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Naringi crenulata (Roxb.) – A potential drug for the future

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Abstract

Medicinal herbs have the power of curing different diseases and healing several ailments of human beings. Special knowledge about the location, usage and benefits i.e., The Traditional Aboriginal Knowledge (TAK) is prevalent among the members of certain tribal communities. The native tribes Irulars and Malasars in the Velliangiri Hills of the Western Ghats use different parts of *Naringi crenulata* (*N.crenulata*) (Roxb.) Nicols to cure different kinds of ailments. The interview and discussion with the traditional healers and their clients proved the medicinal value of *Naringi crenulata*. It could be understood that each and every part of the tree is playing great role in maintaining human health.

Keywords: naringi, traditional aboriginal knowledge, traditional healers, western ghats

Introduction

Medicinal plants play a major role in the life of human beings throughout the globe. These plants are commercially important because of the presence of various chemical substances with the power of curing different diseases and healing several ailments affecting the normal activity of human beings. These economically important plants are found growing in remote forests, hills and mountains where human invasion and intervention are minimum. Special knowledge about the location, usage and benefits i.e., the Traditional Aboriginal Knowledge (TAK) is prevalent among the members of certain tribal communities inhabiting in these geographical locations. Importance of medicinal plants was known to the outside world with the advent of communication technology and messages published in mass media. Increasing commercial pressure on these medicinal plants and competition among the drug manufacturers reflected on the purity and genuinity of the drugs. This ultimately resulted in several side effects in the physiological functions of the persons using these drugs. Hence pharmacognostical study of such wild plants is needed to safe guard the users. The native tribes Irulars and Malasars in the Velliangiri Hills of the Western Ghats use different parts of *Naringi crenulata* (*N.crenulata*) (Roxb.) Nicols (Plate 1) to cure different kinds of ailments. In Tamil it is known as Mahavilvam or Vellai vilvam. In Malayalam it is known as Kattunarakam, Malanarakam, Manmatham etc. In Sanskrit it is known by different names such as vilvaparni, surasi and bilvaparni. This tree is armed with sharp spines (Plate 2) and it is distributed throughout India, especially in the Western Ghats. The plant was taxonomically identified with the help of Gamble Volume [1].



Plate 1: *N.crenulata* tree

Plate 2: Showing sharp spines

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Study Area

The study area of the present study is the foot hills of Velliangiri Hills which forms the eastern part of Western Ghats in the Tamil Nadu State. The area forms a part of Nilgiri Biosphere. It is located between 10.9888°N and 76.6873°E. The study area has typical tropical climate and is situated in the elevation of 300 MSL with an annual rainfall about 150 mm. The rich flora and fair knowledge of tribal people about medicinal plants provides an ideal condition to carry out the pharmacognostical study. The study is confined to the area of settlements of indigenous people in Velliangiri hills located at a distance of 26 kms from Coimbatore city.

Indigenous people

Over period the indigenous people by their culture, belief, religious practices, traditional dietary pattern and their ethnomedicinal practices they have gained knowledge on the flora and fauna of their habitat including the morphology, seasonality, life cycle, methods of propagation, curing process, mode of administration and preservation. They developed the habit of maintaining the biodiversity through judicious and need based utilization of scarce and highly valuable stalk of medicinal plants. All these lead to sustainability of their ecosystem. Mahavilvam (*Naringi crenulata*), and rare medicinal plants are well preserved in sacred grooves. These Plants have been used by healers and health rejuvenators since time immemorial. Major tribal communities identified in the study area are Malasars and Irulars.

