

**THE EFFECT OF RUKSHANA CHURNA (TRIPHALA, MUSTA, CHITRAKMOOL) IN INDIVIDUALS WITH CENTRAL OBESITY AND INSULIN RESISTANCE W.S.R. TO STHAULYA CHIKITSA****<sup>1</sup>\*Vd. Dipika Arunrao Chakole and <sup>2</sup>Vd. V.E.Gogate**<sup>1</sup>PG Scho. Kayachikista, Government Ayurved College, Nanded.<sup>2</sup>Associate Professor, Kayachikitsa, Government Ayurved College, Nanded.**\*Corresponding Author: Vd. Dipika Arunrao Chakole**

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**ABSTRACT**

Obesity is emerging as an important health problem in India. Twenty two million Indians are obese, especially abdominally obese. This obesity especially central obesity due to adiposity which may results into glucose intolerance, an impaired fasting glucose condition in which hyperinsulinemia seen in the patients. This Insulin Resistance condition finally causes TYPE 2 DM to the susceptible. As Obesity and insulin resistance condition comes under “medodushtee” which cause medodhatwagni mandya and which is finally results into apachit medodhatu which we can resemble it with central adiposity. This explained in Ch.sutrasthan 21. In Chikitsa sutra there is mention of ‘ruksha ushna dravya’ These dravya are well explained in different Gana of Charak and Sushruta Samhita. From all of these drugs TRIPHALA, MUSTA, CHITRAK are widely available and most commonly used drugs in current ayurved medicine practices. In this study the rukshan churna(triphala, musta, chitrakmool) was given to patients(No of patients -7)for 45 days. The assessment of Serum Insulin Fasting, Blood sugar Fasting, HOMA IR, Weight of patients was done before and after treatment. The significant effect was found in above parameters.

**KEYWORDS:****INTRODUCTION**

Obesity is emerging as an important health problem in India. Twenty two million Indians are obese, especially abdominally obese. As WHO states – “In developing countries, as their economies grow, Non-communicable disease will become more prevalent largely because of adoption of “western” lifestyle and their accompanying risk factors – smoking, high fat diet, lack of exercise.”<sup>[1]</sup>

This obesity especially central obesity due to adiposity which may results into glucose intolerance, impaired fasting glucose condition in which hyperinsulinemia is seen in the patients. This Insulin Resistance condition finally causes TYPE 2 DM to the susceptible. As obesity and diabetes reach epidemic proportions in the developed world, the role of insulin resistance and its consequences are gaining prominences. The current treatment for obesity, in modern medicine is mainly based on Change dietary habit, physical exercise. Also patient may suggested with Bariatric Surgery.

As Obesity and insulin resistance condition comes under “medodushtee” which cause medodhatwagni mandya and which is finally results into a apachit medodhatu which we can resemble it with central adiposity. So in

Charak Sutrasthan 21 the chikitsa sutra for sthaulya is given as follows:<sup>[2]</sup>

“Vataghna annapanani shleshmamedoghnani |  
Rukshnoshna-bastayateeksharukshanyudwartanani ch||”

In above Chikitsa sutra there is mention of ‘ruksha ushna dravya’ These dravya are well explained in different Gana of Charak and Sushruta Samhita. From all of these drugs TRIPHALA, MUSTA, CHITRAK are widely available and most commonly used drugs in current ayurved medicine practices. Also these drugs are used in general for Rukshana of patient in various condition where it is needed.

**REVIEW OF LITERATURE**

In charak samhita, in chapter no 21 of sutrasthana, there is a explanation about ashtaunindit vyaktee. In this text the symptoms of ateesthaulya is given as follows;

“Atisthoolasya tavidayusho rhaso javaprodh  
kruchhavyavayata daurbalyam daurgandyam swedabath  
kshudhatimatram pipasatiyogashcheti bhavantyashtau  
dosha ||”<sup>[3]</sup>

The most common sign and symptoms which are present in Obesed people are Daurballya, Pipasa-aadhikya, and Kshudhaatimatra. The central obesity of patient can co

related with Med dhatu vridhi lakshana explained in *Ashtang Hrudaya sutrasthan* 11 as follows:  
 “Alape-api cheshtine shwase sfiaka stana udar lambanm||”<sup>[4]</sup>

So we can co related this condition and Sthaulya chikitsa sutra can applied. In the above chikitsa sutra ‘ruksha ushna dravya’ are mentioned This ruksha ushna are explained in *Mustadi gana*, (su.su. 36) *Lekhaniya gana* (ch.su.4) From This *Gana*, commonly used and widely available *ruksha ushna* are *triphala*, *musta* and *chitrak*.

### OBJECTIVES

- To find out is there any combine effect of *triphala*, *musta* and *chitrakmool* in individuals who are insulin resistant due to central obesity.
- To observe the serum Insulin level and blood sugar level in central obese individuals.

### METHODOLOGY

The clinical case study was done over seven patients who visited to *Kayachikitsa* OPD in our institute.

#### • DIAGNOSTIC CRITERIA

- Central Obesity (Waist Circumference: - > 90 cm in male; >80 cm in female.)
- HyperInsulinemia
- BMI >23
- HOMA IR >2<sup>[5]</sup>

HOMA IR= Fasting Glucose (mg/dl) × Insulin (mu/L)

n

n=405 if fasting glucose in mg/dl

n=22.5 if fasting glucose in mmol/dl.

