



# The Role Of Istika Churna Udhwarthana In The Management Of Sthoulya Wsr Obesity : - A Single Case Study

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**Abstract:** Recent studies shows that globally, more than 1.9 billion adults are overweight and 650 million are obese. Due to the consumption of junk food (i.e. unhealthy food habits), sedentary life style etc, Developing countries are facing high risk of obesity and their adverse consequences (i.e. diabetes, ischemic heart disease, etc). More than 135 million people in India suffered from obesity. In India, obesity prevalence varies on factors like age, gender, location, socioeconomic position, etc. The 2015 ICMR-INDIAB study states that the prevalence rates of central obesity range from 16.9% to 36.3% and 11.8% to 31.3%, respectively. Various studies have shown that the prevalence of obesity among women were significantly higher as compared to men<sup>1</sup>.

**Methods and Materials:** This is a single case study of 38 years old married male patient visited in Patient Department at SDM College of Ayurveda and Hospital in Hassan. with complaints of weight gain since 1 year. The patient was treated with *sarvanga udhwarthana* with *istika churna* to whole body. *Udvarthana* is one among the *Bahirparimarjana* Chikitsa. It is simple and affordable procedure with minimum harmful effects. *Istika churna* is having highly *rooksha*, *ushna*, *kapha medhohara* properties which helps in reducing the weight gain and also have great reduction in inch loss. It is economical, cost effective and easily available

**Keywords:** *Istikachurna*, *udhwarthana*, *istikachurna*, *sthoulya*, *obesity*, *udvarthana*

**Introduction: -**

*Udvarthana* is also named as '*churnodvarthana*'. *Udvarthana* is one among the *bahirparimarjana Chikitsa*. It is simple and affordable procedure with minimum harmful effects. *Udvarthana* has its efficacy on various diseases like obesity, dyslipidemia etc. It possesses *Shoshana*, *Rukshana*, *Langhana* and *Kapha-Medohara* properties. The powder of different dry drugs is used for massaging the body and the strokes are applied with pressure in the opposite direction of hairs (*pratilomagati*).

As *Apatarpana Chikitsa* is the most appropriate line of treatment in *Sthoulya* to prevent *Amasanchaya* and *Srotoavarodha*, *Twakasta* Agni gets stimulated after applying drugs used for *Udavartana*, which leads to absorption and digestion of these drugs and further does *Pravilayana* of *Medha Dhatu* (liquefaction of subcutaneous fat) below the skin. *Udvarthana* is a simple and affordable procedure with no harmful effects. *Udvarthana* has its effect on obesity<sup>3</sup>.

According to *CharakaSamhitha*, *Udvarthana* is of two types<sup>2</sup>.

a) *SnigdhaUdvarthana*: indicated for lean and thin (*krisha*).

b) *RukshaUdvarthana*: indicated for obese (*sthoola*).

In *Sushruta*, it is classified in more details. According to him it is of three types:

a) *Udvarthana*,

b) *Udgharshana*,

c) *Uthsadhana*<sup>3</sup>.

*Udgharshana*: In this type, only dry *churna* of herbs or other material is used without addition of *Sneha Dravyas* for the process of *Gharshana*.

**Patient information and relevant clinical findings:**

□ **Case reports:** This case of 38years man who went to the *Panchakarma* in Patient Department at SDM College of Ayurveda and Hospital in Hassan.

□ **Chief complaints:** complaints of weight gain since 1 year.

□ **H/O present illness:** A 38 years old male patient from Hassan occupationally KEB electrician

Approached with gradual increase in body weight, excessive perspiration, dyspnea, heaviness in body, polydipsia, polyphagia, laziness and snoring at night time.

Later because of much field work started skipping meals or delayed eating habits. Once the patient observed tremendous weight gain he started dieting on self without any dietician advice. Thus landed up in *alpa ahara sevana* which lead to constipation, fatigue and no energy to do exercise and again gained weight because of this stress, so he came to *Panchakarma* opd of SDM institute for ayurvedic treatment where he was diagnosed with *sthoulya* (OBESITY CLASS II)

□ **H/O Past Medical illness:** N/h/o-Diabetes mellitus, HTN, Asthama

□ **H/O Past Surgical illness:** not significant.

- Family History:** Not Significant.
- Addiction History:** Ex Alcoholic and occasional smoker.
- Treatment History:** Patient has a history of Allopathic medicines and homeopathic but had no relief.

### Personal History :

- Appetite – regular
- Diet –Mixed Diet
- Urine – 6times/day
- Bowel – Constipated
- Sleep – sound sleep
- Addictions – coffee 4times/day,alcoholic and occasional smoker.

