

Teriminalia chebula – A promising multipurpose herbal medicine

JYOTI GAVLI, R.S.PAGARE, M.O. LOKHANDE AND B.A. AGLAVE

Accepted : May, 2009

Key words : *Teriminalia chebula*, Herbal medicine

From ancient times, Ayurvedic, system of medicine is popular in India. People have been using the various different plants as the useful remedies. They have been following Sushruta, Charka, Veda etc. for the preparation of various drugs. Thus Ayurvedic drugs are prominent even now due to their less side effects. In this age of development and progress of pharmaceutical sciences, medicinal plants have still much more importance. Medicinal plants become one of the chief objects of interest of chemistry field.

Botanical source or the plant source is main source of natural drugs and food. Nowadays many important chemicals compounds are isolated from the different plant parts having both medicinal and economical values. Pharmacognosists have main interest to study the different plant parts along with the isolation and confirmation of the different chemical constituents present in those parts, having pharmacological effects. Till now many plants have to be studied, having important medicinal constituents and pharmacological activities.

Herbal pharmaceuticals have been a part in the life style, diet and health of people. World Health Organization is promoting its inclusion in health policies because of its positive features, which include diversity and flexibility accessibility and affordability in many parts of the world; broad acceptance among many populations in developing countries, comparatively low cost and growing economic importance. Herbal pharmaceuticals are gradually eroding at a faster rate because it has no ready documentation or explanation or justification in terms of modern scientific knowledge, but there are differences at foundation level between traditional and western scientific knowledge. Therefore, traditional knowledge has to be studied and understood with reference to its foundation.

Medicinal plants are part and parcel of human society to combat diseases, from the dawn of civilization. Herbal

medicines are in great demand in the developed as well as developing countries for primary healthcare because of their wide biological and medicinal activities, higher safety margins and lesser costs. *Terminalia chebula* is a plant species belonging to the genus *Terminalia*, family Combretaceae. It is a flowering evergreen tree called in English the black myrobalan. It is also known as Haritaki (Sanskrit and Bengali), Harad (Hindi), Harada (Marathi and Gujrati).

In Indian it is distributed in the forests of Northern India, Eastern India and the Southern Peninsula. The fruit of the plant is rich in tannin and commonly known as myrobalan or chebolic myrobalan.

It is an evergreen tree growing to 30 m tall, with a trunk up to 1m diameter. The leaves are alternate to subopposite in arrangement, oval, 7-18 cm long and 4.5-10 cm broad with a 1-3 cm petiole. The fruit is drupe-like, 2-4-5 cm long and 1.2-2.5 cm broad, blankish, with five longitudinal ridges.

In India pharmacopoeia, fruit of *T. chebula* is extensively used as adjuvant to other medicines in almost all diseases e.g. jaundice, splenopathy, hiccough, cephalgia, epilepsy, leprosy, and as astringent, anti-inflammatory, digestive, cardiogenic. *T. chebula* has been found to influence dermal wound healing and shown possible inhibitory activity against HIV- I. Besides its medicinal value the *T. chebula* is of social forestry importance. The main purpose of this research work is to isolate chemical constituents present in the bark of *Terminalia chebula*.

Ayurvedic herbal compounds of terminalia chebula:

There is a large number of Ayurveda products that contain haritaki. Some of them that has chebolic myrobalan as chief ingredient are – Abhaya modaka or large tablet – very useful in constipation

Abhayaristham – a low alcoholic auto fermented liquid preparation useful in abdominal problems, constipation and piles.

Pathadi vati or tablet – good for abdominal problems, piles.

Pathyadi decoction- useful in headaches of all kinds.

Vyaghri Haritaki – The herbal gem or electuary preparation very useful in bronchitis, cough, cold.

Correspondence to:

B.A. AGLAVE, Department of Biotechnology, Institute of Life Sciences, H.P.T. Arts and R.Y.K. Science College, NASHIK (M.S.) INDIA

Authors' affiliations:

JYOTI GAVLI, R.S. PAGARE AND M.O. LOKHANDE, Department of Biotechnology, Institute of Life Sciences, H.P.T. Arts and R.Y.K. Science College, NASHIK (M.S.) INDIA

Chitraka Haritaki – The herbal electuary very useful in Sinusitis, Nasal allergy, chronic Coryza etc.

Agastya Haritaki – The herbal gem useful in bronchitis, Tuberculosis, Asthma, cough etc.

Danti Haritaki – The sweet granules preparation useful in Urticaria, Constipation and Headache.

Pathyadi Powder – The herbal power useful in abdominal disorders.

Triphala – The combination with equal quantities of three myrobalans – chebulic, belleric and embolic.

Topical use of terminalia chebula:

Its paste with water is found to be anti-inflammatory, analgesic and having purifying and healing capacity wounds. Its decoction as a lotion is surgical dressing for healing the wound earlier.

