

## CLINICAL EVALUATION OF HARITAKI CHOORNA IN STHOULYA

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## ABSTRACT

*Sthoulya* is one of the most effective disease which affect someone social, physical and mental features. As per modern view it is a precursor to coronary heart disease, high blood pressure, diabetes mellitus and osteoarthritis which have been recognized as the leading killer diseases of the millennium. *Sthoulya* is a state of increased *Vikruta vrudhhi* of *Medodhatu*. It is one of the *Satarpanotha vikaras*. The drug *Haritaki* are having *Laghu* and *Ruksha Guna* which are opposite *Guna* to that of the *Sthoulya*. **Objectives:** Practical evaluation of *Sthoulyahara* effects of *Haritaki*. **Results** – 30 patients had completed the trial; no adverse effect were reported. All patients get significant result.

**Keywords:** Sthoulya, Obesity, BMI, Haritake

## INTRODUCTION

Today's lifestyle has completely changed by all the means our diet pattern, lifestyles and behavioral pattern which has made man the victim of many diseases.

*Sthoulya* (obesity) is one among them. *Sthoulya* is one of the most effective disease which affect someone social, physical and mental features. As per modern

view, it is a precursor to coronary heart disease, high blood pressure, diabetes mellitus and osteoarthritis which have been recognized as the leading killer diseases of the millennium<sup>(1)</sup>. All these disorders are an indication of the failing systems, their inability to provide optimum performance to upkeep the physiological clock ticking. In Ayurveda, *Sthoulya* has been described by *Acharya Charaka* as one of the eight despicable persons (*Ashtaunindita*) in the context of the body.<sup>(2)</sup> Principles of *Ayurveda* have significant value even in the life of modern man. The reason behind this is life is the underlying theme over which the whole science of *Ayurveda* is interwoven. Hence one cannot deny the implacability of these principles. The principles of *Ayurveda* are based on strict experimental studies of several years. These principles are the outcome of those studies. Several *Acharyas* have tested these principles for many years and then these principles have got a place in *Ayurvedic Samhitas*. *Sthoulya* is a state of increased *Vikruta Vriddhi* of *Medodhatu*. It is one of *Santarponotha Vikaras*.<sup>(3)</sup> where a physician needs to apply the principal of 'vishesha' which can restore the unhealthy increase of components to the previous undiseased form.<sup>(4)</sup> The drug *Haritaki* <sup>(6)</sup> is having *Laghu* and *Ruksha Guna* which are opposite *Gunas* to that of the *Sthoulya*. Hence the present research work was planned to evaluate the clinical effect of *Haritaki* on *Sthoulya* (*Obesity*).

**Objective of The Study:** Practical evaluation of *Sthoulyahara* effect of *Haritaki*.

#### **Materials and Methods**

- a) **Literary Source:** Literary and conceptual study of the present study was based on the data from Ayurvedic books available from BLDEA's AVS Ayurveda Mahavidyalaya library, and other sources which include magazines, previous work done, research paper's, website etc.
- b) **Drug Source:** The medicines required for the present study were procured from the Pharmacy of BLDEA'S AVS Ayurveda Mahavidyalaya, Vijayapur, and Karnataka.
- c) **Clinical Source:** Patients of either sex diagnosed suffering from obesity were selected from OPD &

IPD of BLDEA's AVS Ayurveda Mahavidyalaya Hospital, Vijayapur.

#### **Method of collection of Data**

A special proforma was prepared with details of history, physical signs and symptoms mentioned for the *Sthoulya*. Patients were analyzed and selected accordingly. A viable and indigenously designed method was used to assess the parameters of signs and symptoms.

#### **Design of the study:**

**Study Design:** Randomized Single Blind Comparative Clinical Study.

**Sample Size:** Total number of patients taken for the study are 60 excluding dropout.

**Duration of Treatment:** 35 days

**Duration of Follow Up:** 15 days

**Study Duration:** Total study duration: 45 days, Treatment duration: 30 days follow up duration: 15 days

#### **Statistical Analysis:**

The obtained data was analyzed statistically and presented as mean  $\pm$  SEM. The data generated during the study was subjected student's "Unpaired 't' Test" for unpaired data to assess the statistical significance between the two groups. The change in signs and symptoms will be analyzed by Paired "t" test.

#### **Inclusion Criteria:**

1. Patients diagnosed as *Sthoulya* having classical signs and symptoms will be selected.
2. Patients of either sex in between age group 20 - 60 years.
3. Patients with BMI more than 25

#### **Exclusion Criteria**

1. Patients age less than 20 and more than 60 years.
2. Patients having major systemic disorders or other illnesses which interfere with the present study.
3. Patients of *Sthoulya* with its severe complications like cerebral vascular diseases, Ischemic heart diseases will be excluded.

