



### Review Article

## A Review on Medohar and leekhaniya gan in obesity

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### ABSTRACT:

Obesity is one of the major disease which is gaining more and more attention from scientists at the global level. In the modern era with continuous lifestyle and environmental changes, dietary habits, man has become the victim of many diseases caused by unwholesome dietary habits and obesity is one of them. Staulya known as obesity. Santarpanotta vikaras (diseases due to excessive nutrition) are increasing during current times. Medodushti (disorders of fat metabolism) serves as one of the important etiological factor in most of the ischemic heart disease. Medohara and Lekhaniya (anti obesity and hypolipidemic) drugs mentioned in ganas ( groups of drugs ) of Ayurvedic classical texts which are useful for prevention and management of obesity are discussed here.

**KEY WORDS:** Obesity, lekhana, medohara, herbs.

### INTRODUCTION:

Growing prevalence of obesity worldwide is an increasing concern surrounding the rising rates of diabetes, coronary and cerebrovascular disease with habits, man has become a victim of many diseases caused by unwholesome dietary habits and obesity is one of them. Sthaulya also known as Obesity is one among the major diseases of the Modern era. It occurs as a result of lack of physical activity with increased intake of food. Obesity is the only one disease which is gaining more and more attention from scientists at the global level. Faulty dietary habits decreased awareness regarding exercise is the main cause of disease. Most of the people in the community is suffering from that disease and complications.

Consequent health and financial implications for the population. Obesity promotes a cascade of secondary pathologies including diabetes, insulin resistance, dyslipidemia, inflammation, thrombosis, hypertension, metabolic syndrome, and obstructive sleep apnea. Increasing body mass index (BMI) levels mediate a common pattern of dyslipidemia characterized by

higher triglycerides, lower high density lipoproteins (LDL) particles, which are independent risk factors for coronary disease. Atherosclerosis or hardening of the arteries results from the buildup of cholesterol on the interior blood vessel walls. Dyslipidemia associated with obesity predicts the majority of the increased cardiovascular risk seen in obese patients.

Atisthauya (obesity) is considered one of the eight despicable conditions as described by Acharya Charak. A person in whom there is an 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. Medas is body tissue predominant in prithvi and ap mahabhut similar to kapha dosha . It is characterized by snighdha (unctuous), guru (heavy ) sthula ( space occupying ) picchila (slimy), mrudu ( tender /soft ) and Sandra (dense ) guna ( qualities). sneha (oleation ) sweda (production of sweat) , Drudhatva ( compactness ) and asthipushti ( nourishment of bones ) are the main functions of medodhatu.

Consumption of guru ( heavy to digest ), sheeta (cold), snigdha(unctuous), madhuradi kaphavardhaka (sweet and kapha increasing) drugs along with lack of exercise and sedentary life style result in the excessive nourishment of medas while other bodily elements (dhatus) are deprived of nourishment. Disproportionately increased medas is accountable for several serious consequences reported in charak samhita like ayuhrasa (decreased life span) javoparadha (decrease in enthusiasm and activity) krichravayavayata a9 difficulty in the sexual act) dourgandhya (bad colour), swedabandha (excessive perspiration) and kshut pipasadhikya (excessive hunger and thirst )

The latest report of prevalence of obesity from WHO;

1. Worldwide obesity has more than doubled since 1980.
2. In 2008 , more thn 1.4 bilion adults , 20 and older , were overweight . Of these over 200 million men and nearly 300 million women were obese.
3. More than 40 million children under the age of five were overweight in 2010.
4. Overall, more than one in ten of the worlds adults population was obese.
5. Total health care expenditure for obesity patients is 2-8 %.

