

Historical and Ethno-Medical Review on *Bilva* (*Aegle marmelos* Corr.)

Neha Parmar*, Suman Singh¹, Bhupesh Patel²

*Assistant Professor, Department of Dravyaguna, Government Ayurved College, Baroda, Gujarat, ¹Ph.D. Scholar, ²Asst. Prof., Department of Dravyaguna, Institute for Post Graduate Teaching & Research in Ayurveda, Gujarat Ayurved University, Jamnagar, Gujarat, India

Received:05/10/2016

Revised:30/10/2016

Accepted: 4/1/2017

QR Code



Access the article online

Website:

www.tmjournal.org

Abstract

Background: *Bilva* (*Aegle marmelos* Corr.) is an historical plant which is used for religious and medical purposes since time immemorial. It is often considered to be a sacred tree in India, where its leaves, fruits and flowers are used for offerings to many deities. Apart from the above, *Bilva* has been used as a therapeutic in wide range of ailments in Ayurveda. The drug has also been in use as traditional medicinal practice by many tribal and village dwellers from centuries. **Aims:** To analyze the historical & ethno-medical uses of *Bilva*. **Material & Methods:** Various lexicons, religious scriptures and articles regarding ethno-botany were referred and essential data were compiled and analyzed. **Results:** The in-depth analyses of historical and ethno-medical usage of *Bilva* tree reveals that the drug was in use right from the Vedic period till today albeit slight differences in its religious usage. Various references of the plant has been enlisted in lexicons of Ayurveda and the ethno medical usage has been found throughout India. Which has similar indications as observed in ethno medicinal claims in vast number of disorders, however the method of application shows minor differences. **Conclusion:** *Bilva* is one of the most important drug in modern times which has a rich history of its usage from Vedic period. The present insight on the ethno-medical usage of the drug on large group of disorders warrants the need of systematic clinical researches to ascertain its properties and mode of action.

Keywords: *Aegle marmelos* Corr., Ayurveda, *Bilva*, Historical & Ethno-medical uses

Introduction

The earliest reference of *Bilva* dates back to Vedic period (2,000-800 BC) where the fruit is referred as an emblem of prosperity and fertility. The footprint of *Bilva* has been observed since Vedic period and later followed in *Samhitas*. It is botanically identified as *Aegle marmelos* Corr. from family *Rutaceae* which is a middle sized slender aromatic armed tree which, grows to a height of 15 to 25 feet. Leaves are alternate on either side of the stem and they have three leaflets, the two laterals being equal sized and the middle one being bigger in size. Flowers are greenish white, fruit is hard, greenish and egg like, are 2-5 inches in diameter. Pulp is sweet, thick and orange in color.^[1,2] Every part of plant are important ingredients of several traditional formulations. Due to its curative properties, it is one of the most useful medicinal plants of India and is being utilized in day-to-day life in various forms. The products obtained from *Bilva*, possess highly nutritive and therapeutic value and hence is getting popularized in Indian as well as in international market. Numerous tribal claims of

Methodology

In the present review, various books relating to history, religious scriptures and lexicons of Ayurveda were utilized along with articles regarding ethno-medical and related studies were referred and essential data were compiled. The data regarding the drug was analyzed and presented in regards to its historical & ethno-medical uses.

Corresponding Author:

Dr. Neha Parmar,
Assistant Professor, Department of Dravyaguna,
Government Ayurved College,
Baroda, Gujarat, India.
Email: neha.parmar@gmail.com

Observations:**Historical importance**

References regarding *Bilva* is abundantly seen in *Yajurveda*, *Atharvaveda*, *Brahmanas*, *Kalpasutras* and *Puranas* which suggests its popularity. It is also mentioned in the *Valmiki Ramayana* and the *Mahabharata*. Historically it is referred as one of the pious trees in the *Baudhayana Dhamasutra*, *Taittiriya Brahmana* termed the *Bilva* tree as propitious tree.^[3]

