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Ethnobotanical studies of Bael (*Aegle marmelos*): A sacred plant of Hindus

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Abstract

Aegle marmelos (Bael) is used in several ways for treatment of various ailments by various tribal groups of India. Different parts of Bael plant have been used for various ailments like root is used for treatment of mad dog bite, the fruit is used as a laxative in rural areas of different parts of country and leaf paste as an anti venom against venom of poisonous insects and animals.

Keywords: *Aegle marmelos*, tribals, Santhals, Bhottada

1. Introduction

Human cultures have always been influenced by plants and their products. All indigenous remedies and medicines have their roots in one way or other, in folk medicine and ethnomedicobotany. Besides health care, ethnobotany is also relevant to food, agricultural improvement, conservation of genetic resources and economic welfare of the tribals [1]. There are over 400 different tribal and other ethnic groups in India. Apart from tribal groups, many other forest dwellers and rural people also possess unique knowledge about plants. Some such folklore and tradition has survived among urban societies [2].

Aegle marmelos Corr., Family- Rutaceae, Common Name- Indian Quince, one of the most important sacred trees of Hindu mythology has great medicinal potential. It is a deciduous tree armed with straight, sharp, axillary thorns, leaves are alternate, trifoliolate. Its ternate leaves are presented to Lord Shiva as offerings by the devotees. The flowers are greenish white, fragrant and the fruit is yellowish brown with a smooth hard aromatic rind. Marmelosin, a furocoumarins, is the active constituent of fruit which acts as laxative and diuretic in lower doses and as a cardiac depressant in higher doses. The unripe or half ripe fruit is believed to be an invaluable remedy in obstinate cases of chronic diarrhea and dysentery. The seeds contain bitter fatty oil which acts as purgative. The fruit also contains sugars (4.6%) and tannin (9% in the pulp and 20% in the rind [3]). Bael is used to cure several ailments like cholera, stomach ache, dog and snake bite, asthma scurvy, vomiting, constipation and piles.

It grows wild in sub Himalayan tract, Central and South India and Burma. It is planted all over India and Burma.

2. Materials and methods

Local survey and identification of plants of Bael growing in our locality in Jaipur was done. The plants were collected, identified and preserved. Plants were identified using floras of Herbarium of Department of Botany, University of Rajasthan, Jaipur. Crude herbal drugs were also collected from the crude drug dealers and deposited in the herbarium. In order to verify the efficacy of the traditional herbal medicine, information was collected from folk or tribal people of several areas.

3. Results and Discussion

Bael is known by different names in different regional languages of India.

Assamese: Bel; Bengali: Bel, Bela, Vilva; Gujarati: Bil, Billy; Konkani: Bel, Bello; Malayalam: Kuvalam, Mavilavu, Vilvam; Marathi: Bel, Bila; Tamil: aluvigam, Iyalbudi, Kuvilam, Mavilangai; Telugu: Bilvamu, Maluramu, Maredu, Sandiliyamu; Kannad: Bilpatre; Urdu: Bel; Uriya: belo, Bilva, Sripholo.

Different ethnic or tribal groups and local people of different Indian states use the plant variously for treatment of various ailments.

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- Santhals use the plant as medicine for abdominal pain, cholera, night fever, stomach disorder and snake bite. They use specially fruits and roots for treating gastric troubles.
- Bhattada tribe of Orissa utilize the roots of Bael for curing bite of mad dog.
- Tribals of Ranchi district of Bihar use the leaves of Bael for treatment of heat in abdomen and jaundice.
- Folklore of Gujarat use the leaves for treating abscess [4-7].
- Tribals of Southern Rajasthan use root bark as fish poison. Tribals of Hadoti plateau of South East Rajasthan use the leaf paste as an antivenom against venom of poisonous insects and animals. The powder of fruit and bark is used for the treatment of stomachache and dysentery in Eastern Rajasthan [8].
- Gangwals of Garhwal hills of Uttaranchal use the fruit as an astringent and tonic. Tribals of Eastern U.P. utilize the leaves for the treatment of cuts and wounds of human beings as well as animals. The leaves are used as antidiabetic agent in Terai region of U.P [9-12].
- Folklore of Assam region use the leaves for backache and vomiting.
- The bark is used for curing of diarrhoea and root for bone fracture in Andhra Pradesh.
- Local people of Maharashtra use the leaves for cure of diabetes.
- The roots are used for treating palpitation of heart in Madhya Pradesh. The Gauria snake charmers of M.P. believe that an appeal to the Bilva tree and to Dhanvantari, the physician of Gods, cures snake bite.
- The fruit is used as a laxative in rural areas of Jammu and Kashmir [13-18].
- The decoction of the small unripe fruit, with fennel seeds and ginger is given for treating piles in the Konkan region.
- The people of Malabar coast use the root bark for treating hypochondriasis, melancholia, palpitation of heart and decoction of leaves in asthmatic complaints [19].

4. Conclusion

The WHO has emphasized the need for better utilization of indigenous system of medicine based on locally available medicinal plants in the developing countries, owing to the realization of the toxicity associated with the use of antibiotic and synthetic drugs. Tribals have specific knowledge about the therapeutic values of the plants but there are no written documents on the knowledge possessed by tribal communities regarding the diagnosis, prescriptions and formulations used for the treatment of several diseases. Here, attempts are made to document different aspects of ethnobotany.

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