



Ethano-medicinal plants used as medicine by the tribals in Vilavancode Taluk, Kanyakumari District of Tamilnadu, India

* Rani E, S Chidambaram Pillai

Research Department of Botany, V. O. Chindambaram College, Tuticorin, Tamil Nadu, India

Abstract

In recent years, the green pharmaceuticals are receiving much more popularity and importance. The ethnic peoples and tribals are mainly depending on traditional medical system and they pass the information of medicinal plants from one generation to another through orally. The present study highlights traditionally used medicinal plants by the tribal communities in Vilavancode Taluk, Kanyakumari District, Tamilnadu, India. A total of 13 medicinal plants belonging to 9 families were studied. The medicinal plants such as, *Abrus precatorius* L., *Ammomum zerumbet* (L), *Amaranthus spinosus* Linn, *Alternanthera sessilis* (L), *Alpinia calcarata* Wild, *Aloe vera*, *Ageratina adenophora*, *Acorus calamus* L, *Aerva Lanata* Juss x. Schult, *Achyranthes aspera* Linn, *Acalypha fruticosa* Forssk and *Abutilon indicum* (L) were collected. The tribal communities used these medicinal plants to treat snake bite, piles, breathing problems, cough, skin diseases, kidney stone, stomach disorders, anaemia and worm infestation. These medicinal plants are potent source of research and development of novel drugs.

Keywords: medicinal plants, alternate, traditional, medicine

Introduction

India is rich in its tribal population from the immemorial time with their traditional knowledge system which deals with the many significant aspects and the health problems of tribal communities. The tribal population have their own herbal homework to treat various diseases ^[1]. The use of herbal medicines by tribal communities is inclined by distinct socio-cultural practices, religious beliefs, support of traditional ability and services of traditional medicine. These people have much associated with their ambient environment and ecology and mainly depend on it for primary health care system, because of they live in remote areas as compared to modern facilities ^[2]. The records of traditional knowledge on medicinal plants have been considered to support the discoveries of novel drugs for the advantage of mankind. Medicinal plants are the base of many societies, for their primary health care system. In primary health care, about 80% of traditional medicines are used which derived from plants ^[3]. Historically medicinal plants have played a vital role in traditional medicine system. The use of these herbal remedies is not only cost effective, easily available in environment or surrounding, but also safe and almost free from serious side effects as compared to modern medicine. The village elders, farmers and tribal have traditional knowledge about for health reasons happening thousands of years ago and is still part of medical practices by folks of various states of Indian sub-continent as well as many other countries including China, Middle East, Africa, South America and other developing countries of world. India has a long ritual of wise conservation strategies and management that are useful to people and society. Biodiversity is the most valuable part of nature and society but least appreciated resource, and it can be a key to the protection of the world ^[4, 5]. The aim of this study is to

identify and compare the medicinal properties of plants.

Materials and Methods

Collection of medicinal plants

The ethnobotanical information was collected by field questionnaire survey among tribal community, by study with herbaria and museum, by study of rituals, myths and folklores and through folk market survey. The villages inhabited by tribal population were selected randomly in this study.

Geographical Area

The ecological significance of the Kanyakumari Wildlife Sanctuary is of paramount importance. The forests serve as a catchment area for 10 reservoirs namely Pechiparai, Perunchani, Chithar-I, Chithar-II, Upper Kodayar, Lower Kodayar, Kuthiyar, Chinna Kuthiyar, Mukkadal and Poigai reservoir. These reservoirs irrigate an area of about 50,000 ha and feed about 2,500 ponds and more than 500 Km lengths of channels. The well-being of these water systems is closely related to the prosperity of the farmers of the district as the economy of the district depends on agriculture. The rainwater due to precipitation in the reserve forest is collected by hundreds of the hill streams. These streams drain into Kodayar, Paraliyar, Pazhayar and Valliyar.

Result

In the present study the following medicinal plants were collected and identified. The tribal communities use these medicinal plants to treat various diseases.

i) *Abrus precatorius* L. (Kundumani)

Medicinal properties: Root powder is frequently taken orally along with cow milk to treat scorpion sting and snake bite.

The paste prepared from ten gram of root with water is applied externally two times a day for a period of one week to treat dandruff.

ii) *Abutilon indicum* (L) Sweet (Thuthi)

Medicinal properties: Decoction of dried leaves are mixed with jiggery and under fined sugar made from palm sap and taken orally to treat piles.

iii) *Acalypha fruticosa* Forssk (Serucinni)

Medicinal properties: The whole plant extract is used to clean the lungs and cures the allergy in lungs. It cures cold it reduces breathing trouble.

iv) *Achyranthes aspera* Linn (Nayuruvi)

Medicinal properties: A decoction of powdered leaves with honey or sugar candy is useful in the early stages of diarrhoea and dysentery. A pinch of root powder with a pinch of pepper powder and honey is a nice remedy for cough.

v) *Aerva lanata* Juss Ex. Schult (Sirupeela)

Medicinal properties: Decoction of fresh leaves is taken orally three times a day to treat kidney stone inflammation until cure. The plant is used for the treatment of snake bite.

vi) *Acorus calamus* L (Vasambu)

