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Review Article

COGNIZANCE OF HALELA (*Terminalia Chebula*) IN UNANI SYSTEM OF MEDICINEShabir Ahmad Bhat^{1*}, Shameem Ahmad Rather²

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Abstract:

Halela (Terminalia chebula) is a fruit which exists in different forms like Halela Zard, Halela Siyā, and Halela Kablī depending upon the stage of its maturity. This classification is famous in Unani system of medicine and all these forms are collectively called as Halelajat. Halela is widely used in Unani medicine either individually or as a part in a number of compound formulations since antiquity. Itrifalat are its popular compound formulations. Out of total phytoconstituents of Halela (Terminalia chebula), 33% are hydrolysable tannins which contain phenolic carboxylic acids like gallic acid, ellagic acid, chebulic acid and gallotannins, and are responsible for pharmacological activity. Halela is anti-inflammatory, astringent, laxative, carminative, antipyretic, antiemetic, and do have some antibiotic property. It is said to inhibit cancer cell growth and urease activity of helicobacter pylori. Modern scientific studies support its use in alzheimer's disease. The current review aims at identifying overall medicinal value of halela with special cognizance in Unani system of medicine so as to provide impetus to the research works in this field.

Key words: Halela, Terminalia chebula, Gallic acid, Helicobacter pylori, Alzheimer's disease, Unani.

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1. INTRODUCTION:

Unani system of medicine is one of the oldest and successful traditional systems of medicine which was originated from Greece and flourished in Arab and Persia. Currently it is highly popular in Indian subcontinent and is a pillar of AYUSH, an amalgam of five different medicinal systems practiced in India, regulated by ministry of AYUSH government of India. It is also known as *Tibb-i-Unani*, Greco-Arabic and Perso-Arabic system of medicine. It is largely based on Hippocrates (father of medicine.,480-370 BC) humoral theory. This theory states that a body is having a unique blend of four humors viz., blood (*Dam*), yellow bile (*Safra*), black bile (*Sawda*) and phlegm (*Balgham*). As long as the humors are in a state of equilibrium, the health is maintained and any disequilibrium in their ratio results in disease.

Halela (*Terminalia chebula*) is a fruit (figure-1). Its tree grows up to 20 m tall. During the development of fruit it passes through different stages of maturity at which they are collected, processed and used in *Unani* system of medicine. According to Avicenna, the different forms of fruit at various stages are named as *Halela Zard* (unripe form), *Halela Siyā* (small and ripe form), *Halela Kablī* (large and fully ripe form), and *Halela chīnī* [1]. All these forms differ from each other to some extent in their temperament and therapeutic action, and are collectively called as *Halelajat* in *Unani* literature. *Halela* is widely used as a drug in unani medicine either individually or as a part in a number of compound formulations since antiquity.



Figure-1. Halela

2. MORPHOLOGY:

Tree of *Halela* is moderate sized, deciduous, with ovate leaves, flowers are hermaphrodite and dull white in colour having an offensive smell. The fruit is

drupe, ovoid and pendulous. Wood of the tree is hard, brownish grey in colour with a greenish or yellowish tinge [2].

2.1 Microscopic description

A transverse section of *halela* reveals the following histology [3];

Epicarp consists of single layer of epidermal cells. Mesocarp made of 2-3 layers of collenchyma followed by a wider area of parenchyma. Vascular bundles are scattered inside the parenchymal zone along with fibers and sclereides. Endocarp is made of thick walled, mostly elongated sclereides.

3. Taxonomy

Botanical name: *Terminalia chebula* Retz. [4,5]

Synonym: *Myrobalanus chebula* Gaertn. [4]

Family: *Combretaceae*

Vernacular names [5,6]

English: Chebulic myrobalan, Ink tree

Arabic: Halelaj

Persian: Halela

Urdu: Haegarad

Hindi: Har, Harara

Sanskrit: Harra, Harada

Assam: Hilikha

Bengali: Haritaki

Gujrati: Hirdo

Tamil: Amagola

4. Ecology, growth and collection

4.1 Habitat

Halela is native to Asia and grows in India, Bangladesh, Sri Lanka, Nepal, China, Myanmar, Egypt, Iran, and Turkey. In India it is abundant in northern region, Assam, Bihar and West Bengal [4,5].

4.2 Period of occurrence

March to December [6]

4.3 Part used as medicine

Fruit, leaves and bark. [1,7]

4.4 Procedure and time of collection

Life span of the *halela* tree is more than 50 years. Mature fruits are obtained during the months of January to april [5]. These fruits are used in both fresh and dried form. To keep the fruits available for long time use, *Murabbas`* are made of them or they are dried in shade to reduce the moisture content up to 10% and stored in well ventilated, moisture free and cool rooms [5].

4.5 Method of processing

During the method of processing the inner seed of the fruit is removed and pericarp cleaned from any dirt and dust. After this it can be used or processed further in different ways as per the need, like for most of the medicinal purposes the dried fruit is oiled and roasted prior to use [8].

5. Pharmacognosy

Fruit of *Halela* is used as medicine in both immature and mature form. The fruit contain good amount of carbohydrates and amino acids. Among carbohydrates glucose and sorbitol being the major constituents. Amount of tannin present in the fruit decrease as it matures. *Halela* is one of the major ingredients of *Triphala* and *Itriphalat*. Various chemicals have been isolated from it and its medicinal applications are becoming wider and wider [5].