In ancient India, *Bilva* was considered as the most sacred of all fruits, and was used as the main food offering to the temple deities. In recent times coconut has superseded the *Bilva* as the principal fruit of religious offering as a symbol of self-surrender.^[4] Hindu iconography is replete with *Bilva*, too—its trifoliate leaves emerge on *Shiva's* crown and trident, and the points of three-pronged leaves also represent the holy trinity of *Brahma*, *Vishnu* and *Shiva*. Its amulets were made and worn for removing the evil effects. It was regarded as the symbol of fatness and fertility as it increases in size from the roots up to the branches and yield's fruits every year.^[5] Among the eight leaves of *Bilva* offered to Lord *Shiva*, it is believed to be *Mokshasadhanam* in *Lingarchandrika*. According to Maitra, *Bilva* tree is said to possess essence of celestial light. It is told to wear '*Bilva Mani*' as ornament for *Dusvapnanashana* (removing bad dreams), *Rakshoghna* (destroying evil), *Rasayana* (elixir of life), *Prajasthapana* (preserving progeny) and *Vishaghna* (anti venom) in *Shankhyana Aranyaka*. Water made out of *Bilva Patra* is used for bath in bridal rituals. It is told to wear *Bilva-danda* in *Upanayan Samskara* too.^[6] *Bilva* was also used as a stick by the Babylonian 7000 years ago. (Alimas, et al., 1996). The tree is also sacred to the Jains, as the 23rd *Tirthankara*, Bhagwan Parasnathji is said to attained enlightenment under a *Bilva* tree.^[7]

Medicinal value in History

In *Atharvaveda*, the unripe fruit is indicated for medicinal purpose, but ripe fruit is mentioned harmful. In *Kurma Purana*, regular drinking of fruit juice ensures long span of life and golden color of skin. Brushing teeth with young branches is said to be beneficial. While the paste of this plant is mentioned in *Matsyapurana* as a good sterilizer for clothing, beds, furniture, coat of armor, ornaments, canopy and fans made of wools and furs. While in *Brahmavaivarta Purana*, consumption of ripe fruits is described to eliminate the ailment caused by excessive bile, but drinking water immediately after having fruit aggravates the bile disorder.

In *Agnipurana*, inhaling the oil obtained from this plant is said to increase the poetic acumen of the inhaler and enables him to live a long life. Further, either the decoction of *Bilva* fruits, *Mangifera indica*, *Dolicos lablab*, *Woodfordia fruticosa*, *Zingiber officinale* along with buttermilk and molasses is mentioned in treatment of gastroenteritis or the decoction of *Bilva*, *Aconitum heterophyllum* and *Holerrhena antidysenterica* should be given. *Bilva* is also said to cure fever associated with pain and cough.^[8]

***Bilva* in Ayurvedic literatures**

Flowers are useful in diarrhea, excessive thirst, vomiting and eye disorders and it is advisable as diet in eruptive boils.^[9] Leaves are used in diarrhea, diabetes and edema, constipation, piles, jaundice, asthma, hiccough, cough, appetizer and to eradicate foul odor of the body. Juice of *Bilva* leaves is strained and added with ghee, rock salt and *Piper longum* then it is rubbed with a cow dung fire and dissolved in milk. Filling eyes with this formulation removes inflammation and pain in eyes and is also useful in conjunctivitis, glaucoma and congestion. *Bilva* leaves as diet helps in subsiding *Vatadosha* and is advised to take bath with *Bilva* leaves for pregnant woman. Decoction of *Panchapallava* (Leaves of *Mangifera indica*, *Syzygium cumini*, *Bilva*, *Feronia limonia*, *Citrus medica*) is administered for gargling in stomatitis. The roots are useful in vomiting, dysurea, asthma, cough, hiccough, tuberculosis, fever, diarrhoea, stomachache and swelling. Decoction of five roots i.e. *Bilva*, *Premna integrifolia*, *Oroxylum indicum*, *Gmelina arborea*, *Stereospermum suaveolens* mixed with honey alleviates obesity. Root crushed and applied with gruel on umbilical region relieves dysuria. *Bilva* powder with honey and ghee promote intellectual power, longevity and health also. The ripe fruits are astringent, heavy to digest, cause tenesmus and constipation. Delivery room and bed made out of *Bilva* stem are believed good for woman and child. Pieces of the stems of the major *Panchamoola* (*Bilva*, *Premna integrifolia*, *Oroxylum indicum*, *Gmelina arborea*, *Stereospermum suaveolens*) measuring eighteen fingers in length should be covered (extending only to three-fourths of the whole) with a piece of linen and then soaked in oil. The stick so formed, should then be lighted and the oil pouring in drops there from should be used lukewarm (as an ear-drop). It instantaneously removes the pain, and is known as the *Dipika-Taila*. *Bilva* stem has been used as toothbrush for bringing significant wealth.^[9]

