well as mentally.

Food habits

- The lunch and dinner timings should be fixed
- The time difference between two meals should be 4 hours
- Low fat meal, with fiber rich vegetables, green salad and fruits should be taken.

Reduce fats, excess calories, sweets, milk, butter, cheese etc in meals.

Other useful habits

- Do not sleep for more than 6 to 7 hours. No day sleeping.
- Try to stop addictions such as smoking, drinking alcohol or any other drugs.
- Say no to package foods, fast/ junk food like Momo, Chowmin, cake, Cold drinks, Ice cream etc
- Periodic fasting (Once in a fortnight)
- Always drink warm water
- Treat the associated disease

CONCLUSION

Sthaulya (obesity) is a predominant metabolic disorder, which is described by Charaka in AshtauninditaPurusha. Sedentary life, lack of exercise, faulty food habits, urbanization, psychological factors along with genetic predisposition play a major role in aetiopathogenesis of

Sthaulya. KaphaPrakriti persons are more prone to become obese (Sthaulya). Some herbal drugs/ classical Ayurvedic preparation like Guggulu, Vrikshamla, ShilajitTriphala, Arogyavardhini, NavakGuggulu etc. along with Yoga & Pranayam and Panchakarma therapy is found very effective for management of Obesity.

By adopting simple life style and healthy food habits anyone can enjoy the life optimally without having lifestyle diseases like Obesity. Ayurveda and yoga is a better, easy and healthy way to fight obesity and other lifestyle disorders. Further exploration of other treatment modalities and their validation through research is necessary.

REFERENCES :

1. American Medical Association AMA Adopts New Policies on Second Day of Voting at Annual Meeting [Internet] 2013 [cited 2014 Apr 7]. Available from: <http://www.ama-assn.org/ama/pub/news/news/2013/2013-06-18-new-ama-policies-annual-meeting.page>.
2. Ng M, Fleming T, Robinson M, Thomson B, Graetz N, Margono C, et al. Global, regional, and national prevalence of overweight and obesity in children and adults during 1980–2013: a systematic analysis for the Global Burden of Disease

- Study 2013. The Lancet [Internet] (0). Available from:<http://www.sciencedirect.com/science/article/pii/S0140673614604608>. [PMC free article] [PubMed]
3. Stevens GA, Singh GM, Lu Y, Danaei G, Lin JK, Finucane MM, et al. National, regional, and global trends in adult overweight and obesity prevalences. *Popul Health Metr*, 2012;10(1): 22. [PMC free article] [PubMed]
 4. Kelly T, Yang W, Chen C-S, Reynolds K, He J. Global burden of obesity in 2005 and projections to 2030. *Int J Obes* 2005, 2008 Sep; 32(9):1431–7. [PubMed]
 5. Hu FB. Obesity epidemiology. Oxford University Press; Oxford; New York, 2008; 498.
 6. Braunwald, Kasper et.al. Harisson’s - Principles of Internal Medicine, New York: McGraw Hill, 17th Edition, 2008.
 7. <http://www.who.int/en/>, accessed on 1/7/17.
 8. World health Report accessed on 2/8/17, 2002.
 9. <http://www.who.int/mediacentre/factsheets/fs311/en/>, accessed on 25/7/17.
 10. <http://www.who.int/news-room/factsheets/detail/obesity-and-overweight>, accessed on 18/8/2018.
 11. Hu FB. Obesity and Mortality: Watch Your Waist, Not Just Your Weight. *Arch Intern Med.*, 2007 May 14; 167(9): 875. [PubMed]
 12. Alberti KGMM, Eckel RH, Grundy SM, Zimmet PZ, Cleeman JI, Donato KA, et al. Harmonizing the Metabolic Syndrome: A Joint Interim Statement of the International Diabetes Federation Task Force on Epidemiology and Prevention; National Heart, Lung, and Blood Institute; American Heart Association; World Heart Federation; International Atherosclerosis Society; and International Association for the Study of Obesity. *Circulation*, 2009 Oct 20; 120(16): 1640–5. [PubMed]
 13. Alberti KGM, Zimmet P, Shaw J. The metabolic syndrome—a new worldwide definition. *The Lancet*, 366(9491): 1059–62. [PubMed]
 14. S.K. Giri, Sanghamitra Patnaik, Kavya N; A review on multidimensional angle of obesity and its effective management; *Int. J. Res. Ayurveda and Pharma*, Nov – Dec 2016; 7(6): 1 -10.
 15. Agnivesha, Charaka, Dridhabala. In: Charaka Samhita, Sutra Sthana, Ashtaninditeeya Adhyaya, 21/3. 5th ed. Vaidya Jadavaji Trikamji Acharya., editor. Varanasi: Chaukhamba Sanskrit Sansthan, 2009; 116.
 16. Ibidem. Charaka Samhita, Ashtaninditeeya Adhyaya, 21/1: 117.
 17. Chakrapanidutta. In: Commentator, Sushruta Samhita, Sutra Sthana,

Dosha dhatumala kshayavruddhi Vijnaniya Adhyaya, 15/4. 8

th ed. Vaidya Jadavji Trikamji Acharya., editor. Varanasi: Choukhambha Orientalia, 2005: 68.

18. Agnivesha, Charaka, Dridhabala . In: Charakasamhita, Sutra Sthana, Deerghan jeeviteeya Adhyaya, 1/61. 5th ed. Vaidya Jadavaji Trikamji Acharya., editor. Varanasi: Chaukhamba Sanskrit Sansthan, 2009; 17.

19. Sushruta. In: Sushruta Samhita, Sutra Sthana, Dosha dhatumalak shayavruddhi Vijnaniya Adhyaya, 15/4. 8th ed. Vaidya Jadavji Trikamji Acharya., editor. Varanasi:

Choukhambha Orientalia, 2005; 67.

20. Agnivesha, Charaka, Dridhabala. In: Charakasamhita, Sutra Sthana, Ashtaninditeeya Adhyaya, 21/4. 5th ed. Vaidya Jadavaji Trikamji Acharya., editor. Varanasi: Chaukhamba Sanskrit Sansthan, 2009; 116.

21. Ibidem. Charaka Samhita, Pramehanidanam, 4/51: 215.

22.

<http://www.ccras.nic.in/sites/default/files/viepdf/faq/OBESITY.pdf>, accessed on 20/8/2018.

23.

<http://www.himalayastore.com/wellness/pureherbs/vrikshamla.htm>, accessed on 20/8/2018.

24. Vagbhata, AshtangaSamgraha, Kalpasthana. BastikalpaAdhyaya, 5/68. In: Vaidya AnantAthavale., editor. 8th edition. Pune: ShrimadAtreya Prakashana, 1980; 30.

25. Agnivesha, Charaka, Dridhabala. Charaka Samhita, Sutrasthana, Ashtouninditiya Adhyaya, 21/4. In: Vaidya Jadavaji Trikamji Acharya., editor. 1st edition. Varanasi: Chaukhamba Sanskrit Series, 2004; 116.

26. Choudhury, B., Sarma, B.P., Study of Lagerstroemia speciosa (L.) pers as a hypoglycemic agent, Guwahati University, Assam (Ph.D. Dissertation), 2014.

27. <http://www.yogamag.net/archives/1997/ese97/obesity.shtml>, accessed on, 20/8/2018.