### General examination:

- Pulse - 82/min
- B.P. - 130/90mmHg
- CVS-Normal Heart Sounds
- CNS-Conscious & well oriented to Time, Place, and Person.
- Height-164cm
- Weight- 101.95kg

### Dashavidha pareeksha:

<i>Prakruti</i>	<i>Vatakapha</i>
<i>Vikruthi</i>	<i>Hetu-ahara,vihara,manasika,anya</i> <i>Dosha-kapha</i> <i>Dushya-rasa,mamsa,meda</i> <i>Desha-sadharana</i> <i>Kala-hemantha</i> <i>Bala-pravara</i>
<i>Sara</i>	<i>Madhyama(medo sara pradhana)</i>
<i>Samhanana</i>	<i>Avara</i>
<i>Pramana</i>	<i>Pravara</i>
<i>Satmya</i>	<i>Madhyama(madhura pradhana)</i>
<i>Satwa</i>	<i>Madhyama</i>

<i>Aharashakti</i>	<i>Pravara</i>
<i>Vyayama shakthi</i>	<i>Avara</i>
<i>Vaya</i>	<i>Madhyama</i>

Table 1 shows dashavidha pareeksha of patient.

### **Anthropometry;**

Table2

SITE	MEASUREMENTS
Chest girth	110cm
Abdomen girth	119cm
Hip girth	114cm
Right mid arm circumference	38cm
Left mid arm circumference	38cm
Right mid thigh circumference	56cm
Left mid thigh circumference	56.2cm

Table2 shows anthropometry of patient on 0<sup>th</sup> day before treatment.

### **Blood Investigation:**

	Before Treatment(1thday)	After Treatment(8 <sup>th</sup> day)
Total Cholesterol	228 mg/dl	206 mg/dl
H D L Cholesterol	56 mg/dl	50 mg/dl
L D L Cholesterol	135 mg/dl	130 mg/dl
Triglycerides	182.6mg/dl	130 mg/dl
V L D L Cholesterol	36.5mg/dl	26 mg/dl
FBS	100.1mg/dl	100mg/dl
PPBS	140mg/dl	139mg/dl

Table 3 shows blood investigations before treatment and after treatment

### **NidanaPanchaka:**

#### **Hetu**

**Ahara:** Guru picchila ahara pishta anna sevana, skipping the meals, ati mamsa ahara sevana.

**Vihara:** Ati asana, Ati yana, Diwaswapna.

**PoorvaRoopa:** Alasya, weight gain

**Roopa:** Increased weight, lethargy, fatigue, constipation and exertional dyspnoea

**Anupashaya:** Standing, walking, exertion

**Upashaya:** nothing specific

**Samprapti:** Due to *Nidanasevana*(*Ati Asana, Ati yana, Avyayama, Vishamashana, Mamsahara sevana* lead to *vata-kapha prakopa* that caused *Agni dushti* and Formation of *Ama* which proceeded with *Srotorodha* and disturbance in *dhatu poshana* and only *Medhodhatu upachaya* seen again Indulgence in *alapahara*(*kshudha vega dharana*) lead to *Vata prakopa*(*Koshta Baddhata*) and *Alpahara* lead to *dhourbalya* but *medo vriddhri* and thus lead to *sthoulya*.

### **Samprapti Ghataka:**

*Dosha* : *Kapha vata.*

*Dushya* : *Rasa, Mamsa, medha*

*Srotas* : *Rasa-mamsa-medovaha srotas*

*Sroto-dushti* : *Sanga*

*Agni* : *Vishama-agni*

*Roga-marga* : *abhyantara*

*Adhi shtana* : *sarva shareera*

*UdbhavaSthana* : *amashaya*

*VyaktaSthana* : *Sphika, Sthana,udara*

*Diagnosis* : *Sthoulya (Obesity Class –II)*

### **TREATMENT PROTOCOL**

Table 4 shows Different therapy procedures performed, their ingredients and the duration

<b>Procedure</b>	<b>Ingredients</b>	<b>Duration</b>	<b>Time</b>
<i>Sarvanga udvarthana</i>	<i>istika churna</i>	<b>7 days</b>	<b>40min</b>

**INGREDIENTS:** plain *istika churna* is used for *udvarthana* procedure

**ISTIKA CHURNA COMPOSITION<sup>4</sup>:**

Percentage of istika churna constituents of brick (weight basis)

There are six major ingredients of brick.

The general percentage of these ingredients in brick is given below:

Ingredient Percentage in <i>Istika churna</i>	
Silica (SiO <sub>2</sub> )	55%
Alumina (Al <sub>2</sub> O <sub>3</sub> )	30%
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )	8%
Magnesia (MgO)	5%
Lime(CaO)	1%
Organic Matter	1%

Table 5 shows the Percentage of istika churna constituents of brick (weight basis)

**Preparation of the *istika churna*:**

- Collection of clay: *Nadhi mruthika* is collected from the river side area and it should be processed by
- Removing the stones, roots, dried leaves and unwanted substances.
- The collected clay should be dried under the sun.
- The clay should be made into a paste form place it in a brick moulds.
- Moulds should be baked in a oven for 2 days
- 1050° c Temperature should be maintained throughout the procedure.
- Bricks should be make it into small pieces.
- Pieces should be kept in a pulverizer mechine.
- Coarse powder should be collected and it should be sieved in a 420 partice size siever.
- powder should be collected and stored .