Vessel used in *Panchakarma* should be made of *Bilva* stem to nullified defect of vessels. Decoction of Stem bark of *Bilva* with *Holoptelea integrifolia*, *Prosopis spicigera*, *Ficus racemosa* etc. is used for bathing child which is said to promote longevity. Stem bark of *Bilva* with honey checks vomiting. Unripe fruits are appetizer, digestive and astringent. Tender fruits of *Bilva*, jaggery, sesame oil, *Piper longum* and *Zingiber officinale*—all together are indicated in conditions of *Vataja Vyadhi*, abdominal pain and tenesmus. Paste of tender fruit of *Bilva* mixed with *Zingiber officinale* powder and jaggery alleviates irritable bowel syndrome.^[9]

Ethno medical information on *A. marmelos* is available from many parts of India and other countries. Available ethno medical literatures reveal that entire plant; leaf, fruit, stem bark, root and essential oil of fruits are used in various forms for vast number of diseases.

Ethno-medical uses

A) Flowers: An infusion of the flowers is used as a cooling drink,^[10] it is expectorant and are inhaled in cough.^[11] It is also used in epilepsy.^[12] The decoction obtained from the bark, flower, leaf, root and stem is used for the treatment of dehydration and urinary problems.^[13] are used as antidiarrheal and antiemetic.^[14-15] Drink prepared by boiling dried flower is said to be refreshing, soothing and calming.^[16] One teaspoonful gum is used in jaundice for 2 days.^[17]

B) Leaves:

Leaves are said to be helpful for treating ophthalmic infections & dropsy.^[11-12, 15, 18-19] For the treatment of opacity of cornea, leaves along with those of *Dolichandrone falcate*, pinch of common salt and turmeric crushed with goats milk is used as an eye drop twice a day until it is cured.^[20] Crushed fresh leaves are sniff up for the treatment of bleeding from nostril (epistaxis) and it is reported that the bleeding stopped within five minutes.^[21] It is also a good hair tonic when mixed with cumin seeds and massaged on the scalp.^[19]

In anthrax, leaves extract is administered with sufficient quantity of garlic paste daily once for three days.^[20] Leaves are bitter and used as febrifuge.^[15,22-23] Leaf juice with *Ocimum basilicum* is used twice daily in the treatment of fever.^[24] Fresh leaves of *Azadirachta indica*, *Andrographis paniculata*, *A. marmelos* are boiled and concentrated to which little expressed juice of lemon is added and taken 10 ml thrice a day for 3-4 days to treat fever.^[25] About 50 gms of fresh leaves with an equal amount of sacred basil is

pounded to make an aqueous extract. This preparations with honey is administered in malaria twice daily for about one week or more.^[26] Decoction made of *Andrographis paniculata* leaves, *A. marmelos* leaves and *Cyperus rotundus* 5 gm each is taken orally in Malaria.^[27] Leaves of *A. marmelos* are even prescribed in conditions of backache, fever and vomiting.^[15,28]

