

Ethno Medicinal Practices of Tribal Inhabitants of Attappady and Vakkodan Hill Regions of Kerala



Chemistry

KEYWORDS : Attappady, Irulas, Kurumbas, Mudugas.

Time : 11

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ABSTRACT

Ethnobotanical exploration in Attappady and Vakkodan Hill Stations of Mannarkkad Taluk in Palakkad District of Kerala State, resulted in information on traditional use of 70 plant species belonging to 38 families used by the tribals and locals of the region. Diseases/ ailments found prevalent in the area are diarrhea, skin diseases, dysentery, rheumatism, kidney stone, tooth ache, fever, jaundice and wounds. The data of use of plants for medicinal purposes of tribes was collected on the basis of personal interviews with traditional and natural healers, medicine men, priests, village seniors, tribal doctors and old women of the society. Majority of the medicinal preparations were made from leaves and some use the underground parts like root, rhizome, and tuber etc. The data obtained is enumerated.

Introduction

Phytochemicals are non-nutritive plant chemicals that have protective or disease preventive properties. In India, it is reported that traditional healers use 2500 plant species and around 100 species of plants serve as regular sources of medicine. Many of the methods for treating injuries and diseases have been passed down through families for generation and some of these have been adopted for use in medical profession. The state Kerala has a rich biodiversity. Medicinal plants constitute an important component of the plant resource spectrum of Kerala. The rural folk and tribal communities make use of about 2000 species of lesser-known wild plants for various medicinal uses. There are recent reports on ethnobotanical documentation of medicinal plants. 1-20 An ethnomedicinal study was undertaken to collect information possessed by tribes of Attappady and Vakkodan Hill Stations of Mannarkkad Taluk in Palakkad District of Kerala State.

Materials and Methods

Frequent field visits were made to Jellippara, Agaly, Kottathara and Kookampalayam, which comprise the study areas of Attappady hill region and to Palakkayam, Payappullu, Cheenikapara and Irumbakachola, which comprise the study areas of Vakkodan hill region during the period from February to May 2012 with a view to identify the medicinal plants used by the ethnic tribes for treating ailments. Data presented here is based on personal observations and interviews with traditional healers. Plant specimens were properly processed and arranged as a herbarium. Comparison of photographs of the plants and plants identified from the study area was done at the time of collection of information to identify the plants and their uses.

The Attappady block is located between 10°55' 10" and 11° 14' 19" North Latitude and between 76°27' 11" and 76° 48' 8" East Longitude, stretching from Mukkaly to Anakatty (West-East) and Thazhemully to Muthikkulam (North-South), covering an area of 745 km² in Mannarkkad taluk of Palakkad district of Kerala, South India. The 745 km² stretch of verdant hillocks amidst perennial streams and fertile agricultural land is inhabited by three tribal clans — the most primitive community of the Kurumbas, the Mudugas and the predominant clans Irulas.

The total population of the area is 68,824, of which 41 percent is accounted by tribal people. Irulas are the most populated community among the tribals in the Attappady area and they occupy 80 hamlets out of a total of 116. The Mudugas habitate 22 hamlets of Attappady. Inhabitants of Attappady and Vakkodan Hill region use traditional medicine to cure diseases. Enumeration on indigenous knowledge and practices helps in conserving the traditional knowledge, and a comprehensive database of the plants used for medicinal purposes by tribes could be disseminated to the new generation for awareness and sustainable utilization of plants. Hence the present study gains significance.

Results and Discussion

Tribals and rural people use a variety of plant species from the forest as well as non-forested pockets of the study area. An exploration of ethnomedicinal utilization of tribes on Attappady and Vakkodan hill region through interview of experienced practitioners revealed that 70 plant species belonging to 38 families of significant ethnomedicinal value. Table I gives the details of the plants revealed by the study. The plants have been arranged in alphabetical order of their Scientific names. The ethno practices are enumerated against each plants. Chart I depicts the extent use of the plants for various ailments.