Equal parts of three myrobalans and catechu are made in a paste with clarified butter or some bland oil work as an ointment in chronic ulcerations, ulcerated wound and other skin disease with discharge. These ointments could be a substitute for Gall ointments used in Britain.

These are used for astringent purpose in hemorrhoids as well. Its decoction is used as gargle in oral ulcers, sore throat. Its powder is good astringent dentifrice in loose gums, bleeding and ulceration in gums.

Terminalia chebula and abdominal disorders:

It is good to increase the appetite, as digestive aid, Liver stimulant, as stomachic, as gastrointestinal prokinetic agent, and mild laxative.

Haritaki has proven gastro kinetic effect *i.e.* it helps in moving the contents of stomach earlier. So it can be used after surgeries and as adjuvant with other drugs that interface with gastric motility as antihistaminics, atrophine like drugs,

Base on its comprehensive properties, it promotes appetite and helps in digestion.

It stimulates the liver and protects it further by expelling the waste excretory products from the intestines.

The powder of Haritaki has been used in chronic diarrhea, sprue with good results. It should be used as hot infusion in these disorders. It is indicated in protracted diarrhea with hematochezia and prolapse of rectum.

For persons with excessive gas in intestine, flatulence, it is a good herb that can be taken daily. It will relieve these conditions smoothly. One compound chebulagic acid from Haritaki has shown antispasmodic action like that of Papaverine.

Being as mild laxative, it is a mild herbal colon cleanse. With its other prosperities, it provides some help in

conditions with Liver and Spleen enlargement and in Ascites. It is not a strong purgative like other herbs as Senna. It does the strong purgative like other herbs as Senna. It does the cleansing action very smoothly. Further it can be taken for a long time without any ill effects.

In Ayurveda haritaki is the best for 'Strotoshodhana' or purifying the channels of body.

Terminalia chebula and central nervous system:

It is a good nervine. It is used in nervous weakness, nervous irritability. It promises the receiving the power of five senses.

Terminalia chebula for heart and blood vessels:

It is adjuvant in hemorrhages due to its astringent nature; it helps in edema and various inflammations.

Terminalia chebula for lungs and airways:

It is good for chronic cough, coryza, sorethroat and asthma. It is used with other herbs in many holistic herbal formulations in Ayurveda.

Haritaki for reproductive or sexual health:

Being anti-inflammatory, and astringent, it is useful in urethral discharges like spermatorrhea, vaginal discharges like leucorrhoea. It can be given as adjuvant conditions of Uterus.

Haritaki for kidney and urinary bladder:

It is helpful in Renal calculi, dysuria, and retention of urine.

Haritaki for skin disorders:

It is useful in skin disorders with discharges like allergies, urticaria and other erythematous disorders.

Biological and pharmacological activities of Terminalia chebula:

Antibacterial activity:

Terminalia chebula exhibited antibacterial activity against number of bacterial species. One group of researchers found that it is effective in inhibiting the urease activity of Helicobacter pylori (H. pylori), an ubiquitous bacterium implicated in the development of gastritis, ulcers and stomach cancers. Antibacterial activity of Terminalia chebula against both Gram positive and Gram negative human pathogenic bacteria has also been reported. Gallic acid and its ethyl. Ester isolated from ethanolic extract of Terminalia chebula showed antimicrobial activity against methicillin-resistant Staphylococcus aureus. Diffuses of Terminalia chebula showed an inhibitory effect

against strain XC-100 of the bacterium *Xanthomonas Campestris* pv. *Citric* indicating its usefulness for the management of citrus canker disease. It has also growth inhibitory action against *Salmonella typhus* and intestinal bacteria.

Antifungal activity:

An acquirer extract of *Terminalia Chebula* exhibits antifungal activity against a number of dermatophytes and yeasts (35, 36). It is effective against the pathogenic yeast *Candida albicans* and dermatophytes *Epidermophyton*, *Floccose*, *Microspores gypsums* and *Trichophyton rubrum*. Its inhibitory effect of three dermatophytes (*Trichophyton*spp.) and three yeasts (*Candida* spp.) has also been documented. *Terminalia chebula* is highly regarded as an universal panacea in the Ayurvedic medicine. It is the one of the most versatile plants having a wide spectrum of medicinal activities.

This versatile medicinal plant is the unique source of the various types of components having the diverse

chemical structure. Very little work has been done on the plausible medicinal applications of these components and hence extensive investigations are needed to exploit their therapeutic utility to combat diseases.

A drug development programme should be undertaken to develop modern drugs with the components associated from *Terminalia Chebula*. Although the crude extracts from the fruit parts of *Terminalia chebula* have medicinal application from time immemorial, modern drugs can be developed after the extensive investigation of its bioactivity, mechanism of action, pharmacotherapeutics, toxicity and after proper standardization and clinical trials. As the global scenario is now changing towards the use of nontoxic plant products having the traditional medicinal use, development of modern drugs from *Terminalia chebula* should be emphasized for the control of various diseases.