Malasars

Malasars are the native people inhabiting the Western Ghats on the slopes of Tamilnadu and Kerala states of south India. Malasars are otherwise called by different names such as Malsar, Malayar and Malasir. The name malasar is derived from the word Malai Arasar which means “king of the hill”. Their place of residence is known as pathis which resemble hamlets formed of huts made up of bamboo plastered with

mud. They speak a dialect of Tamil. Their staple food consists of ragi (*Eleusine coracana*), samai (*Panicum Milliare*), maize and locally available roots and tubers. Greater part of their diet is wild yam (*Dioscorea sp.*). Bamboo seed boiled in honey is a delicacy. Among the rich and varied plants of Western Ghats the edible folk loric plants of Malasars constitute an important source, the use of which for human and veterinary health care has probably continued, in an unbroken tradition for well over 2 millenium.

Irulars

Irulars are inhabiting the foot hills of Western Ghats. They are leading life as honey collectors and food gatherers. Now-a-days they work as agricultural labourers. They collect the medicinal plants from malasar community and sell them in the shops maintained by them in the foothills of Velliangiri hills. Thus irulars play a role in commercialization of medicinal herbs.

Materials and methods

During the visit to the study area the indigenous people were found to use the study species *Naringi crenulata* in different forms. Interview with those people and opinion leaders revealed the TAK about the species embedded in that community. The traditional practice among them to make use of this plant in maintaining their health was known after discussion with the peer groups. This formed the basis for conducting the pharmacognostical study of the selected species. Further the users of this medicinal plant were also interviewed to get their opinion about the effectiveness of the plant.

Mode of administration of *N.crenulata*

Discussion with the healers and their clients revealed that different parts of the plant like root, stem, bark, leaves and fruits were used to cure different ailments and diseases. All parts of this plant are medicinal [2]. The details are given in Table 1.

Table 1: Medicinal uses of parts of *N.crenulata*

Parts	Mode	Application	Uses
Root	Extract	Internal	Vomiting and dysentery [3]
		Internal	snake bite [4], body pain [5], colic [6]
Stem	Powder	Topical	Acne
Bark	powder	Internal	Antipyretic, fever, pitta [7], anti-aging [8]
	juice	Topical	sprain
		Internal	Throat infection
	extract	Internal	Anticancerous, antitumor
	Tieing a piece with other herbs	External	amulet
	juice	Internal	analgesic
Leaves	Decoction	Internal	Cold, cough
	Paste orally with milk	Internal	mental disorders, digestive disorders, epilepsy [7]
	extract	Internal	Anticancerous, anti diabetic
		Internal	heart and liver related disease
	Fresh leaf chewing	Internal	Skin disorder [9]
	Fresh leaf extract	External	Hair growth [10]
	Fresh leaf	Internal	Removes sterility
Fruits	decoction	Internal	antidote to insect poison and intestinal worms
		Internal	liver related disease



Plate 3: Stems with leaves



Plate 4: Leaves

The root extract of the plant through oral administration was found to arrest vomiting and dysentery. More over the same was used to save the life of people from snake bites. The stem of the tree when applied in the powder form reduces the severity of acne. Similarly when the bark of the tree is powdered and consumed it arrested fever. This powder has antipyretic and anti aging properties. Bark juice when applied externally gives relief from pain due to sprain. When the same juice is consumed and goggled throat infection got cured. Decoction prepared from the leaves is the medicine against cold and cough. Leaf paste when consumed with milk reduces the problems of mental disorders, digestive disorders and epilepsy. Other life threatening diseases like cancer, diabetics, cardiac problems and liver related diseases like jaundice are cured by consumption of leaf extract. External application of fresh leaf extract on the head promotes hair growth. Chewing raw leaves regularly removes sterility and supports pregnancy in ladies. The decoction taken from fruits, when consumed internally acts as an antidote for insect bite and intestinal worm infestation. *Naringi crenulata* along with *Phyllanthus reticulatus* has the ability of healing the skin disorders such as Eczema and scabies which is an inexpensive way of curing such conditions ^[9].

Conclusion

The interview and discussion with the traditional healers and their clients proved the medicinal value of *Naringi crenulata*. It could be understood that each and every part of the tree is playing great role in maintaining human health. Hence suitable measures should be taken for ensuring need based use of this valuable species and to preserve the same in its natural habitat.

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