Chart I

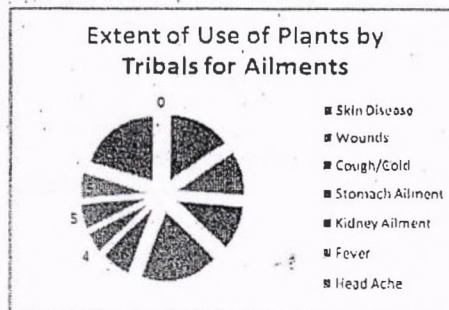


Table-I

PLANTS USED BY TRIBALS OR ATTAPADY & VAKKODAN HILL REGION FOR THEIR ETHNO MEDICINAL PRACTICES

S. No	Botanical Name	Local Name	Ailment Treated	Ethno medicinal Uses in the areas surveyed
1.	Abrus precatorius.L.	Künni, Vellakkunni Adimaduram	Kidney stone Wounds	10ml leaf is taken early morning for 15 days Crushed leaves are applied.
2	Acorus calamus	Vayampu Akaraveci, Akkittam	Cuts and wounds	The dried rhizome is powdered and mixed with water. A thick paste is applied on the affected areas.
3	Aegle marmelos Linn. Corr. ;	Koovalam	Laryngitis Tumor	Fresh mature leaves are chewed during early morning for five days. A daily does of 1 gm/kg body weight of the extract administered orally for 21 days will reduce the growth of Tumor

4	<i>Aerva Lanata</i> Linn. Juss. Ex. Schultes	Cherula Cerupulai, Cirupilai	Kidney stone	Plant extract consumed for 15 days
5	<i>Ageratum conyzoides</i>	Iruveli Kuruver, Vettiver	Wound	Leaf juice is applied on fresh wound
6	<i>Alangium Salvifolium</i>	Angolam Alangi.	Scabies	Paste of bark and fruit is applied three times daily for 7 days
7	<i>Alpinia Calcarata</i> (Roscoe)	Chittarattha	Cough and cold for children	Rhizome powder is mixed with honey.
8	<i>Alstonia scholaris</i> R.Br.	Ezhilampala	Burns and boils	Latex obtained from the plant is applied on burns and boils
9	<i>Alstonia Venenata</i> , (Pittosporum Tetraspermum)	Analivegam Palamunnipalai Sinnappalai	Skin diseases, leprosy.	Paste of roots and fruits is applied on affected parts.
10	<i>Andrographis paniculata</i> (Burm)	Kriyitta Nilavempu	Burning Sensation	Paste of whole plant is applied on affected parts.
11	<i>Aristolochia indica</i> .L	Karlakam	Insect bites, Snake bites, Diarrhea, Cholera	Chewing leaves Leaf paste is used. The leaf juice is used to treat diarrhea, cholera and intermittenet fevers
12	<i>Asparagus racemosus</i> Willd.	Sathavari	Immunity of children	Leaf and root powder is mixed with breast milk and paste is taken internally.
13	<i>Baccopa monnieri</i> (L) PENNELL	Brahmi Akantapuntu	Skin diseases, leprosy	Apaste of whole plant is applied on affected parts.
14	<i>Baliospermum Montanum</i>	Nagadhandhi Apaicevakaceti	To relieve indigestion	The powdered roots are taken internally
15	<i>Bauhinia Variegata</i>	Manja Mandharam	Ulcer	Dried leaf powder taken internally with milk.
16	<i>Boerhaavia diffusa</i>	Thazhuthama Mukkurattai	Ophthalmia Rheumatic pain	The leaf juice is used as a lotion for treating ophthalmia Water boiled with whole plant is drinking and bathing.
17	<i>Biophytum sensitivum</i> .	Mukkutti Amalakam	Allergies	The juice of the whole plant is rubbed on the skin agaist allergies for 5 days.
18	<i>Butea monosperma</i>	PJash, Camata.	Mosquito repellent	Gum-like juice from its flower kills mosquito.
19	<i>Callicarpa tomentosa</i> .L.	Perugalam	Itches	An aqueous extract of the leaves is used as an antiseptic to dress wounds and boils.
20	<i>Calotropis gigantea</i> (L.) R.Br.	Erukku	Herpes. Snakebite Skin diseases	Root paste is applied locally. Chew the leaves, poison will not spread in blood. Leaf juice with coohut juice heat in sunlight for 7 days. Apply the paste on affected parts.
21	<i>Cassia oxidentalis</i>	Ponnamthakara	Teeth pain	Paste of leaves is applied.
22	<i>Cardiospermum helicacabum</i>	Uzhinja	To dress wounds	An extract of the leaves is used as an antiseptic
23	<i>Catharanthus Roseus</i> (L)	Savanari Nithyakalyani	Diabetes	Leaf juice is taken internally
24	<i>Centella Asiatica</i> (Hydrocotyle Asiatica)	Kodangal Vallarai, Ollarai	Infection in intestine Skin diseases	Curry made with whole plant is consumed. A paste of leaves are applied
25	<i>Citrus Medica</i>	Ganapathi Narakam	Skin diseases	Paste of seeds is applied on effected parts.
26	<i>Clerodendron Serratum</i> (L) Moon	Cheruthekkku. Angaravallari	Head ache	A paste of leaves is applied externally.
27	<i>Clitoria Ternatea</i>	Shamkupushpam Kakkattan	Migraine	Paste of white Clitoria Ternatea is applied externally.
28	<i>Coleus aromaticus</i> L.	Panikkurka	To relieve common cold	Leaf paste with coconut oil applied on head and body.
29	<i>Coscinium fenestratum</i>	Maramanjai Alakanirani	Jaundice	Root and stem paste is used.
30	<i>Curculigo Orchioides</i> Gaertn	Nilapana Alyancu, Arikkuram, Kannatali	Vomiting	Tubular roots boiled with water and taken internally.
31	<i>Cyathula prostrate</i> (L)Bl	Cherukadaladi	Craw-Craw, Scabies Dysentery	Ashes of the burnt plant mixed with water and applied externally. Leaf past with honey is taken internally.
32	<i>Cyclea Peltata</i> (Lam) Hook	Padakizhanju Malaitanki Patakkilanku	For intestinal disorder and dysentery.	Root paste is used.
33	<i>Cynodon dactylon</i>	Karuka Akaticararuku	Asthma	Half a glass juice of whole plant with two spoons honey is taken orally early morning for ten days
34	<i>Cyperus rotundus</i> L.	Muthanga	Head ache	A paste of tubers is applied internally.
35	<i>Desmodium gangeticum</i>	Orila, Pullati Orila Sirupulladi	Vomitting	Root juice is taken internally.
36	<i>Eclipta prostrata</i> (Linn) Linn	Kayyoni, Kanjuni.	Head ache Cough & cold	Apply leaf paste or leaf boiled coconut oil. Leaf juice of this plant, <i>Coleus aromaticus</i> and Turmeric is boiled in oil and apply on head (for children)
37	<i>Emilia sonchi folia</i>	Muyalchevi Mayarcevi	Tonsillitis	A paste of whole plant is mixed with honey and salt and taken early morning before sun rise.