#### **Diagnostic Criteria:**

- Diagnosis will be made based on classical signs and symptoms like *Spik*, *Sthana* and *Udara Lambana* (increased fat deposition in chest, abdomen and gluteals)

- *Atisweda, Atikshudha and Atitrishna.*
- *Kshudra Shwasa* (breathing difficulty) and *Daurbalya* (weakness)
- Patients having BMI more than 25.

**Assessment Criteria:**

Assessment was done based on objective & subjective criteria before, during & after treatment.

**Subjective Criteria:**

- *Dourbalya* (general weakness)
- *Swedabadha* (excessive sweating)
- *Kshudhatiyoga* (excessive hunger)
- *Pipasaatimatram* (excessive thirst)

**Objective Criteria:**

- Calculation of BMI (Weight in kg divided by height in meter square)
- Waist Hip circumference ratio
- Circumference of chest, abdomen, mid arm and mid-thigh.
- Lipid profile (12 hours fasting)

Data was collected before, during & after therapy for which scores was given based on the severity. Later they will be assessed for the improvement.

**Drug and Posology**

**Haritaki Churna**

Dosage: 6 g / b.i.d., Anupana: Ushna Jala, Route: Oral, Duration: 30 days **Follow up:** 15days, **Duration:** 30 days, **Follow Up:** 15 days

**Laboratory Investigations:**

- Urine routine (Albumin, Sugar & micro)
- Blood routine (Hb, TC, DC)
- Lipid profile (12 hours fasting)

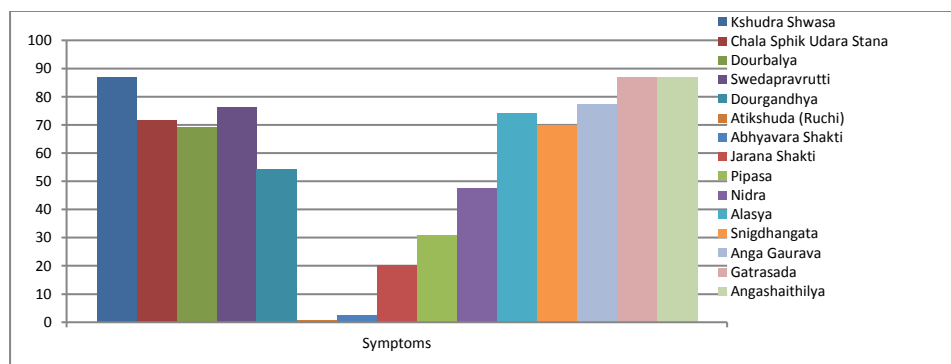
**Effect of Therapy**

In the present study total 35 patients were registered, out of which 5 patients have dropped out the treatment, out of remaining 30 patients were treated with *Haritaki Churna* (The effect of the drugs on various subjective and objective criteria is presented here under the separate headings.

**Effect of Therapy:** In this group total 35 patients were registered out of which 2 patients were dropped out while remaining 33 patients have completed the full course of treatment. Here the effect of drug *Haritaki Churna* on various parameters is presented in the following tables.

