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**REVIEW ARTICLE** 

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### Critical review on *Haritaki* w.s.r. to *Sthaulya* (Obesity)

#### Shilky Patel<sup>1</sup>, Trupti Jain<sup>2</sup>, Charu Bansal<sup>3</sup>, Nitin Marwaha<sup>4</sup>

<sup>1</sup>Post Graduate Scholar, Department of Swasthavritta, Pt. K.L.S. Govt. (Auto) Ayurveda College and Institute, Bhopal, Madhya Pradesh, India.

<sup>2</sup>Assistant Professor, Department of Swasthavritta, Pt. K.L.S. Govt. (Auto) Ayurveda College and Institute, Bhopal, Madhya Pradesh, India.

<sup>3</sup>Professor, Department of Swasthavritta, Pt. K.L.S. Govt. (Auto) Ayurveda College and Institute, Bhopal, Madhya Pradesh, India.

<sup>4</sup>Professor & HOD, Department of Swasthavritta, Pt. K.L.S. Govt. (Auto) Ayurveda College and Institute, Bhopal, Madhya Pradesh, India.

#### ABSTRACT

Obesity is a major risk factor for a number of chronic diseases, including Diabetes, Cardiovascular disease & Cancer etc. In 2013, the American Medical Association (AMA) declared Obesity a disease that requires a range of interventions to advance treatment & prevention. So, it is the need of the hour to develop better treatment protocol to treat & prevent the condition. Ayurveda has the potential in the prevention, management & improvement of the quality of life in obese patient. Haritaki having properties like Kaphaghna, Medoghna, Deepana, Pachana, Ruksha, Laghu Guna, Katu, Tikta Rasa and Ushna Veerya, it does the Sthaulya Samprapti Vighatana. Various studies also suggested that Haritaki possesses an antiobesity and hypolipidemic effects based on Kaphanashak and Medoghna properties and presence of its biologically active components like saponins, phytosterols, chebulinic acid and corilagin. Therefore, Haritaki can be useful as an adjuvant therapy for Obesity.

Key words: Overweight, Obesity, BMI, Haritaki, Sthaulya

#### **INTRODUCTION**

Haritaki is a marvelous Ayurvedic drug prized as "king of medicine" and used since ancient time for therapeutic purposes. It has been widely used in the traditional Indian medicine system of Ayurveda because of its wide spectrum of pharmacological actions that contains biologically active chemicals.<sup>[1]</sup>

Obesity is a major risk factor for a number of chronic diseases, including Diabetes, Cardiovascular disease & Cancer etc. In 2013, the American Medical Association

#### Address for correspondence:

#### Dr. Shilky Patel

Post Graduate Scholar, Department of Swasthavritta, Pt. K.L.S. Govt. (Auto) Ayurveda College and Institute, Bhopal, Madhya Pradesh, India.

E-mail: anurag.katiyar9@gmail.com

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Published by Maharshi Charaka Ayurveda Organization, Vijayapur, Karnataka (Regd) under the license CC-by-NC-SA (AMA) declared Obesity a disease that requires a range of interventions to advance treatment & prevention.<sup>[2]</sup> So, it is the need of the hour to develop better treatment protocol to treat & prevent the condition. *Ayurveda* has the potential in the prevention, management & improvement of the quality of life in obese patient.

#### **H**ARITAKI

हरीतकी पञ्चरसाऽलवणा त्वरा परम् |

रूक्षोष्णा दीपनी मेध्या स्वादुपाका रसायनी ।

चक्ष्ष्या लघुरायुष्या बृंहणी चान्लोमिनी ||B.P.

#### **Raw Haritaki**

Latin name: Terminalia chebula Retz.

Family: Combretaceae

Synonyms: Abhaya, Pathya, Kayastha, Putana, Amruta, Haimavati, Avyatha, Chetaki, Shreyasi, Shiva, Vayastha, Vijaya, , Jivanti, Rohini.<sup>[3]</sup>

Varieties : Vijaya, Rohini, Putana, Amrita, Abhaya, Jivanti, Chetaki.<sup>[4]</sup>

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#### Properties<sup>[5]</sup>

Rasa (taste): Madhura, Amla, Tikta, Katu, Kashaya

Guna (property): Laghu, Ruksha

Veerya (potency): Ushna

Vipaka (digestive stage): Madhura

**Doshaghnata**: Tridoshashamak

#### Karma<sup>[6]</sup>

Vedanasthapana, Vrana shodhana Vranaropana, Dipana, Pachana, Krimmighna Kushthaghna, Medhya, Chakshushya, Brimhaniya, Anulomana, Rasayana.

#### Rogaghnata<sup>[7]</sup>

Useful in Shotha, Shoola, Arsha, Hridroga, Kasa, Shwasa, Udavarta, Vibandha, Visham Jwara, Ashmari, Kamla, Gulma, Udar Rog, Kushtha, Krimi, Swarbheda, Grahani, Aadhman etc.

#### Pharmacological activity<sup>[8]</sup>

Antioxidant and free radical scavenging activity, Hypolipidemic and hypocholesterolemia activity, Gastrointestinal motility improving, Purgative property and Immunomodulatory activity etc.

#### Research review of Haritaki

#### 1. Hypolipidemic activity<sup>[9]</sup>

High amount of saponins, phytosterols, chebulinic acid and corilagin present in *Haritaki* is responsible for the hypolipidemic effect.

