



A literary study on *Haritaki* (*Terminalia Chebula*)-a nature's gift

Saurabh Jagannath Tayade¹, Jasmine², Shailesh Jaiswal³

¹ PG Scholar, Department of Shalya Tantra, Parul Institute of Ayurveda, Vadodara, Gujarat, India

² PG Scholar, Department of Kaumarbhritya, Parul Institute of Ayurveda, Vadodara, Gujarat, India

³ Associate Professor, Department of Shalya Tantra, Parul Institute of Ayurveda, Vadodara, Gujarat, India

Abstract

The global market for herbal therapeutics is steadily growing. For the most part, the Indian medical system relies on herbal preparations to treat diseases. Haritaki (*Terminalia chebula* (Combretaceae Family) means "a dark greenish yellow fruit that wards off disease." The well-known Ayurvedic medicine is the healthiest product on the market and is completely healthy for internal organs. Haritaki would be a blessing to the individual who consumes it in everyday life by judicious combinations of different adjuvants. Despite the fact that Ayurvedic texts offer useful mainstreaming drugs such as Ritu Haritaki (Seasonal usage of Haritaki with limited adjuvant), basic indications, and contra indications, many practitioners and others disregard them. A huge number of pharmacological experiments on various medicinal plants have been performed all over the world. Haritaki (*Terminalia chebula*) has been the subject of a lot of study in recent years. In this manuscript, the pharmacological findings of Haritaki were reviewed.

Keywords: haritaki, ayurvedic medicine, pharmacological etc

Introduction

More than 85% of people in developed countries depend on western medicine for their primary health care needs, according to the World Health Organization (WHO) [1]. Ayurveda, Siddha, and Unani are ancient Indian medical systems that promote the use of medicinal plants to cure diseases [2]. Plants contain a diverse range of bioactive compounds and are a rich source of pharmaceuticals [3]. The growing understanding that plant-based therapeutics are natural goods, non-narcotic, easily biodegradable, face minimal environmental risks, have no harmful side effects, and are easily available at reasonable prices is driving up demand in both emerging and developed countries [4]. Because of the wide range of pharmacological activities associated with the biological active chemicals found in this herb, *Terminalia chebula* (haritaki) is used in herbal medicine [5].

Haritaki is a Sanskrit word that refers to a yellowish pigment (Harita) that means (Hari, i.e. the Himalayas) and cures all diseases (Haray et. al) [6]. Haritaki is a medium-sized tree that can be found growing wild in India, Myanmar, Egypt, Turkey Bangladesh, Iran. Flowers bloom from April to August, and fruits ripen from October to January. It can be found in India, often in deciduous forests and areas with low rainfall, but it can also be found in mildly damp forests.

Aim and Objective

To evaluate the review Study of *Haritaki* (*T. chebula*) According to *Ayurvedic Samhita*.

Methodology

Haritaki (*T. chebula*) related materials were collected from various articles and ayurvedic books, and contemporary textbooks, authoritative articles, esteemed reviews literature, etc.

Synonyms [7]

India - Assamese – *Shilikha*;

Sanskrit – *Haritaki, Abhaya, Kayastha*,

Hindi – *Harre, Harad, Harar*;

Bengali – *Haritaki*;

Gujarati – *Hirdo, Himaja, Pulo-harda*;

Kannada – *Alalekai*; Kashmiri – *Halela*;

Malayalam – *Katukka*;

Marathi - *Hirda, Haritaki, Harda, Hireda*;

Oriya – *Harida*;

Punjabi – *Hakeka, Harar*;

The drupe-like fruit is 2–4.5 cm long and 1.2–2.5 cm wide, blackish, and has five longitudinal ridges [8].

Haritaki shapes and sizes.

Vijayan, Boodhana, Rogini, Abhyan, Amrutha, Boothagi, and Sethagi are the seven varieties of Haritaki defined in Siddha literature based on their geographical distribution.

Haritaki fruit

The fruit of haritaki contains five other tastes:

Pungent - outer skin,

Sour - ridge,

Astringent - seed,

Bitter - stem

Sweet - endosperm.

Haritaki - Tridosha Shamaka

Haritaki will cure kapha dosha when taken with salt, Pitta Dosha when taken with sugar, and Vata dosha when taken with ghee.

Haritaki's chemical components

It has a high phenolic content, especially hydrolysable tannins, anthraquinone, flavonol, carbohydrates, glucose,

and sorbitol ^[9], chebulic acid ^[10], chebulinic acid ^[11], ellagic acid, gallic acid ^[12], chebulagic acid ^[13], and other phenolic acids.

Haritaki pharmacological research

Several in vivo and in vitro pharmacological studies have been performed based on the chemical constituents found in haritaki.

Haritaki toxicological research

The inner seed of the Haritaki fruit is poisonous, so it is omitted while making therapeutics based on experiments showing that a water extract taken orally from dried Haritaki fruits has no toxic effects in mice.