**Table 1:** Effect on subjective and objective criteria's in *Haritaki Choorna*

Symptoms	Mean BT	Mean AT	Mean Diff	% of Relief	SD	SE	't' Value	'p' Value
<i>Kshudra Shwasa</i>	0.766	0.1	0.666	86.95	0.0546	0.099	6.679	< 0.0001
<i>Chala Sphik Udara Stana</i>	1.066	0.3	0.766	71.87	0.678	0.123	6.185	< 0.0001
<i>Dourbalya</i>	1.3	0.4	0.9	69.23	0.607	0.11	8.115	<0.0001
<i>Swedapravrutti</i>	0.7	0.166	0.533	76.19	0.628	0.114	4.645	<0.0001
<i>Dourgandhya</i>	0.366	0.166	0.2	54.54	0.406	0.074	2.692	0.0117
<i>Atikshuda (Ruchi)</i>	3.8	3.766	0.033	0.87	0.718	0.131	0.254	0.8013
<i>Abhyavara Shakti</i>	4.266	4.166	0.1	2.34	0.547	0.1	1	0.3256
<i>Jarana Shakti</i>	3.6	2.866	0.733	20.37	0.784	0.143	5.117	<0.0001
<i>Pipasa</i>	1.833	1.266	0.56	30.90	0.773	0.141	4.01	0.0004
<i>Alpa Vyavaya</i>	0.333	0.333	0	0	0	0	0	1.0000
<i>Sexual Desire</i>	2.961	2.961	0	0	0	0	0	1.0000
<i>Erection</i>	3	2.666	0.066	2.22	0.365	0.066	1	0.3256
<i>Rigidity</i>	1	0.666	0.666	6.66	0.253	0.046	1.439	0.1609
<i>Nidra</i>	1.966	1.033	0.933	47.45	0.739	0.135	6.911	<0.0001
<i>Alasya</i>	1.3	0.333	0.966	74.35	0.413	0.075	12.793	<0.0001
<i>Snigdhangata</i>	0.666	0.2	0.466	70	0.507	0.092	5.037	<0.0001
<i>Anga Gaurava</i>	0.733	0.166	0.566	77.27	0.568	0.103	5.461	<0.0001
<i>Gatrasada</i>	0.766	0.1	0.666	86.95	0.758	0.138	4.816	<0.0001
<i>Angashaithilya</i>	0.8	0.1	0.7	87	0.466	0.85	8.225	<0.0001



**Figure 1:** Effect on subjective and objective criteria (*Haritaki Choorna*)

In *Kshudra Shwasa* 86%, *Angashitilya* 87% and *Gatrasada* 86% relief was recorded which is statistically significant (<0.0001), in *Anga Gaurava* 77 %, *Swedapravrutti* 76%, *Alasya* 74 %, *Chala Sphik Stana Udara* 71%, *Snigdhagata* 70 %, *Dourbalya* 69%,

relief were recorded and in *Nidra* 47%, *Jarana Shakti* 20% relief was recorded which is statistically significant (<0.0001), *Pipasa* 30% *Daurgandhya* 54%, *Atikshudha* 2.3%, *Alpa Vyayaya* 0% relief is recorded which is statistically insignificant.

**Table 2:** Effect on Objective Criteria's

Symptoms	Mean BT	Mean AT	Mean Diff	% of Relief	SD	SE	't' Value	'p' Value
BMI	32.899	31.935	0.963	2.92916	0.971	0.177	5.435	<0.0001
Waist circumference	42.633	42.333	0.3	0.703675	0.466	0.085	3.525	0.0014
Hip circumference	43	42.466	0.533	1.24031	0.73	0.133	4	0.0004
Abdominal circumference	42.566	42.1	0.466	1.096319	0.628	0.114	4.064	0.0003
Chest circumference	39.533	39.066	0.466	1.180438	0.507	0.092	5.037	<0.0001
Waist Hip circumference ratio	0.982	0.985	0.001	0.101764	0.011	0.002	0.462	0.6475
Mid arm circumference	13.55	13.416	0.133	0.98401	0.345	0.063	2.112	0.0434
Mid-Thigh circumference	19.766	19.366	0.4	2.023609	0.498	0.09	4.396	0.0001
Weight	74.466	78.48	2.253	3.025962	1.559	0.284	7.913	<0.0001

Weight reduction 3.02% relief found which is statistically highly significant (p<0.0001) in BMI 2.929% relief found which is statistically highly significant. Relief was found which is highly significant (<0.0001), chest circumference 1.1804 relief found which is statistically highly significant (<0.0001), waist circumference 0.7036 relief found which is very statistically significant (0.0014) hip circumference

1.0963 relief found, abdominal circumference 1.096% relief were found which is consider as non-significant (0.0004), (0.0003), in chest circumference 1.1804% relief were found which is highly statistically significant (<0.0001) mid arm 0.9 % and mid-thigh circumference 2.02% relief were found which is not statistically significant.

**Table 3:** Effect on laboratory investigation

Symptoms	Mean BT	Mean AT	Mean Diff	% of Relief	SD	SE	't' Value	'p' Value
WBC Count	6040	6436	-396	6.5673	1326.3	242.2	-1.638	0.1122
Neutrophils Count	58.366	55.133	3.233	5.53969	7.872	1.437	2.249	0.0323
Eosinophils Count	4.266	3.133	1.133	26.5625	1.332	0.243	4.659	<0.0001
Lymphocytes Count	37	40.3	-3.3	8.91892	7.715	1.408	-2.342	0.0263
Monocytes Count	0.733	1.266	-0.53	72.7273	0.628	0.114	-4.645	<0.0001
Basophils Count	0	0	0	0	0	0	1	0
Hemoglobin Count	11.25	12.013	-0.75	6.72194	0.783	0.14	-5.287	<0.0001