**Figure 1 preparation of istika churna**

#### Discharge medicines:

Sl.no	Medication	Dosage
1.	Cap-Decrin plus	twice daily before food

Table 6 shows Medications and therapies prescribed during discharge

**Follow up** : 15 days

ASSESSMENT CRITERIA:

#### Diagnostic Criteria

- Waist circumference >40 inches (102 cm) in males and >35 inches (88 cm) in female
- Waist hip ratio >0.9 in males and >0.85 in females.
- BMI>25kg/m<sup>2</sup>

## Subjective parameters:

1. Body Mass Index
2. chest circumference
3. Waist circumference
4. Hip circumference
5. Waist-hip ratio

## Results:

Factors	Before treatment 1 <sup>st</sup> day	After treatment 7th day	After Followup 21th day
Weight circumference	101.95kg	94.1kg	92.3kg
Bmi	37.9kg/m <sup>2</sup>	35 kg/m <sup>2</sup>	34.3 kg/m <sup>2</sup>
Chest circumference	110cm	107cm	103cm
Abdomen circumference	119cm	108cm	105cm
Hip circumference	114cm	97cm	95cm
Right mid arm circumference	38cm	33cm	32cm
Left mid arm circumference	38cm	32.8cm	32cm
Right mid thigh circumference	56cm	54cm	53cm
Left mid thigh circumference	56.2cm	54cm	53cm
Waist hip ratio	1.04	1.11	1.1

Table 7 shows the anthropometry before treatment, after treatment and after followup.

## Discussion:

*Panchakarma* to be undertaken for prolonged period and continuous medical supervision, which needs admission in hospital. Therefore, external treatments are quite popular among society for the management of this clinical condition. It is considered the best therapy for encouraging results in inches loss. Commonly used drugs in *Udvarthana* are kola, kulatha, methika, rasna, mugdha, sarshapa, haridra, atasi, kusta, vacha, shatahva, yava, yastimadhu, devadaru, haritaki, bibhitaki, amalaki, musta, kadhira, guduchi, shailayadi etc.

A study conducted with *Udvarthana* by *istika Churna* shows its benefits in obesity where *Udvarthana* provided good result in almost all parameters because they eliminate *Dosha* from the body and

simultaneously perform the action of Samprapti Vighatan (breaking of pathogenesis) at cellular level. The effect of Udvartana in reducing parameters such as weight, BMI, anthropometry and serum lipid values

*Istikachurna* (Brick powder) is easily available and cost effective. *Ishtika Churna* kindles the *Twakstha Agni* that is *Bhrajaka Pitta* and it does *Siramukhanehavivechana* that is broadening of openings of *Sira* by removing the blockages and reduces *kapha* and *meda*, helps in the management of *Sthoulya*.

In this present study *Udvarthana* is done with *Istika Churna* which acts as *Kapha Medohara* by its property of *Kashaya rasa, Laghu and Ruksha gunas*.

**SILICA:** Works as an anti-inflammatory: Silica is a natural anti-inflammatory that may help relieve skin conditions like eczema and psoriasis. It also helps to reduce facial pores, blemishes, and wrinkles<sup>5</sup>.

**ALUMINA:** Alumina is the common name of the ingredient aluminum oxide. It is a naturally mineral used as an abrasive, thickener, and an absorbent in cosmetic products. In skin care preparations, alumina is used in amounts up to 25%. It's been considered safe as used in cosmetics by the independent Cosmetic Ingredient Review panel. It is also approved by the U.S. Food and Drug Administration as a color additive for use in certain over-the-counter drug<sup>6</sup>.

**IRON OXIDE:** Iron oxides are considered to be safe as used in cosmetics and personal care products because they are non-toxic and non-allergenic. Iron oxides are even well tolerated by those with sensitive skin<sup>7</sup>.

**MAGNESIA:** Many skin conditions can cause dryness and itchy skin. magnesium does help in itchy skin and magnesium deficiency causes dry skin. However, one of the many skincare benefits of magnesium is that it can help in reduction of inflammation caused by conditions which lead to dry and itchy skin, such as eczema<sup>8</sup>.

**LIME:** The use of lime stone paste is recommended in case of skin conditions such as acne. Calcium present in limestone is antioxidising in actions and can help in the treatment of acne. Antioxidants also help in preventing tissue damage and cause delaying in ageing of the skin<sup>9</sup>.

All the elements present in the *istika churna* are of skin friendly and showed great results in the weight loss and inch loss.

**Conclusion:** *Sthoulya* can be successfully managed with *udvarthana chikitsa* with the *istika churna*. In this case *udhvartana* gave remarkable relief to the patient with significant weight reduction from 101.95kg to 94.15 kg with in 7 days of treatment

BMI is reduced from 37.9kg/m<sup>2</sup>(Obesity class II) to 35kg/m<sup>2</sup>(Obesity class I) and having drastic changes in serum lipid profile before and after treatment.

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