38	<i>Ficus (Microcarpa) gibbosa</i>	Ithi	Skin inflammation	The fresh leaf juice and latex is applied twice a day for 5 days externally.
39	<i>Glycosmis arborea</i> (ROXB) DC	Panal Anam Kattukonci Konci	Jaundice and vomiting	Powdered bark is boiled with water, and half a cup drink in the morning and evening for 21 days.
40	<i>Helicteris isora</i> L	Idampirivalampiri	Snake bite	Paste of roots and paste is taken internally.
41	<i>Hemidesmus indicus</i> (Linn) R.Br.	Naruneedi Nannari Acuvapalai	Fever, cough and diarrhea	The root paste is applied on the forehead to reduce fever and root paste with sugar is given to children to palliate cough and diarrhea.
42	<i>Hemigraphis colorata</i> Blomi	Murikoodi	Fresh wound healer	Leaf juice is applied.
43	<i>Justica gendarussa</i>	Vathamkkolli	Arthritis	Water boiled with whole plant is drinking and bathing.
44	<i>Leucas aspera</i> (willd) Spreng.	Thumba	Snake bite, Migraine	Leaf paste is taken externally and internally to treat snakebite. Leaf paste is applied topically on the forehead to cure
45	<i>Merremia emaginata</i> (Burn)	Elichevi	Spider poison	Leaf paste is applied on affected parts
46	<i>Murraya koenigii</i> (L.) Sprengel	Kariveppu Kariveppilai.	Diarrhea and gum problems	For treating diarrhea-Leaf decoction 15 ml take thrice daily. For gum problems, Paste of stems used to massage the gums.
47	<i>Naregamia alata</i> WIGHT & ARN	Nilanarakam Nela-naringu	Malaria, fever	Paste of whole plant is taken internally
48	<i>Nilgiranthus ciliates</i> (Bremek)	Krinkurinji	Cough, Chestpain	A decoction of root and bark is taken internally.
49	<i>Oxalis corniculata</i>	Puliyaral Amanitam	Fever	Paste of root is taken orally to treat common fever.
50	<i>Phyllanthus Niruri</i> (Fraternus)	Jaramala, Kizharnelli Kizha-Nelli	Yellow fever	Paste of whole plant is taken internally.
51	<i>Plumbago zeylanica</i>	Vellakoduvelil	Loose motion	Whole plant crushed and taken with ghee.
52	<i>Prunus cerasoides</i> D.Don	Patimukham Himalayanchery	Arthritis	Seed oil is extracted and warmed. The warmed oil is massaged on the affected parts at bedtime.
53	<i>Ruta chalepensis</i>	Arutha, Arvada.	Helminthic infections	Leaf juice is taken internally.
54	<i>Saraca indica</i>	Arvata, Arvada Asokam.	Skin diseases	Powdered flower is boil with coconut oil and applied externally
55	<i>Scaevola sericea</i>	Naupaca, Badraksham.	Wound	A paste of leaves and flowers are applied externally.
56	<i>Scoparia Dulcis</i>	Kallurukki	Kidney stone	Paste of whole plant is taken internally with milk early morning for 40 days.
57	<i>Sida cordata</i> (Burn.f.) Borssum	Kurunthotty	Tonic	One table spoon plant powder taken with milk.
58	<i>Solanum, Virginiatum</i> Burn.f	Kandakari Chuda	Itch and ring worm Hair fall Cough	Leaves are made into a paste with turmeric powder Ripened fruits made into paste and mixed with the part of <i>Hibiscus rosasinens</i> flower and applied Dry flower is mixed with honey and taken twice daily.
59	<i>Solanum nigrum</i>	Pitchkati, Chukkutticheera Manathakkali	Mouth ulcer	Leaves and fruits are chewed and swallowed.
60	<i>Spondias pinnata</i> (L.f) Kurz	Ambazham	Dysentery	Bark is used to treat dysentery
61	<i>Tabernaemontana divaricata</i>	Nandiarvaam	Red eye	Flower juice is applied.
62	<i>Terminalia chebula</i>	Kadukka	Chronic ulcers Infected wounds	The fruit pulp is used to cure bleeding gums and promote healing of chronic ulcers Dried fruit is burnt in fire and the ash is make a paste with curd and apply on the effected parts
63	<i>Spondias pinnata</i>	Ambazham	Regulating menstruation	Root paste is taken internally.
64	<i>Tinospora cord folia</i>	Chittamruth, Gulancha	Digestion and ulcer	Paste of stem juice and honey is consumed
65	<i>Tribulus terrestris</i> .L	Njerinjil Acacaram, Akkavalati	Urinary infection	Whole plant is boiled with water and consumed.
66	<i>Tridax Procumbens</i>	Odiyan Pacha Kenattuppuntu	Wounds	Leaf paste is applied
67	<i>Verninia Cinerea</i> (Linn) Less	Poovamkuruninil Cakatevi	Stomach ache	A decoction of entire plant is taken internally(15ml- twice)
68	<i>Vetiveria zizanioides</i>	Ramacham	Lungs problem	Oil stem

