

Literary and clinical review of Obesity and Gout

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Abstract

Obesity is result of a complex variety of social, behavioral, cultural, environmental, physiological and genetic factors. Obesity is not only a cosmetic concern it is ultimately life threatening. In India 120 million urban Indians are seriously obese. BMI is significantly associated with risk for gout compared with persons with BMI of 21- 22.9 kg/m² the age, adjusted relative risk for gout is 1.40 for a BMI of 23 – 24.9 kg/m², 2 – 3.5 kg/m² for BMI of 25 – 25.9 kg/m², 3.26 for BMI of 30 – 34.9 kg/m² & 4.41 for a BMI of 35 kg/m² or higher. Weight gain over time is also associated with risk of gout, even after adjusting for initial weight & other risk factors. Gout afflicts an estimated 840 out of 100,000 people. Gout is strongly associated with obesity, hypertension, hyperlipidemia and DM. Gout is condition with abnormally high levels of uric acid in and around the joints and decreased kidney functions. Data suggests that obesity increases serum urate by eliciting both increase production and decrease renal excretion of urate. In the normative ageing study, weight gain between the 1st and 3rd visits was positively associated with increase in serum urate. In contrast weight reduction has been shown in prospective studies to be associated with decline in uric acid levels. *Vatarakta* runs on the lines of *santarpano tha janya vyadhi* and according to the classics it is caused due to ``*mishthanna sukha bhojinaam....etc*``

Keywords – Obesity, Gout, *Vatrakta*, *Santarpanjanya Vyadhi*

Introduction

Health is a big asset which requires proper care and nurturing. A fit and trim body gives inner and outer confidence whereas an obese physique makes you dull and pessimistic. It also results in emotional suffering which is one of the most painful parts of obesity. Obesity is result of a complex variety of social, behavioral, cultural, environmental, physiological and genetic factors. Obesity is not just a cosmetic problem and it

ultimately leads to life threatening conditions. Someone who is grossly overweight is twice as likely to die prematurely as compared to an average – weight person. This is because obesity has been linked to several medical conditions such as diabetes, stroke etc.

Gout is one such illness which is closely associated with Obesity. Gout is a joint disease caused by high levels of uric acid in blood. In other words to say Gout or gouty arthritis is defined as an

attack of a metabolic disease which deposits uric acid in joints. Obesity is a primary cause for gout according to current research. At least half of all the gout sufferers are overweight if not obese.¹

Vatarakta runs on the lines of *santarpanothajanya vyadhi*² and caused due to "*Mishthanna sukhabhojinaam*"³ which are also *nidana* of *Sthoulya* that is obesity.

Obesity

"Obesity " specifically refers to an excessive amount of body fat. It is an abnormal accumulation of body fat, usually 20 percent or more over an individual's ideal body weight. Obesity is associated with an increased risk of illness, disability, and death.

Body mass index (BMI) is a simple index of weight-for-height that is commonly used in classifying overweight and obesity in adult populations and individuals. It is defined as the weight in kilograms divided by the square of the height in meters (kg/m²). BMI provides the most useful population-level measure of overweight and obesity as it is the same for both sexes and for all ages of adults. The World Health Organization (WHO) defines "overweight" as a BMI equal to or more than 25, and "obesity" as a BMI equal to or more than 30⁴. But there is evidence that risk of chronic disease in populations' increases progressively from a BMI of 21.

Overweight and obesity lead to serious health consequences. Risk increases progressively as BMI increases. Raised body mass index is a major risk factor for many chronic diseases which include gout.

Gout

The term "Gout" comes from the Latin word "gutta" meaning "a drop" which describes the large lump of urate

deposits.⁵ Gout has been studied by physicians and has caused suffering in countless humans since the days of Hippocrates or even before.

Gout is a form of arthritis that causes severe pain and swelling in the joints. It most commonly affects the big toe (approx 75 % of first attacks) , but may also affect the heel, ankle, wrist or elbow. Gout usually comes on suddenly, goes away in 5-10 days, and can keep recurring. It is different from other forms of arthritis because it occurs when there are high levels of uric acid circulating in the blood, which can cause urate crystals to settle in the tissues of the joints. Gout is more common in overweight people and the risk of developing the disorder increases with higher body weights.

Association between obesity & gout

In addition to the inherited abnormality in handling uric acid, other risk factors for developing gout include obesity, excessive weight gain, especially in youth, moderate to heavy alcohol intake, high blood pressure, and abnormal kidney function.⁶

Researchers report a clear link between body weight and uric acid levels. In one Japanese study, overweight people had two to more than three times the rate of hyperuricemia as those who maintained a healthy weight.⁷

Data suggests that obesity increases serum urate by eliciting both increased production and decreased renal excretion of urate. In contrast weight reduction has been shown in prospective studies to be associated with decline uric acid levels.⁸ The incidence of gout in 47,150 male patients over 12 year period (1986 to 1998). These men started with no history of gout. Over the years, the authors documented 730 confirmed cases of gout.