#### MATERIALS AND METHODS :

Compilation and tabulation of lekhaneeya ( which scrapes excess medas ) and medohara ( which

removes and dries up excess medas ) herbs where comes from ganas of charak samhita. Sushruta samhita , ashtang sangraha , ashtang hrudaya , rasa (taste ) , guna ( qualities ) veerya (potency ) , vipak ( drug metabolism ) action on doshas and useful parts of drugs compiled from Dhanwantari Nighantu Nighantu Adarsha , textbook of dravya guna which was tabulated data were then analysed .

#### RESULTS :

1. Collection ,authentication ,standardization of lekhaneeya gana or medohara gana .
2. Standardization was done according to API guidelines on the basis of physical and chemical parameters.
3. Charak has given single gana of 10 drugs ( lekhaniya gana ,) while sushrut and vagbhat have mentioned 8 and 10 ganas respectively. A total of 160 different herbs have been enlisted from these various groups . Analysis of 100 drugs has been made , which are taken from different ganas of classical texts after excluding the controversial drugs. Based on relevant references from the classical texts and modern texts of dravyaguna, useful part was recorded .The part used appears to be roots, root barks ,stem bark and fruits in large number of drugs. Rasa and anurasa of drugs have been enlisted. Tikta rasa is seen in 59 herbs , katu in 48 kashaya in 41 madhura in 33 and amal in 8 herbs .

#### List of medohara ganas mentioned in classical literature

**Table 1 : List of medohara ganas mentioned in classical literature**

Name of Gana	Charak Samhita	Sushrut Samhita	Ashtanga Hrudaya	Ashtanga Sangraha
Lekhaniya gana	+	+	+	-
Varunadi gana	-	+	+	+
Shalasaradi gana	-	+	-	-
Lodharadi gana	-	+	+	+
Arkadi gana	-	+	+	+
Mushkakadi gana	-	+	+	+
Nygrodhadi gana	-	+	+	+
Tryushana -	-	+	-	-
Ushakadi gana	-	+	+	+
Asanadi gana	-	-	+	+
Surasadi gana	-	-	+	+
Vatsakadi gana	-	-	+	+
Vacha haridradi gana	-	-	+	+

**Table 2 : List of Medohara drugs**

Sanskrit Name	Latin name
Musta	<i>Cyperus rotundus</i>
Kushta	<i>Sausurea lappa</i>
Haridra	<i>Curcuma longa</i>
Vaccha	<i>Aconus calamus</i>
Ativisha	<i>Aconitum heterophyllum</i>
Katuki	<i>Picrorhiza kurroa</i>
Chitraka	<i>Plumbago zeylanica</i>
Chirabliva	<i>Holoptelia integrifolia</i>
Pippali	<i>Piper longum</i>
Maricha	<i>Piper nigrum</i>
Shunti	<i>Zingiber officinalis</i>
Varuna	<i>Crataeva nurvala</i>
Shigru	<i>Moringa oleifera</i>
Daruharidra	<i>Berberis aristata</i>
Tarkari	<i>Clerodendrum phlomidis</i>
Agnimantha	<i>Premna integrifolia</i>
Saireyaka Dwaya	<i>Barleria species</i>
Bimbi	<i>Coccinica indica</i>
Shatavari	<i>Aparus racemosa</i>
Bilwa	<i>Aegle marmelos</i>

**Table 3 : Categorization of herbs on the basis of part used**

Part used	No. of herbs
Root, root bark	36
Stem bark	34
Fruit	23
Leaf, tender leaf	15
Heartwood	12
Seed	7
Gum	5
Flower	5
Latex	5
Whole plant	5
Rhizome	4
Oil	3
Tuber	1

**Table 4 : Number of drugs based on analysis of Rasa, vipak, Veerya, Guna and Doshaharatwa.**

Rasa	No	Vipaka	No.	veerya	No.	Guna	No.	Doshahara	No.
Tikta	59	Katu	82	Ushna	59	laghu	67	Kapha	8
Katu	48	mad-hura	17	sheeta	40	Ruksha	59	Vata	67
kashaya	41	amala	1	Anushna	1	Tikshna	25	pitta	48
Madhura	33					Snigdha	23		
Amala	8					Guru	20		
Lavana	1					sara	10		