#### 2. Anti inflammatory activity<sup>[10]</sup>

Gallic acid derived from the extracts of several plants especially *T. chebula* was showed to exert anti-inflammatory activity via the downregulation of the NF-kB pathway in the development of inflammatory diseases.

#### 3. Anti diabetic effect<sup>[11]</sup>

Terminalia chebula methanolic extract (TCE) containing 2.7% chebulic acid shows preventive effects against the formation of advanced glycation end products (AGEs) and endothelial cell dysfunction.

#### 4. Anti bacterial activity<sup>[12]</sup>

Gallic acid and its ethyl ester isolated from ethanolic extract of *Terminalia chebula* shows antimicrobial activity against methicillin-resistant *Staphylococcus aureus*. It has also growth inhibitory action against *Salmonella typhi* and intestinal bacteria. The extracts of *Terminalia* proves to be an effective anti-bacterial agent by forming the inhibitory zone against *Pseudomonas aeruginosa*, *P. fluorescens*, *Bacillus bronchiseptica*, *Staphylococcus aureus*, *Salmonella epidermidis*, *B. cereus*, *B.pumilis*, *Shigella boydii* and *Escherichia coli*.

#### 5. Antiviral activity<sup>[13]</sup>

Terminalia chebula fruits afforded four immunodeficiency virus type 1 (HIV-1) integrate inhibitors, gallic acid and three galloy glucoses. Their galloyl moiety plays a major role for inhibition against the 3'-processing of HIV-1 integrase of the compounds.

#### 6. Gastroprotective activity<sup>[14]</sup>

The gastroprotective and antisecretory mechanisms of chebulinic acid isolated from myrobalan fruit exhibited through Chebulinic acid which significantly decreases free acidity, total acidity, and upregulated mucin secretion, and inhibits H + K+- ATPase activity.

#### 7. Antioxidant activity<sup>[15]</sup>

Chebulinic acid has an antioxidant effect and exhibits free radical scavenging activity and ferric-reducing antioxidant activity.

#### Review on Sthaulya (Obesity)

Obesity is a medical condition in which excess body fat has accumulated to an extent that it may have a negative effect on health. A body mass index (BMI) over 25 is taken into account overweight, and over 30 is obese. [16]

The analysis of Ayurvedic classics reveals that *Sthaulya* is a *Santarpanjanya Vikara*. Consumption of *Guru, Snigdha, Madhura Rasa Aahara* along with lack of exercise and sedentary lifestyle results in excessive nourishment of *Medas* and derangement of *Agni* leads to *Aama* production which disturbs *Medodhatwagni* and block proper formation of other *Dhatus*. Thus

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improperly formed *Medodhatu* accumulates in the body leading to flabbiness of hips, abdomen and breast has been categorized as *Atisthaulya Roga*.<sup>[17]</sup>

Since, Haritaki is having properties like Kaphaghna, Medoghna, Deepana, Pachana, Ruksha, Laghu Guna, Katu, Tikta Rasa and Ushna Veerya, it does the Sthaulya Samprapti Vighatana. Several researches also proved the positive effect of Haritaki on weight control, lipid control and glycemic control because of its biologically active component like saponins, phytosterols, chebulinic acid and corilagin. Hence addition of Harad in daily diet not only improves digestion but also plays a key role in reducing Obesity.

#### Review of Haritaki w.s.r. to Sthaulya

In Ayurvedic classics, *Haritaki* has described as follows:

- Acharya Charaka has mentioned Haritaki as Pathya for Atisthaulya in Sutrasthana.
- Acharya Sushruta said that Haritaki is useful in Santarpanjanya Roga
- Dhanvantari Nighantu described that Haritaki has Lekhan and Vatanuloman property and is useful in Santarpanjanya Rog.
- Bhava Prakash, Yog Ratnakar, Bhaishajya Ratnavali and some other Nighantu mentioned Haritaki in so many Sthaulyanashak Yog.

#### **DISCUSSION**

According to Ayurvedic classics Sthaulya is Vata Kapha predominant metabolic disorder. Excessive accumulation of Kapha and Meda with other factors eventually leads to Sthaulya. Haritaki on the basis of its pharmacological properties is useful in Obesity (Sthaulya).

The drug Haritaki possesses Katu, Tikta Rasa and cause Upashoshana of Kleda and Meda. Due to Teekshna, Laghu, Gunas, and Ushna Veerya, they help in clearing the Srotas, also acts on Kapha and Vayu to break the Sthaulya Samprapti. Katu, Tikta Rasa present in Haritaki and Shunthi improve Jatharagni and correct digestion and metabolism. High amount of saponins,

phytosterols, chebulinic acid and corilagin present in *Haritaki* is responsible for the hypolipidemic effect.

#### **CONCLUSION**

Acharyas described Haritaki as Pathya for Sthaulya and also one of the important ingredients in several Sthaulyanashak Yog on the basis of its pharmacological properties. Due to chemical constituents specially saponins, phytosterols, chebulinic, corilagin and properties like Katu, Tikta Rasa and Ushna Veerya, Haritaki improves Jatharagni, correct digestion and metabolism. Hence addition of Haritaki in daily diet not only improves digestion but also plays a key role in reducing Obesity.

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