### OBSERVATION

#### 1. Table for Serum Insulin

Sr. No.	Before treatment	After Treatment	Difference in level	Percent relief
1.	24.9 uU/ml	10.6 uU/ml	14.3 uU/ml	57.42%
2.	18.4 uU/ml	9.5 uU/ml	8.9 uU/ml	48.36%
3.	22.9 uU/ml	18.2 uU/ml	4.7 uU/ml	20.52%
4.	11.9uU/ml	10.1uU/ml	1.8 uU/ml	15.12%
5.	17.5uU/ml	10.9uU/ml	6.6uU/ml	37.71%
6.	26.6uU/ml	11.5uU/ml	15.1uU/ml	56.76%
7.	24.2uU/ml	32.6uU/ml	-8.4uU/ml	-34.71%

#### 2. Table for Blood Sugar Level

Sr. No.	BT	AT	Difference in levels	Percent relief
1.	97mg/dl	80 mg/dl	17 mg/dl	17.52%
2.	90.9mg/dl	80.6mg/dl	10.3mg/dl	11.33%
3.	124mg/dl	105mg/dl	19mg/dl	15.32%
4.	100.5 mg/dl	105 mg/dl	-4.5 mg/dl	-4.477%
5.	78.5 mg/dl	94 mg/dl	-15.5 mg/dl	-19.74%
6.	87.0mg/dl	90mg/dl	-3 mg/dl	-3.45%
7.	78.6 mg/dl	76.8mg/dl	1.8mg/dl	2.29%

#### • INCLUSION CRITERIA

- Patient who are willing for treatment
- Above diagnosed Patient.
- Either sex
- Patients >18 years and < 70 years.

#### • EXCLUSION CRITERIA

- Patient who are not willing for treatment.
- Patient with Alcoholism or h/o of alcoholism.
- Long term Infectious condition in patient.
- Patient with multiple drug therapy
- Patient having Hyperinsulinemia due to tumour of Insulin producing cells of pancreas.
- Pregnant and lactating women
- Patient taking medicine for weight reduction lipid lowering drugs
- Patients having obesity with associated diseases like – Hypothyroidism, Cardiac problem like IHD/CHD.

#### • LAB INVESTIGATION

- Serum INSULIN fasting
- Blood Sugar level fasting.

#### • SUBJECTIVE CRITERIA

- Pipasadhikya*
- Kshudhadhikya*
- Daurbalya*

#### • DRUG DOSE AND DURATION

A mixture of *churna* (*trifala*, *musta*, *chitrakmool*)

Dose -3 gm each *churna* twice a day *annankala* with *anupana of koshnajala*

Duration – 45 days.

Patients are also *advice pathyapathya*.

## 3. Table for HOMA IR index

Sr. no.	BT	AT	Difference between index	Percent difference
1.	5.96	2.09	3.87	64.93%
2.	4.12	1.89	2.23	54.12%
3.	7.06	4.71	2.35	33.28%
4.	2.95	2.61	0.34	11.52%
5.	3.39	2.52	0.87	25.66%
6.	5.71	2.56	3.15	55.16%
7.	4.69	6.18	-1.49	-31.76%

## 4. Table for Weight

Sr.no	BT	AT	Difference
1.	94 kgwt	88kgwt	6kgwt
2.	92kgwt	91.5kgwt	0.5kgwt
3.	110kgwt	106kgwt	4 kgwt
4.	78kgwt	75kgwt	3kgwt
5.	69kgwt	67kgwt	2kgwt
6	84kgwt	84kgwt	0kgwt
7.	84kgwt	82kgwt	2kgwt

6. The subjective criteria i.e. kshudhahikya, pipasadhikya and daurbalya were not found in all patients but some of them shows one or two symptoms from them in which they shows significant relief.

1. The table no 1. Represents the values of Serum insulin fasting in patients before and after treatment in which 2 patients shows decrease in SR insulin level more than 50%; while 2 patients shows decrease in bet 25%- 50% and 2 patients shows decrease upto 25% and in one patient serum insulin level increased.
2. The table no 2. Represents the Fasting blood sugar level observed in patients in which 4 out of 7 patients shows significant decrease in Fasting blood sugar level
3. The table no 3. Shows the HOMA IR of patients before and after treatment which shows the highly significant change in the index.
4. The table no 4. Represents the weight difference in patients before and after treatment.

## DISCUSSION

As we know different *Gunakarma* of *trifala*, *musta* and *chitrakmool* are well explained in *different nighatu* and *samhita*. All of this drugs are specially *ruksha* and *laghu* in *guna*. Hence used as a *rukshan* in properties. In *charak sutra 21 the chikitsa sutra* for *sthaulya* mention the *rukshan karma*. So this *rukshan* properties of the mentioned *dravya* gives us significant result in weight reduction.

Also all of these three drugs have *kaphghna* property and according to *charak samhita* in *prameha vyadhi* there is mainly *kaph dushti* along with "*bahu drav shelshma*". Hence these combination of drugs gives us positive effect on Blood Glucose level and serum Insulin level.

## RESULT

The Early results in this clinical case study shows significant results in decrease in values of Serum insulin Fasting, fasting Blood Sugar Level and in subjective criteria along weight reduction in patients as mentioned in above observational tables.

## CONCLUSION

So from above all observations in the stated clinical case study, we observe the significant effect in the individuals with insulin resistant central obesity condition. Furthermore clinical trials are needed to establish the results as sample size was too short in this pilot study.

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