**DISCUSSION :**

Kayagni or pachkagni (Digestive fire) contributes its moieties to the Dhatu or Dhatwagni dealing with tissue metabolism. Ama (undigested toxic substance) which results from hypofunctioning of jatharagni (digestive fire) may clog to the srotas (channels) leading to srotorodha (obstruction of channels) which in turns increases medodushti and decreases the nutrient supply to subsequent dhatus

namly Asthi (bone tissue), majja ((bone marrow) and shukra (fertility promoting substance).

Acharya charak has furnished six therapeutic measures (shadupakrama) i.e. langhana (lightening therapy) Bruhana (nourishing therapy), Rukshana (drying therapy) Snehana (oleation therapy), swedana (fomentation therapy) and stambhana (astringent therapy).

Guru and snigdha ahara, madhura rasa sevan, gramya audaka anupa mamsa, matsya, bholjanotar jalpaan, ati sampurana, madyapana and adhyahasana are the aharaj hetu. These hetus are mainly responsible for increase in kapha dosha. Kapha and meda shows ashraya bhava so it causes sthauilya.

Langhaneeya dravya (drug causing lightness) can achieve the therapeutic effect by the dominance of gunas like laghu (light) Ushna (hot), teekshana (strong), vishada (non-slimy), ruksha (dry), sukshma (subtle), khara (rough) sara and kathina (hard)

Rukshaniya drugs (causing dryness) should possess gunas like ruksha, laghu, khara, teekshna, ushna, sthira, vishada, and kathina. The comparison of gunas of both the upakramas clearly indicate that a drug possessing the gunas namely laghu, ruksha, ushna, teekshna, vishada, khara and kathina may significantly subdue kapha and medodhatu dushti in the conditions like obesity, hyperlipidemia and diabetes mellitus.

Analysis of the herbs clearly indicate that Tikta rasa dravyas dominates the list (59) followed by katu (48), kashay (41), madhura (33), and amala (8) rasa drugs. Tikta being laghu and ruksha reduces vitiation of kapha and medodushti along with neutralization of amavisha through deepaniya, pachaniya and vishagna activities.

Sushruts classification of vipak reflects two dominant gunas i.e. guru and laghu further quoted as katu and madhura vipak. Drugs with katu vipak are relatively more in number followed by madhura and amal vipakas.

#### Nidan

1. Guru and snigdha ahara, madhura rasa sevan bhojanotar jalpan ati sampurana, madyapana, adhyasana are the aharaj hetu.
2. In absence of vyayam, excessive sleep, physical and mental relaxation, there diminished requirement of energy. Viharatmak hetus show that they are responsible for kapha vrudhhi.
3. Achintana, Harshanityatva and maansonivrutti are physiological factors.

#### Rupa :

According to charak there are 8 main lakshanas (rupa) of obesity :

1. Ayuhrasa (Diminution of lifespan)
2. Javoparodha (Lack of enthusiasam)

3. Kriccha Vyavaya (Difficulty in sexual act)
4. Daurbalya (Debility)
5. Svedabadha (Distressful sweating)
6. Kshudhatimatrata (Excessive hunger)
7. Pipasa atiyoga (excessive thirst)

#### Samprapti :

According to charak, due to avarana of all the srotas by the meda, there is vriddhi of koshtagat vata which cause increasing jataragni. Due to that, more consumption of food is occur. And again deposition of meda is increased. Srotas is again obstructed. this chain of storotas dushti is form and obesity is occur.

#### Mode of action :

The properties of leekhaniya gana and medohara gana are against the guru madhura sheeta which helpful for reducing excess of fat in obesity. These ganas and related mahabhut like akhasha and vayu mahabhut are attributed to laghavakara action.

Katu and kashaya rasa is important for karshana. and tikta rasa has property to do lekhaniya karma.

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