Serum cholesterol (HDL)	37.66	36.233	1.433	3.80531	5.302	0.96	1.48	0.1497
Serum cholesterol (LDL)	216.3	158.533	57.66	26.65639	27.252	4.97	11.589	<0.0001
Serum cholesterol (VLDL)	12.68	16.006	-3.32	26.2355	3.89	0.71	-4.683	<0.0001
Serum Triglycerides	62.73	80	-17.26	27.5239	20.025	3.65	-4.722	<0.0001
Serum Total cholesterol	260.1	210.83	49.33	18.9622	22.92	4.18	11.78	<0.0001

Eosinophil count 26 %, Monocyte count 72.7 %, Hemoglobin count 6.72%, Serum cholesterol (LDL) 26.65 %, Serum cholesterol (VLDL) 26.23%, Serum Triglycerides 20.02 %, Serum total cholesterol 18.96 % relief were recorded which is highly statistically significant (<0.0001). WBC count 6.56%, Neutrophils Count 5.53%, Serum Cholesterol (HDL) 3.80 % relief were found which is statistically insignificant

## DISCUSSION

This is the most important part of any research work. It comprises the discussion of important points from Conceptual Study as well as the results obtained from Applied Study. Discussion is nothing but the logical reasoning of observations. If all the points are discussed with proper reasoning, then they help to draw proper conclusions. It is a bridge which connects the findings with conclusions. Only a properly done discussion can fulfill the purpose of research work i.e., to draw some conclusion from the findings and results. Therefore, discussion is the main substratum of any type of research work. Now need is to discuss the practical observations and results to see the state of hypothesis get proved or rejected. It is the necessity of time to refurbish the principles of *Ayurveda* in today's context. In management group 35 patients have completed the course of treatment. The discussion of some important observations and their relationship with *Sthoulya* is as follows: All the patients were selected for this study, after assessing the selection criteria for *Sthoulya*, so it is obvious that all the patients should have complaint of *Bharvrdhi*. 100% patients were found to be suffering from *Angagauravata*. The reason behind this is, *Medodhatu* is having *Prthvi* and *Aap Mahabhuta* dominance, so abundant growth of *Medodhatu* in *Sharira* leads to increase of *Gunas* like *Guru*, *Seeta*, *Snigdha* in the body, which ultimately leads to *Angagauravata*. It is also said in classics that

*Medodhatu* produced in *Sthoulya* condition is in *Ama-vastha* which causes *Angagauravata*. In *Sthoulya Medodhatu* obstructs the normal path of *Vatadosa*, this *Vatadosa* (*Shamana Vayu*) stimulates the *Pachaka Pitta* in the *Koshta* which leads to symptom like *Atiksudha*. *Sweda* is said to be *Mala* of *Medodhatu*, increased production of *Medodhatu* increases *Swedapravrtti* of the body. This increased *Swedapravartuna* might be the reason behind *Atipipasa*. Now, we shall discuss the *Nidana Kara Bhavas* of *Sthoulya* persons in this study, Persons who does *Ati Shali Sevana* are 71% in this study, and *Guru Madhura Sheeta Snigdha Ahara Sevana* (80%, 40%, 74%, 60%) respectively. *Ati Sampurana* 48%, *Kshira Sevana* 22%, *Phala Sevana* and *Gramya Ahara Sevana* 17%, *Auduka Sevana* 25%, *Adhyashana* 17%, *Nava Madya Sevana* 10%. In *Viharaatmak Nidana*, *Avyayama* 77%, *Bhojanantara Nidra* 60%, *Avyavaya* 45%, *Asanasukha* 14%, *Diwaswapna* and *Gandamalyanu Sevana* 17%, *Bhojana Nantara Snana* 2%. Due to these *Viharaatmak Nidana*, Patients were more prone to *Sthoulya*. Increased *Medodhatu* in the body increases the weight of the person this increased weight is the prime cause for *Ksudra Swasa*. In this study 85% patients were relieved after treatment Modern science has also accepts obesity as one of the causes for *Dyspnoea*. 69% patients were reported having *Angadaurbalya*. In this study 69% patient were relieved after treatment. It is evidenced in classics that *Medodhatu* causes obstruction in the nourishing pathway due to which maximum of *Ahara Rasa* leads to production of *Medodhatu* and nourishment of further *Dhatus* is hampered. As all the *Dhatus* do not get proper nourishment it produces the symptom like *Angadaurbalya*. Better results were found in symptoms like *Atiksudha* and *Atinidra* Due to this reason symptom like *Atiksudha* were found to have better results. This is also evidenced in classics that *Haritaki* with its