Medicinal properties: Dried rhizome is ground with water and the paste is given orally to children for speech therapy. Pounded rhizomes along with curcuma aromatic rhizomes and *Azadirachta indica* leaves are applied on the affected parts to cure eczema.

vii) *Aegle marmelos* L (Vilvam)

Medicinal properties: Leaf paste is applied topically to heal wounds. Fruits crushed with seeds of *Strychnos nuxvomica* and *Pongamia pinnata*, boiled with coconut oil is applied on the affected parts.

viii) *Ageratina adenophora* (Spreng) R. King & H. Robinson (*Aanadam patchila*)

Medicinal properties: The paste prepared from twenty gram of leaves with water is applied externally on the chest helps to relieve pain during heart attack.

ix) *Aloe vera* (Linn Burn.f) (Sottukattalai)

Medicinal properties: One fresh leaf is taken per day for about ten days after removing the epidermal peel to cure kidney stone.

x) *Alpinia calcarata* Wild (Sitharathai)

Medicinal properties: The paste prepared from the rhizome mixed with water taken orally twice a day for two days to get relief from stomach disorders.

xi) *Alternanthera sessilis* (L) R.Br.ex.Dc (Ponnankanni)

Medicinal properties: Decoction of whole plant is used for skin diseases. Leaf is cooked and each with normal diet for twenty to thirty days to cure night blindness.

xii) *Amaranthus spinosus* Linn (Mullukeerai)

Medicinal properties: Handful of whole plant pounded

boiled in a cup of water and filtered. The decoction is taken orally for anaemia. The leaf was used as vegetable.

xiii) *Amomum zerumbet* (L) (Kattuchenthi)

Medicinal properties: The rhizomes are boiled and the juice used to treat worm infestation in children. The fresh rhizomes were pounded and used as medicine for indigestion and other ailments.

Discussion

In this study various medicinal plants were used by tribals were collected from Vilavangode taluk, Kanyakumari District of Tamilnadu, India. Most of the plants belong to Fabaceae, Amaranthaceae, Araceae, Asteraceae, Euphorbiaceae, Liliaceae, Malvaceae, Rutaceae and Zingiberaceae families. In Tamil Nadu, ethnomedical value of various plants from tribal area and rural communities for treating various disorders and diseases has been carried out by various research groups [6-8]. These reports suggested that the ethnobotanical study in Kanyakumari District is incomplete and traditional knowledge on herbal medicine of a large number of folk communities need an effective documentation. Many commercially available drugs used in modern medicine were earlier used as impure form in folk or traditional medicine to treat diseases. The important factor of using plant based medicines are that they are highly safe than the synthetic drug and offering more affordable treatment. The medicinal plants have many compounds with antibacterial and antifungal activity. Many attempts have been made to discover novel medicine from numerous sources including plants [9]. The traditional knowledge about the medicinal properties of local plant species is vital in alternate medicine as well as for the self sustenance of local population. High costs associated with numerous side effects of synthetic drugs are forcing people to depend on the alternate herbal medicine for their health care needs.

Conclusion

The present study revealed the importance of traditional medicines in tribal communities of Kanyakumari district, Tamil Nadu, India. The results of the present finding provide evidence that medicinal plants and traditional practice of medicine play critical role in the health care system among tribals. This kind of research work will attract much more attention of phytochemist, ethnobotanist and pharmacologist for their investigation of medicinal plants in the region.

References

1. Anthwal A, Sharma RC, Sharma A. Sacred groves: traditional way of conserving plant diversity in Garhwal Himalaya, Uttaranchal. *Journal of American Science*. 2006; 2(2):35-38.
2. Anthwala A, Gupta N, Sharma A, Anthwal S, KI-Hyun Kim. Conserving biodiversity through traditional beliefs in sacred groves in Uttarakhand Himalaya, India. *Resources, Conservation and Recycling*. 2010; 54:962-971.
3. Anonymous. Census of India SC/ST Population. Registrar General of India, New Delhi, 1991.

4. Anonymous. Census of India for the State of Uttaranchal, Bihar and Jharkhand, Registrar General of India, New Delhi. 2001.
5. Attisso MA. Phytopharmacology and Phytotherapy. In: Bannerman RH, Burton J, (eds.), Traditional Medicine and Health Care Coverage. World Health Organization, Geneva. 1983.
6. Anandan T, Veluchamy G. Folk medical claims from Tamil nadu North Arcot district. Bulletin for Medical Ethnopharmacology and Botanical Research. 1986; 73:99-109.
7. Viswanathan MB. Ethnobotanically important plants. In: Tamil Nadu biodiversity strategy and action plan – Forest Biodiversity, (Ed. R. Annamalai) Tamil Nadu Forest Department, Government of India, Chennai. 2004; 170-231.
8. Ignacimuthu S, Ayyanar M, Sankarasivaraman K. Ethnobotanical investigations among tribes in Madurai district of Tamil Nadu, India. Journal of Ethnobiology and Ethnomedicine. 2006; 2:25-34.
9. Tomoko N, Takashi A, Hiromu T, Tetsuro I, Hiroko M, Munekazu I *et al.* Antibacterial activity of extracts prepared from tropical and subtropical plants on methicillin-resistant staphylo-coccus. Journal of Health Science. 2002; 48:273-276.