5.1 Chemical constituents

Out of total phytoconstituents of *Halela* (*Terminalia chebula*), 33% are hydrolysable tannins which are responsible for pharmacological activity. These tannins contain phenolic carboxylic acid like gallic acid, ellagic acid, chebulic acid and gallotannins such as 1,6 di-O-galloyl- β -D-glucose, 3,4,6 tri-O-galloyl- β -D-glucose, 2,3,4,6 tetra-O-galloyl- β -D-glucose, 1,2,3,4,6 penta-O-galloyl- β -D-glucose. Flavonol glycosides, triterpenoids, coumarin conjugated with gallic acid called chebulin, as well as phenolic compounds has also been isolated [9,10,11]

5.2 Temperament (*Mizāj*)

Halela is cold in first degree and dry in second degree. According to Avicenna *Halela Zard* is somewhat hotter or in other words less cold in temperament than other types [7,12].

6.Actions (*Af'āl*)

Mainly pericarp (*post*) of the fruit is used as medicine [13]. It is anti-inflammatory, astringent, laxative, carminative, antipyretic, antiemetic, and do have some antibiotic property [4,10]. It is a blood purifier, antioxidant, and radioprotector [6]. It provides strength to heart, liver, spleen, stomach and intestines. *Halela Zard* is purgative for yellow bile (*Safra'*) and phlegm (*Balgham*), while as *Halela Siyā* and *Kablī* induce purgation for phlegm (*Balgham*), and black bile (*Sawda'*) [14,15]. In general *Halela* helps to remove the abnormally raised humors from the body and thus treats the ailments caused by humoral imbalance. It is anti aging, memory booster and anti hemorrhagic. *Halela*, particularly *Halela Kablī* is said to have diuretic property and can be used in urinary symptoms. *Halela Kablī* is considered

to be the drug of choice for diseases due to cold humors [14]. *Halela* inhibits cancer cell growth and urease activity of helicobacter pylori [6].

a. Therapeutic uses

Because of its special affinity for gastro intestinal tract it is used in dyspepsia, acid reflux disorders, gastro-duodenal ulcers, bacillary dysentery, diarrhoea, jaundice, hepatitis, splenomegaly, flatulence etc. Its anti-inflammatory action makes it useful in both external and internal inflammations and swellings [2,6]. It is effective for palpitations, tachycardia, malenchoia, bell's palsy, leprosy, urticaria, pruritis, dementia, epilepsy and obesity [13,16]. Since *Halela* has special property of *Istefragh* or detoxication, of the body. It gives protection against the diseases caused by deranged humoral balance, accumulation of toxins and free radicals inside the body [14,17]. It is used in ascites, all types of piles, orchitis, and other types of swellings and inflammations as well. It is useful in bladder ailments, strangury, urinary discharges, vesicular calculi, tumors, constipation, anemia, gout, arthritis, elephantiasis and delirium [2,15]. The fruit is also effective in sore throat, bleeding gums and dental caries. It is soothing to burns and scalds, cooling for eyes, prevent ageing, and gives protection from cancer. Avicenna has included *Halela Siyā* and *Kablī* in *Adviyā Qalbiā* (medicines having specificity with cardiac ailments). *Halela Zard* has special evacuating property for yellow bile (*Mushil-i-Safra'*), *Halela Siyā* for black bile (*Mushil-i-Sawda'*) and *Halela Kablī* for phlegm (*Mushil-i-Balgham*), yellow bile (*Mushil-i-Safra'*) as well as for black bile (*Mushil-i-Sawda'*) [1,7,12,14].

b. Dosage (*miqdar-i-khurak*)

7- 17.5 g in dry form [18]
3-6 g powder of pericarp (*post*) [4]
3-7

7.Adverse effects (*Muzarrat*)

Sensation of heaviness in GI tract and constipation due to its property of *Mushil bil-asr* [1,18].

7.1. Corrective (*Muslih*)

Roghan-i-Bādām for constipation [1,18].

8.Substitute (*Badal*)

Post Annār and *Māzu* act as substituent's for *halela*. More over all types of *halela* can be used as substitute for each other [12,18].

9.Ethnobotany

Halela in dried form constitute one of the important vegetable tanning materials. Its extract is also used in

treating the feed-water of locomotives, as an additive in oil drilling and in ink making [5]. Besides all other uses, *halela* has a lot of medicinal properties and is applied for the same purpose in traditional system of medicines for centuries. It is referred as king of medicines in Tibet and because of its healing property it attains the top position in `Ayurvedic materia medica [11].

9.1. Important formulations

Habb-i-Muqil, Itrifalāt [19].

10. Scientific reports

» *Halela* is a blood purifier, antioxidant, and radioprotector [6].

» Latest studies have revealed that *Halela* gives protection against necroptotic cell death [20].

» Because of having anti inflammatory, anti oxidant and anti cholinergic constituents, scientists support its use in Alzheimer's disease [11].

» *Halela* is listed among drugs having anti cancerous property [21].

11. CONCLUSION:

Halela is a potent herbal medicine with a soaring place in different kinds of traditional medicines. The irrefutable medicinal values of *halela* have maintained its heeling position since antiquity. The need of the hour is to validate its therapeutic uses scientifically so that people throughout the world can have its benefits at low cost with no or negligible side effects.

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