Leaves of *Euphorbia pulcherrima* are combined with leaves of *A. marmelos*, *Justicia gendarussa*, *Ocimum tenuiflorum*, fruits of *Terminalia bellirica*, fruits of *Piper nigrum*, trachea of the bird great hornbill (*Buceros bicornis*, Bengali: Dhanesh)* and honey. This mixture is crushed and juice obtained from the mixture (alternately, pills prepared from the mixture) is taken thrice daily in the morning, afternoon and evening for 7 days as treatment for asthma.^[29] 10-20 ml decoction of leaves are given to the patient at bed time in respiratory disorders.^[16-30] The leaves are expectorant, febrifuge and effective in bronchial asthma.^[11] Fresh leaf juice with black pepper is given to infants to cure cough.^[31]

Juice expressed from the leaves is applied individually or mixed with crushed chili and applied topically in the treatment of abscess.^[11, 15, 24, 32] In ascites 25 gm of leaves is mixed thoroughly with 5 gm of powdered fruits of black pepper and honey.^[26] Matured fruit of *capsicum annum* crushed and mixed with 3 spoonful leaves extract of the *A. marmelos* and half cup of cow milk is also given twice daily for a week in ascites.^[33]

Leaf paste of *A. marmelos* is applied on rheumatic pain.^[10] Paste of leaves is mixed with butter, applied over fractured area and bound in bone fracture.^[34]

For women suffering from continuous breast pain, shade dried leaves of *A. marmelos* along with roasted & powdered fenugreek seeds mixed with sugar-candy is given on empty stomach once daily in the morning.^[35] For retained placenta, decoction of leaves with those of *Vitex negundo* and sesame seeds is administered orally.^[20]

In cardiac problems, leaf extract of *Centella asiatica* and *A. marmelos* is taken with a cup of hot water early in the morning. However the exact nature of cardiac problems is not ascertained.^[36]

Melia azadirachta leaves, seeds of *Semecarpus anacardium* with *A. marmelos* is used to treat nausea. The bark of *Pterocarpus marsupium*, *Bauhinia vahlii*, *Spatholobus roxburghii*, *Terminalia tomentosa*, *Dalbergia latifolia* and

A. marmelos leaves along with fried rice is used in treatment of chronic stomachache.^[8]

Tender leaves cooked and eaten for relieving stomachache.^[37-38] One teaspoonful leaf powder is taken orally in empty stomach for 15-30 days to cure gastric problems.^[39] Powdered dry leaves of *A. marmelos*, *Emblica officinalis* and *Babool* (*Acacia nilotica*) mixed with fenugreek seeds and sugar is taken twice daily after meals to get relief from gas trouble.^[35] Leaf paste mixed with butter is used in mouth sores.^[21] Leaf juice is given orally once daily for 2-3 days to reduce hyperacidity of children.^[40] An infusion of the leaves is considered as an effective remedy in curing peptic ulcers.^[41]

Leaves pounded to paste with equal quantities of leaves of *Cajanas cajan* and a little water and 1 cupful extract taken in the morning in empty stomach in jaundice in combination with red palm candy.^[15, 42-45] Whole plant of *Cynodon dactylon* are combined with leaves of *Cajanus cajan*, whole plants of *Cuscuta reflexa* and leaves of *A. marmelos* and crushed together to obtain juice. The juice is orally taken in Jaundice.^[29] *Nyctanthes arbor-tristis* flowers with leaves of *A. marmelos* is taken orally in the treatment of Hepatitis.^[40]

Leaf juice alone or leaves paste mixed with *Cynodon dactylon* and *Eclipta prostrata* leaf paste is prescribed in constipation.^[13, 46] *A. marmelos* leaves, fruits of *Randia dumetorum* and *Nigella indica*, oil cake of *Bassia latifolia*, *Carum ajowan* and salt is also used in the treatment of constipation.^[8] Juice prepared from the leaf extract acts as a laxative agent.^[18]

The fresh leaf extract is reported to reduce the period of convalescence in patients suffering from cholera or choleric diarrhea.^[11, 47] *A. marmelos* leaves with bark of *Odina wodier*, salt and *Carum ajowan* is used to treat watery diarrhea.^[8] Leaves of *Justicia adhatoda* and *A. marmelos* are crushed together, pills prepared from the crushed mixture are taken orally for dysentery (one pill thrice daily for 15 days).^[48] Leaves of *Punica granatum* and *A. marmelos* is also taken orally in empty stomach in the treatment of dysentery.^[40]