Haritaki's Traditional Uses

Haritaki fruit is widely used in Thai herbal medicine for laxative, carminative, astringent, expectorant, and tonic effects ^[13]. Fever, cough, diarrhoea, gastroenteritis, skin disorders, candidiasis, urinary tract infection, and wound infections are among the illnesses for which it is commonly used as folk medicine by Tamil Nadu tribes ^[14]. It's a diuretic and cardiotoxic that's used in a lot of Ayurvedic formulas ^[15]. It's used to slow down the ageing process and give you more energy and immunity ^[16]. It is said to be able to heal blindness and to stop cancerous tumours from growing ^[17].

The following are some of the most important haritaki preparations:

Triphala Choorna: Digestive, blood purifier, cholesterol reducer, antioxidant, three body humours balancer.

Legiyam Kadukkai: Constipation, gas, and ulcers are all symptoms of an ulcer.

Medicinal Uses of Haritaki

Antioxidant Activity

Because of the presence of phenolics, T. chebula leaves, bark and fruit showed high antioxidant activity ^[18]. T. chebula (Aqueous extract) inhibited xanthine/xanthine oxidase activity and scavenged 2, 2-diphenyl-1-picrylhydrazyl (DPPH) radicals ^[19]. T. chebula (aqueous extract) inhibits free radical-induced hemolysis and nitric oxide development in lipopolysaccharide-stimulated murine macrophages ^[20]. T. Chebula (aqueous extract) has potent antioxidant function, as shown by inhibition of radiation-induced lipid peroxidation in rat liver microsomes at various doses ^[21].

Cytoprotective Action

Southern Blots of terminal restriction fragments of DNA isolated from sub-culture passages revealed the effect of chebula extract on the age-dependent shortening of telomere length ^[22]. In vitro, it caused duodenal ulcers and seemed to have a Cytoprotective effect on the gastric mucosa.

Anticarcinogenic properties

Chebulinic acid, tannic acid, and ellagic acid, which are found to be the most growth inhibitory phenolics of T. Chebula ^[23], are present in crude extract of T. chebula fruit. In many malignant cell lines, including human (MCF-7) and mouse (S115) breast cancer cell lines, human osteosarcoma cell line (HOS-1), human prostate cancer cell

(PC-3) and a non-tumorigenic immortalised human prostate cell line (PNT1A), T. chebula fruit (Ethanol extract) blocked cell proliferation and caused cell death in a dose-dependent manner ^[24].

Gastrointestinal motility Action

The fruit of T. chebula has been shown to improve gastric emptying time ^[25]. T. chebula's antiulcerogenic function was accompanied by a beneficial effect on the gastrointestinal mucosa, with an increase in the secretory status of Brunner's gland involved in duodenal ulcer protection ^[26].

Antispasmodic Action

T. chebula has been shown to have anti-vata or anti-spasmodic effects in in vitro and in vitro experiments by reducing abnormal blood pressure and intestinal spasms. This backs up its long-standing use for spastic colon and other gastrointestinal issues ^[27].

Hepatoprotective Action

In isolated rat hepatocytes, T. chebula fruits displayed high hepatoprotective activity due to their antioxidant impact ^[28]. T. chebula fruit (95 percent ethanolic extract) exhibited hepatoprotective efficacy against anti-tuberculosis (anti-TB) drug-induced toxicity, which could be explained by its antioxidative and membrane stabilising properties ^[29].

Cardio protective Action

The effects of T. chebula fruits (500 mg/kg body weight) on isoproterenol-induced myocardial damage in rats were studied. Pre-treatment with T chebula extract had a cardio protective effect in laboratory rats due to lysosomal membrane stabilisation, which prevented myocardial necrosis and inhibited alterations in heart mitochondrial ultrastructure and function ^[30-31].

Wound cure activities

Topical administration of T. chebula alcoholic extract for the cure of rat dermal wounds shows that T. chebula cured wounds more rapidly, as shown by better contraction rates and reduced epithelization period ^[32]. T. chebula (ethanol extract) was registered against the stomach ulceration caused by indomethacin ^[34].

Antidiabetic Action

A dose-dependent blood glucose reduction of Streptozocin mediated diabetic rats both in the long-term and short-term trial existed in chebula fruit and nuts, but also had renewable activity ^[35, 36]. A 75 percent methane extract of T. chebula (100 mg/kg body weight) oral administration greatly decreased the amount of blood sugar in regular and alloxal diabetic rats within 4 h. A sustained effect was obtained through regular administration of the medicine ^[37].

Conclusion

The conventional Indian medicines scheme such as Siddha, Ayurveda and Unani uses mostly medicinal plants for disease control. Acknowledgement for herbal therapy in the world is growing steadily because it is healthy and pure. Extensive research on medicinal plants has been done, drawing several more researchers to further research. Terminalia chebula (Haritaki) is a major herbal medicine used for many diseases and certain cancers. It has a wealth of chemicals. Many pharmacological studies on its chemical

components have been carried out. This article contains a study of some pharmacological trials of haritaki. These studies explain claiming that haritaki is an Amuta in Tamil is Kayakalpa, in ancient literature that balances the three body humours or doshas that are the major cause of disease and emphasise that herbal medicines address the cause of the disease instead of overcoming symptoms.

Conflict of Interest

None

Source of Finance & Support

Nil

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