



TRADITIONAL MEDICINES USED FOR ORAL HEALTH CARE AMONGST THE LOCAL PEOPLES OF KOLLI HILLS OF TAMIL NADU

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ABSTRACT

An ethno-medicinal survey was conducted during 2010-11 to examine the traditional knowledge of local peoples of Kolli hills of Namakkal district of Tamil Nadu. The results obtained reveal that 18 species of medicinal plants are being used, traditionally, to control and cure a variety of dental problems by the local people. Present study reveals that medicinal plants continue to play a major role in oral healthcare needs of Kolli hills peoples. Hence there is an urgent need to conserve the biodiversity as well as the traditional knowledge by proper documentation for further research in dentistry.

Keywords: Medicinal plants, Oral disease, Traditional knowledge, Kolli Hills.

INTRODUCTION

Medicinal plants have been used as traditional treatments for numerous human diseases for thousands of years and in many parts of the world. Oral diseases continue to be a major health problem worldwide¹. Dental caries and periodontal diseases are among the most important global oral health problems, although conditions such as oral and pharyngeal cancers and oral tissue lesions are also significant health problems². Good oral hygiene is necessary for the healthy teeth, gum and fresh breath. A number of methods are used in oral hygiene to prevent and cure oral diseases. It is of importance to look at the roles plants play in oral hygiene as a number of them have medicinal properties. When compared to tooth paste, mouth washes, denitrifies etc. plants used for oral hygiene stands out. In many African homes, teeth are cleaned in the morning by chewing the root or slim stem of certain plants until they acquire brush-like ends.

The development of medical science, plants continue to be an important source of drugs in many countries around the world. During past two decades reliability and usage of herbal product has become of increasing importance, due to the side effects and complications of many chemical and synthetic medicines. About 25 % of drugs are derived from plants and many other are formed from prototype compounds isolated from plant species¹. Kanwar et al., reported that about two million traditional health practitioners use over 7500 medicinal plant species. A lot of research has been carried out on the utilization of medicinal plants for the treatment of so many diseases².

According to the World Health Organization (WHO), more than 80 percent of Africans rely on traditional medicine and indigenous knowledge to meet their health needs³. This is due to the fact that traditional medicine is

accessible, affordable, culturally and socially acceptable and most people prefer it to the 'exorbitantly priced' conventional Western medicine. Plants and natural products from time immemorial used for their pharmacological applications viz., antiulcerogenic, wound healing, anti-inflammatory, antimicrobial, antioxidant properties etc.

Kolli Hills (Kollimalai) lies between 11°10'5" -11°30' 00" N latitude and 78°15' 00" E longitude. It is situated in the Namakkal district of Tamil Nadu above the river Cauvery, covering an area of about 503 km². Physiographically, it is a hilly region with altitude ranging from 180 m at the foothill to 1415 m at the plateau. The slope of this region varies from gentle to very steep. Geologically, the study area occupied by the hill is highly undulating, cut by a network of streams and most of them are semi-perennial and seasonal flowing in all directions, but mostly in the eastern and southeastern directions.

MATERIALS AND METHODS

An ethno-medicinal survey was carried out in the Kolli hills, Namakkal district during February 2010 to March 2011. The information regarding the usage of medicinal plants for curing tooth related problems was collected by consulting the elders and herbal healers in the study area. The presented information was gathered through questionnaire, personal interviews and discussions among the village elder peoples, herbal medicine practitioners and other traditional healers in their local language (Tamil). The questionnaire allowed descriptive responses on the plant prescribed, such as documented as to vernacular name (Local name), parts used and medicinal uses. Plant parts that were identified as having use in ethnobotany were collected and compressed. Plant species collected were identified with the help of flora books⁴⁻⁷. The Botanist, J. K. K. Nataraja College of Arts &



Science, verified the identities of the plants and a voucher specimen was also deposited, the medicinal importance of each plant was enumerated.

RESULTS

The use of herbal remedies is important among the rural peoples of Kolli hills and it reflects the revival of interest in traditional medicines. Now a days the developed countries people also returning to plant medicines, Due to increasing demand of ethnomedicinal plants and more profit. The plant species are arranged in alphabetical order, each plant is followed by its family, vernacular name (Tamil). The medicinal uses are described with details such as the part(s) used singly; combination with other ingredients, the following is the list of 24 medicinal plants studied.