Leaves of *A. marmelos* with fruits of *Nigella indica* and black pepper are used to treat convulsion.^[8] In debility leaf powder of *Bhang* mixed with equal amount of leaves of *A. marmelos*, *Azadirachta indica* and *Vitex negundo* is taken once daily regularly during physical weakness.^[49]

In diabetes, the leaf of *A. marmelos* is used,^[50] the Loi community of North-east India eats tender raw leaf with milk,^[15, 51-52] and leaf powder is also used along with cow's milk daily.^[53] In few parts of India dry leaves powdered and mixed with the leaf powder of *Azadirachta indica* and *Ocimum sanctum* is given 3 times a day for 15 days.^[53] In Kerala, fresh ground leaves of *A. marmelos* are made in the form of small balls and taken once a day for 1 week in diabetes.^[25] *A. marmelos* leaves decoction is drunk every morning on an empty stomach to cure diabetes.^[55] Leaf powers of *A. marmelos* and *Azadirachta indica* and seeds of *Syzygium cumini* are made into powder, which is used along with water twice a day to cure diabetes.^[41] Leaves are kept in water for one night; next morning ground with water is taken along with the remaining water. Leaf powder mixed with equal amount of turmeric powder is taken orally for diabetic ulcers.^[56]

In eternal bleeding piles, leaves paste is applied externally and the juice is taken internally.^[13] Leaf juice mixed with black pepper is taken orally once daily for 5 days to get relief from piles.^[57]

Ash of the leaves is used to kill worms and injuries caused by animals.^[11, 15, 58] Leaves are kept under pillow for good sleep and paste of new leaf also taken by the Marma as remedy for Insomnia.^[10]

In Scabies, equal quantity of fresh *Curcuma aromatica* (rhizome), *Ocimum tenuiflorum* (leaves), *A. marmelos* (leaves) and *Tectona grandis* (stem bark) are mixed and prepared in the form of paste and applied externally over the whole body.^[25]

In snake bite, leaf juice is applied on bitten part and squeezed leaves are eaten to avoid nausea.^[59]

Two spoonful powder of *Schrebera swetenoides* tender leaves and *A. marmelos* leaves is given in Tuberculosis with two-spoonful of honey once a day till cured.^[60]

For treating ulcers and maggot infested sores, leaf paste issued as an external application.^[20]

Juice of stem bark of *Pterocarpus marsupium*, root of *Abutilon indicum*, leaves of *Limonia acidissima* and *A. marmelos* in equal quantities is taken once daily in the morning for a week to relieve painful and burning sensation during urination.^[61]

C) Root & Root Bark:

A. marmelos root is used in cholera,^[47] swellings,^[62] vomiting,^[63] diarrhea,^[64-65] gastric problems, palpitation of heart, in bite of mad dog.^[15] *Desmodium gangeticum*, *Pseudarthria viscida*, *Solanum anguivi* var. *anguivi*, *Tribulus terrestris*, *Oroxylum indicum*, *A. marmelos*, *Stereospermum chelonoides*, *Aerva lanata*, *Gmelina arborea*, *Solanum giganteum* are prepared in the form of decoction and taken orally 3 ounce daily for 3 months in postpartum disorders.^[25] The decoction of bark and root is administered with jiggery in the treatment of intermittent fever.^[13, 15, 41] Root paste is used to cure rheumatism,^[23] is administered externally on snake bite,^[66] and as antidote to snake venom^[41] as well as fish poisoning.^[15, 67] Its decoction is given to treat high blood pressure, vomiting & diarrhea.^[13] The juice extracted from root bark and mixed in a cup of milk is prescribed to induce sleep and as a remedy for depression and weak heart.^[68]