When checked against body mass index, the authors saw that the risk of gout increases as such:

BMI	Relative Risk of Gout
21 - 24.9	1
25 - 29.9	1.95
30 - 34.9	2.33
35 +	2.97

This means that a man with body mass index of 35 or greater has almost 3x the risk developing gout as compared to a man with BMI of only 21.⁹

Other Researches Done

Obesity and central body fat distribution are associated with hyperuricemia.¹⁰ Hyperuricemia is associated with metabolic syndrome components such as obesity and dyslipidemia.¹¹ Serum triglyceride is markedly associated with hyperuricemia.¹²

In Classics

In Classics *Sthoulya* is considered as *Shleshma nanatmaja*¹³ and *Santarpanothajanya vyadhi* while *Vatarakta* is considered as *Vatananatmaja vyadhi*¹⁴ and is named as *Vatakhuddata*¹⁴. Whereas *Vatashonita vyadhi*, *Aadhyavata*, and *Vatabalas roga* are its synonyms. Also, *Dhamanipratichaya*¹⁵ has been mentioned as a *sleshma vikara* which is caused due to obesity and is the cause for *Vatarakta*.

Gout is considered as a disease of lifestyle and was associated with rich, people with high status and their excessive consumption of drinks and rich foods, also in classics the word “*Aadhya*” means “rich” and *aadhyavata* means the disease affecting the rich class due to involvement of *vata*. On the other hand, obesity is also a disease which affects people who indulge in excessive consumption of drinks and rich foods.

Association between Sthoulya and Vatarakta

The *Nidanas* mentioned for *sthoulya* are the same as that for *vatarakta* and are as follows

<i>Sthoulya</i>	<i>Vatarakta</i>
<i>Guru annapana</i>	<i>Mishthanna sukha bhojinaam</i>
<i>Avyayama, Cheshtadweshi</i>	<i>Achankramana</i>
<i>Atibhojana</i>	<i>Adhyashana, Ajir nabhojana</i>
<i>Avyavaya</i>	<i>Avyavaya</i>
<i>Madyapana</i>	<i>Madyapana</i>
<i>Diwaswapa</i>	<i>Diwaswapa</i>

मेदसाऽऽवृतमार्गत्वाद्वायुः कोष्ठे विशेषतः ।

च. सू. २१/५

आढ्यवात इति ज्ञेया स कृच्छ्रो मेदसाऽऽवृतः ।

च. चि. २८/६५

आढ्यवाते इति मेदसाऽऽवृतः वातस्य । चक्रपाणि⁷

From above reference it is clear that The *samprapti* of *sthoulya* and *vatarakta* also shows similarities wherein it is the *medadhatu* which is causing the *aavarana*.

Vatarakta occurs in small joints especially in the *snayu* of *hasta & pada moola*, *snayu* is nothing but the *updhatu* of *medadhatu* and there is excessive *medodushti* in *sthoulya roga*.

The *chikitsa* and *pathyapathya* of *sthoulya* and *vatarakta* also shows amazing similarities like *Basti karma*, *Virechana karma*, usage of *Shilajatu*, *Gomutra*, *Takra*, *Arishtha*, *Makshika*, *Triphala*, *Yava* and *Godhuma* which are mentioned for both in the classics.

Further in the *chikitsa* of *vatarakta* it is mentioned

कुपिते मार्गसंरोधान्मेदसो वा कफस्य वा ।

आतिवृष्टानिले नादौ शस्तं स्नेहनबृंहणम् ॥

च. चि. २९/१५६

व्यायामशोधनारिष्टमूत्रपानैर्विरेचनैः ।
तत्रभयाप्रयोगैश्च क्षपयेत् कफमेदसी ॥ च. चि. २९/१५७

This shows that there is definite involvement of *kapha* and *meda* in the

formation of *vatarakta*, hence *snehan* has been contraindicated as it may further vitiate *kapha* and *meda* and treatment for corrections of *kapha* and *meda* is advised.

STRIKING SIMILARITIES

Parameters	<i>Sthoulya</i>	<i>Vatarakta</i>
<i>Nidana</i>	<i>Guru annapana, Avyayama, Cheshtadweshi, Atibhojana, Avyavaya, Madyapana, Diwaswapa</i>	<i>Mishthanna sukha bhojinaam, Achankramana, Adhyashana, Ajirnabhojana, Avyavaya, Madyapana, Diwaswapa</i>
<i>Samprapti</i>	मेदसाऽऽवृतमार्गत्वाद्वायुः कोष्ठे विशेषतः ।	आढ्यवात इति ज्ञेया स कृच्छ्रो मेदसाऽऽवृतः ।
<i>Chikitsa</i>	<i>Basti karma, Virechana karma, Shilajatu, Gomutra, Takra, Arishtha, Makshika, Triphala, Yava and Godhuma</i>	<i>Basti karma, Virechana karma, Shilajatu, Gomutra, Takra, Arishtha, Makshika, Triphala, Yava and Godhuma</i>

Conclusion

Taking all these points into consideration it can be firmly said that obesity and gout have got a close association between them and the treatment for obesity will definitely favor gout.

To conclude I would like to say that henceforth when we come across a patient of obesity in our practice, we should not only investigate him for a lipid profile but also for serum uric acid levels to screen him for gout well in advance.

Ayurveda has got a very important role in the treatment of both obesity and gout of which the most important part is *Nidana parivarjanam*.

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