1. *Abutilon indicum* Linn. (Malvaceae). Vernacular name: Thuthi. The leaf paste is used for the treatment of toothache.
2. *Acacia nilotica* Linn. (Fabaceae). Vernacular name: Karuvelam. The branches are cut in to small pieces and used as tooth brush without any tooth paste. The bark powder is used as a tooth paste.
3. *Acalypha indica* Linn. (Euphorbiaceae). Vernacular name: Kuppaimeni. The whole plant powder is used in toothache.
4. *Achyranthes aspera* Linn. (Amaranthaceae). Vernacular name: Nayaruvi. The dried root powder is used as tooth paste and it used to treat gum disorders.
5. *Allium sativum* Linn. (Alliaceae). Vernacular name: Vellapundu. The paste of the bulb is applied to the gums and cavities of infected teeth.
6. *Aloe vera* Linn. (Liliaceae). Vernacular name: Kutralai. Leaf paste is used in oral wound healing.
7. *Azadirachta indica* Juss. (Meliaceae). Vernacular name: Vepamaram. Leafs used to treat toothache. Narrow branch cut into small pieces and used as tooth brush without any tooth paste.
8. *Calotropis procera* Linn. (Asclepiadaceae). Vernacular name: Vellerukku. Roots in the form of paste are applied to toothache.
9. *Cassia auriculata* Linn. (Caesalpiniaceae). Vernacular name: Aavarai. Young stems used as a tooth brush.
10. *Cinamomum tamala* Nees&Ebesm. (Lauraceae). Vernacular name: Ilavangapa ri/ Pa ai. Bark juice is applied to treat tooth decay and toothache.
11. *Citrus medica* Linn. (Rutaceae). Vernacular name: Elimichai. Fruits are used to treat bleeding gums in scurvy, due to high content of Vitamin-C.
12. *Ficus religiosa* Linn. (Moraceae). Vernacular name: Aalaamaram. The bark powder is used as tooth paste.
13. *Jatropha glandulifera* Rox. (Euphorbiaceae). Vernacular name: Adalaichedi. The latex is used to treat toothache, gum infections.
14. *Lucas asperasprong*. (Lamiaceae). Vernacular name: Thumbai. Leaf paste is used in toothache, gum infections.
15. *Ocimum basilicum* Linn. (Lamiaceae). Vernacular name: Tirunirrippachai. Leaf extract is used as mouth freshener and treatment oral ulcer.
16. *Ocimum sanctum* Linn. (Lamiaceae). Vernacular name: Tulasi. Powder of dry leaves along with salt is applied to painful teeth and also used as mouth freshener.
17. *Phyllanthus emblica* Linn. (Euphorbiaceae). Vernacular name: Nelli. The fruits are a good source of Vitamin-C and used to treat bleeding gums and oral ulcers.
18. *Piper nigrum* Linn. (Piperaceae). Vernacular name: Milagu. The dried seeds are powdered and mixed with milk for the treatment of throat infection.
19. *Pulmaria acutifolia* Pair. (Apocynaceae). Vernacular name: Thevarali. Latex is used to treat mouth ulcer.
20. *Ricinus communis* Linn. (Euphorbiaceae). Vernacular name: Aamanakku. Twigs and Leaves tender shoots are used as tooth brushes in dental caries.
21. *Solanum nigrum* Linn. (Solanaceae). Vernacular name: Manattakkali. The leaf and fruits of juice mixed with salt to drink which cure oral ulcers, it is excellent remedy for oral ulcers.
22. *Solanum surattrense* Burm. (Solanaceae). Vernacular name: Kandankathiri. Fruit are mixed with salt, it is applied for toothache.
23. *Vitex negundo* Linn. (Verbenaceae). Vernacular name: Nocchi. Branches are cut into small pieces and used as tooth brush without any tooth paste.
24. *Zingiber officinale* Linn. (Zingiberaceae). Vernacular name: Ingi. Paste of rhizomes is used to treat toothache and tooth decay.

DISCUSSION

Medicinal plants, which form the backbone of traditional medicine, have in the last few decades been the subject for very intense pharmacological studies; this has been brought about by the acknowledgement of the value of medicinal plants as potential sources of new compounds of therapeutic value for example recently pharmaceutical companies like Abbott have started using curcumin (Manjal) as a main component in curcuma gel, it is used to heal oral ulcers. Traditional medicine is an art practiced by few elderly people whose empirical knowledge is respected by everyone in the village. Plant-based traditional knowledge has become a recognized tool in search for new sources of drugs; it is clear that these



herbal medicines can offer a platform for further research in dentistry. During the study period, it was also observed that elderly people have more knowledge about these traditional herbal medicines. The wealth of ethnobotanical knowledge has been documented from various parts of India⁸⁻¹³. A perusal of these reports suggests that documentation of this knowledge in Tamil Nadu is incomplete and particularly in the Kolli Hills of Namakkal district. Present study reveals that medicinal plants continue to play a major role in oral healthcare needs of Kolli hills peoples. Hence there is an urgent need to conserve the biodiversity as well as the traditional knowledge by proper documentation and for further research in dentistry.

CONCLUSION

The knowledge of medicinal plants used by the peoples of Kolli hills seems to be well known to its culture and tradition. So, these types of plant medicines, which are almost free, are a great help to the poor peoples. However these medicines are limited to rural areas and it is necessary to carry out research into these medicines and make available to every part of the country at lowest cost. It will also provide new pharmacological directions for better oral health care of the human being regarding variety of diseases.

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