69	Wrightia tinctoria	Danthapala, Ayyapala, Veppali	Expel worms Psoriasis	A paste of bark is given orally to children to expel worms. Green leaves plucked before sunrise is heated in sunlight with pure coconut oil for 7 days. apply the pink/yellow coloured oil on effected parts.
70	Zingiber zerumbet Sm	Malaayinchil Kattinchi Murada	Fever Scar	A decoction of rhizome with pepper and cumin seeds used as a remedy for fever. A paste of rhizome with curd is applied on the affected parts.

Conclusion

The study reveals ethno medicinal practices of tribals of Atapady and Vadakkon hill regions of Kerala. The information obtained from this ethno medicinal study ensures the therapeutic efficiency of the traditional medicinal plants, which may lend lead in developing novel therapeutic agents. Ethnomedicinal documentation and understanding the roots of ethno knowledge has become an essential task of ethno-allied disciplines. Ethno botanical surveys can potentially bring out many different clues for the development of safe, effective and inexpensive indigenous remedies. The wisdom available with the tribes is transmitted only through oral communication in locally-spoken, scriptless language and therefore needs conservation. Ailments such as fever, diarrhea, dysentery, skin-problems, jaundice, rheumatism etc. are mostly treated with the different medicinal plants. Due to overgrazing, encroachments, unsustainable utilization and other developmental activities in the

regions, several persistent medicinal plant species are on the verge of extinction. Due to lack of awareness, people of the tribal regions are unaware of the wealth of this heritage. Over exploitation of medicinal herbs can lead to local extinction of valuable herbs indicating an urgent need to draw up the necessary plans for medicinal plant utilization and conservation.

Acknowledgement

The authors thank the authorities of Avinashilingam Institute for Home Science and Higher Education for Women Coimbatore for providing the necessary facilities for carrying out the study. We are thankful to the local people and Tribes for sharing their knowledge regarding plants and their uses in traditional health care practices. The authors are also grateful to Mr. P.K. Krishnadas, Maruthi and Sumathi for their advice and noble support during the survey.

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