D) Stem & Stem Bark: The oil that drips from the burning ends of stem is dropped in ear for curing ear problem.^[41] Water kept overnight in a glass made from raw wood of *Bilva* is taken orally stomach for 7 days in the treatment of Diabetes.^[40] Bark paste is applied externally on boils.^[31] During bone fracture, paste prepared from stem bark extract with pepper and *Carthamus tinctorius* oil is applied over fracture area and tied with bandage twice in a week for a fortnight.^[20] Bark of *A. marmelos*, and *Terminalia balerica* and root of *Andrographis paniculata* made into small pills after drying in sunlight & one tablet is taken thrice daily for diarrhea^[69] and stomach disorders.^[15] The stem bark, sugar and *Cuminaum cyminum* are taken in equal quantities, pounded together, mixed in water and filtered, this extract is given internally to reduce body heat (20-30 ml).^[70] The stem bark is used beneficially in intermittent fever,^[71] melancholia, palpitation of heart and in stomach pain.^[11, 72-74]

E) Unripe Fruit: Paste prepared from fresh fruit shell by rubbing with stone is applied to acne.^[10] Juice is prepared from the burnt fruit and molasses prepared from *Saccharum officinarum* juice which is taken one cupful twice a day for five days for dysentery.^[23] Fruit juice is also used in cases of fish poisoning,^[35] Decoction of fruit of *A. marmelos* is taken as scorbutic.^[18] Young fruit boiled in raw milk with seven black pepper seeds is taken empty stomach to cure.^[39] Dried powder of fruit and seed is used in the treatment of chronic dysentery, dyspepsia, anemia^[46] and as brain tonic.^[63] Fruit is grinded together with the leaf of *Adhatoda vasica*, the root of *Cyperus rotundus* and boiled, this is then added with equal amount of honey and is taken orally 2 times a day in metrorrhagia.^[58]

To treat the complaints of a mother after child birth, a paste is made of top of the fresh unripe fruit of *A. marmelos*, leaves of *Ocimum sanctum*, little ginger and 84 black peppers.^[62] Fruit pulp yields a refreshing drink, which is used for asthma.^[75] The fruit decoction mixed with sugar candy is administered orally 3-4 times a day in chronic diarrhea and dysentery,^[13] diarrhea and diabetes.^[10-11, 13, 15, 41, 71, 76-80] The pulp of its fresh fruits mixed with milk and cubeb powder acts as diuretic and astringent on the mucous membranes of the generative organs, therefore, useful in gonorrhea.^[78] Paste obtained from dried young fruit powder and small amount of water is taken orally in chronic dysentery,^[81] and in the form of tea for constipation & body pain.^[82] Inner fleshy pulp is cut into small thin pieces and dried in sunlight. These dried pieces are soaked in water overnight and taken in the morning in empty stomach for 2-4 weeks which is also said to be beneficial in diarrhea.^[83] Tender unripe fruits have astringent and digestive property. They are also used in stomachache and to promote digestion and strength. In empty stomach fruit pulp is used to cure amoebic dysentery^[84-85] and in ulceration of stomach.^[86] A mixture of water extracts made of very young fruit of *A. marmelos*, flowers of *Woodfordia fruticosa*, and root of *Holarrhena antidysenterica* together with some sugar candy or honey is given in dysentery.^[87] Fruit juice is used to treat abdominal pain and acute dysentery. Unripe fruits are baked for 6 hrs and given to treat as strong astringent and to treat dysentery.^[88] The roasted unripe fruit pulp is given in stomach disorders.^[89, 90] Juice prepared from fruit is advised to be taken one cup twice a day for five days as remedy for stomach pain and dysentery (with blood).^[15, 42, 52, 54, 91] Slightly roasted fruit on fire is kept on eyes for some period in ophthalmic disorders.^[92] Dried fruit is mixed with sugar is taken orally during fever and cold.^[93] Fruit pulp is applied locally to cure mouth diseases.^[94] Unripen fruit is also used in piles, spermatorrhoea, backache and for cooling the body.^[95] Fruits crushed with seeds of *Strychnos nuxvomica* and *Pongamia pinnata*, boiled with coconut oil is applied on the affected parts to cure scabies and other skin diseases.^[96, 97]

F) Ripe fruit:

The ripe fruits are eaten fresh; its aromatic pulp is diluted with water and sweetened with sugar and Tamarind to make a delicious cooling drink. The aromatic pulp is called "Morabba".^[22] A thick mixture made with twin fruits of *A. marmelos*, melted hail and earth excavated by rats, is smeared on the breasts of a young mother to check the flow of milk when the breast pain or suppurate. In puerperal fever a liquid drink made with the entire contents

scraped out of a ripe fruit of *A. marmelos*, juice of old dried fruits of *Mangifera indica*, two ounces of a kind of red ants and a little salt.^[18]

The old fruits of *A. marmelos*, Bark of *Melia azadirachta*, resin of *Shorea robusta* and pulverized kernel of a mango stone for cholera.^[18] Juice prepared with the ripe fruit of *A. marmelos* and sugar candy is administered in dysentery.^[18] Rotten fruit paste (from ripe fruit) is applied topically to the scalp and dried before being washed off as anti-dandruff.^[87] Ripe fruits are sweet aromatic, cooling and laxative.^[15,77,91] The rind of fruit is brunt on fire and after making powdered is massaged on forehead of children to make healthy.^[98] Juice is prepared from ripe fruit of *A. marmelos* is taken a cupful once a day for constipation.^[88] Pulp of ripe fruits mixed in water is used to make juice, which acts as a soothing agent.^[15,99] Ripened fruit pulp paste is applied on head to get cooling effect of eyes.^[100]

Discussion

Various references in *Sanskrit* literature shows the importance of *Bilva* in *Vedic* times. Since the *Vedic* period till the recent *Nighantus* of Ayurveda, there is vast description of different indications of *Bilva* in diseases. Religiously *Bilva* leaves,^[15, 42, 66 91, 101] flowers^[15] and stem paste^[12] are used like sandalwood primarily in the offering to Lord *Shiva*, only leaves are used in serpentine worship.^[72] Leaves are considered to be a sacred symbol and *Bilva* tree is said to be a wish granting tree.^[15]

In Ayurvedic literatures, *Bilva* is used in various systemic illness of gastro-intestinal tract (mouth ulcers, stomach ache, vomiting, nausea, jaundice, hepatitis, diarrhea, dysentery, cholera, constipation and piles), respiratory tract (hiccup, cough & asthma), reproductive tract (leucorrhoea, metrorrhagia, spermatorrhoea, peripureal disorders of women, breast engorgement), urinary tract (dysuria, burning micturition), endocrinal disorders (diabetes), eyes, ears, different types of fever (malaria & anthrax), joint disorders and as an antidote in snake and fish poisoning. After screening the various available sources regarding the ethno-medical claims of *Bilva* approximately 184 uses was identified. Among them majority of claims were related to the application of *Bilva* leaves (88 claims) as a medicine in various systemic disorders all over India. This was followed by unripen fruits of *Bilva* (43 claims), root (17 claims), stem (14 claims), ripened fruits (11 claims), root bark (6 claims), flower (6 claims) and seeds (2 claims). Apart from the above, the rind of fruit is brunt on fire and after making powdered is massaged on forehead of children to make healthy^[98] and one teaspoonful of gum is used for 2 days in jaundice.^[44]

Conclusion

Bilva tree has great medicinal as well as religious value and is one of the most important drug in modern times which has a rich history of its usage from *Vedic* period. The present insight on the similar therapeutic usage mentioned in Ayurveda and ethno-medical practices of the drug upon large group of disorders warrants the need of systematic clinical researches to ascertain its properties and mode of action.

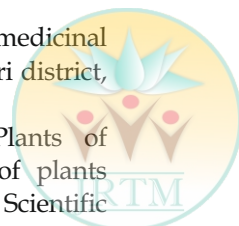
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How to Cite the article:

Neha Parmar, Suman Singh, Bhupesh Patel. Historical and Ethno-Medical Review on *Bilva* (*Aegle marmelos* Corr.). J. Res. Tradit. Med 2016; 2(5): 138-146

<http://dx.doi.org/10.21276/jrtm.2016/200>

Source of Support: NIL

Conflict of Interest: NIL

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