own properties can do the function of *Strotovibandhanasana*. In *Kshudrashwasa* 86%. In *Chala Sphik Stana Udara* 71 % in group A were relieved. In *Dourbalya* 69 % in were relieved. In *Sweda Pravrutti* 76% were relieved. In *Dourgandhya* 54% were relieved. In *Atikshudha* group 0.8% patients were relieved. In *Abhyavarana Shakti* 2.3% in *Jarana Shakti* 20% in were relieved. In *Pipasa* 30%. In *Alpa Vyavaya* 14% relieved. In *Nidra* 47% were relieved. In *Alasya* 74% patients were relieved. In *Snigdhangata* 70% were relieved. In *Anga Gourava* 77%. In *Gatrasada* 86% were relieved. In *Angashaithilya* 87% were relieved. By this statistical result we can conclude that patients were more relieved administered *Haritaki Churna*. So, it is statistically highly significant. In BMI 2.92% waist circumference 0.70% hip circumference 1.24%. In Abdominal circumference 1.09%. In chest circumference 1.18. In Mid arm 0.98%. Mid-thigh circumference 2.02%. Weight 3.02%. By this statistical data we can depict that is highly significant in reducing the BMI in all circumference. In *Medovaha Srotas* the prominent symptoms are *Alasya* 86%, *Dourbalya* 81%, *Sphik Stana Udara Chalatawa* 75%, *Snigdhangata* 44%, *Anga shaithilya* 64%, *Pipasa Atimatra* 58%, *Talu Shosha* 58%, *Sweda Badha* 41%, *Dourgandhya* 38%, *Kanta much shosha* 26% , *Bahu mutrata* 15%, *Javoparodha* 4%, *Atishlakshna* 9%, *Mutra Sada* 3%. In laboratory findings in WBC count 6.56%. In Neutrophils count 5.53. In Eosinophil count 26% in group A and 20% get improved. In lymphocyte count 8.91% in In Monocyte count 72% in hemoglobin %, 6.72%. In Serum cholesterol (HDL) 3.80%. In Serum cholesterol (LDL) 26%. In serum cholesterol (VLDL) 26%. In serum triglycerides 27% in serum total cholesterol 18% get improved.

This decides that the *Haritaki Choorna* acts as a *Sthoulyahara* effect.

## CONCLUSION

Conclusion was the essence of the whole study. In ancient research methodology it is described as “*nigama*”. In the discussion part of the study the work is discussed on the basis of concepts, supported by

data and logical reasoning. The conclusion drawn from the scientific discussion is as follows, according to *Ayurveda Acharya Charaka* has mentioned *Sthoulya* under the caption of *Santarpanotha Vikara*. Though *Sthoulya* is mentioned as *Krcchrasadhya Vikara* but on the basis of BMI one can say that if a person’s BMI lies between 25-40kg and 2 it can be termed as *Sadhya*, but if it goes beyond 30kg/m<sup>2</sup> then it goes beyond 30kg/m<sup>2</sup> then it became *Asadhya*. *Nidana* of *Sthoulya* mentioned in classics are now changing. Increasing stress, faulty dietary habits and decreased awareness regarding exercise are becoming the prominent causative factors for *Sthoulya*. *Kaphaprakruti* person were found more prone to *Sthoulya* so they should be advised proper diet regime and exercise. In society percentage of population suffering from *Sthoulya* is increasing day by day so they should made aware regarding the disease and its severe complications before it reaches to its epidemic level.

## REFERENCES

1. Gupta Rashmi Gupta Gopal Das, Biochemical study of Guggul in case of Adolescent Obesity Journal of Pharmacology and Phytochemistry, Vol. 4 issue 2 (2015), 205 – 7
2. Vaidya Ravidatta Tripathi, Charak Samhita with Vaidyamanorama Hindi commentary. Chaukhamba Sanskrit Pratisthan Delhi; 2013 Sutrasthana 21/3 300p.
3. Vaidya Ravidatta Tripathi, Charaka Samhita with vaidyamanorama Hindi commentary. Chaukhamba Sanskrit pratisthan Delhi; 2013 Sutrasthana 23/ 6 317p.
4. Vaidya Ravidatta Tripathi, Charak Samhita with Vaidyamanorama Hindi commentary. Chaukhamba Sanskrit pratisthan Delhi; 2013 sutrasthana 1/44 13p
5. Planetayurveda.com. (2018). Haritaki, Harad (terminalia chebula) – online

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