

## TRADITIONAL UTILIZATION OF INDIGENOUS PLANTS FOR THE TREATMENT OF COLD AND SKIN DISEASES IN PUDUCHERRY REGION

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An ethnomedicinal survey of medicinal plants used for cold and skin diseases in Puducherry regions was conducted. The binomial, family, vernacular name, habit and traditional practice of 50 species, 46 genera and 32 families of Angiosperms are discussed here for the treatment of skin and cold ailments. This piece of investigation would help the traditional herbalist healers as well as health workers to manage cold and skin diseases related health problems with locally available plants. This may provide helpful indication for future research in the field of Ayurvedha, Sidha, and Pharmacology especially in the formulation of new and potential anti-cold and skin disease drugs.

**Keywords:** Cold and Skin diseases; Ethno medicinal; Herbalists.

### Introduction

Traditionally tribals and herbalist had been using the plants to cure their ailments. This system of using herbs and different biological, active ingredients in treating various diseases had become a part of their culture till recent years<sup>1</sup>. Cold and skin diseases have been known since ages. It is well known as vasting disease due to micro organism acting in our bodies. This infectious disease persists in many ways thro' the water, air, one person to another person because of micro organisms like virus, bacteria, fungi etc. Cold (Kapa), skin diseases are one of the common diseases in day- to- day clinical practice. At present, treatment of these diseases includes use of antibiotic drugs or combined use of both the medicaments. It has been estimated that as many as 75-90 % of the world's rural people rely on herbal traditional medicine<sup>2</sup>. In view of adverse side effects of modern allopathic medicines, discovery of a safe and efficacious anti-cold and anti- skin diseases drug with little side effect is imperative. The objective of this study was to interact with local traditional healers and document their knowledge in medicinal plants which are treating cold and skin diseases in around Puducherry region.

### Material and Methods

**Study area:** The region is a flat terrain of an average elevation of about 15 meters above sea -level intersected by the deltaic channels of River Gingee and the Ponnaiyar and other streams forming in two main drainage basins, interspersed with lagoons, lakes and tanks. The main entity of Puducherry is almost in a semicircle between 11° 46'

and 12° 3' North latitude and between 79° 36' and 79° 53' of eastern longitude.

Traditional botanical knowledge on plants and their therapeutic application to respective ailments are collected from traditional or ethnic groups provided from local people from April 2007 to August 2007. Majority of medicinal plants are collected from undisturbed places, wastelands, roadsides and bushy areas. Specimen collected from the study areas were identified and compared with specimens of Herbarium, French Institute, Puducherry (HIFP). Authentic identification and nomenclature of specimens were made by referring the local flora<sup>3-6</sup>. In the following enumerations plant names have been arranged alphabetically in disease wise. The correct binomial is followed by the family within parentheses and local name in Tamil, parts are with medicinal uses.

### Results and Discussion

The Present preliminary investigation accounted to 50 species of Medicinal plants providing cold and skin diseases. This survey reveals the fact that the Puducherry and its surrounding regions are rich in medicinal plants which are shrubs, herbs and trees comprising about 50 species, 46 genera and 32 families of Angiosperms. Of the 50 species, 18 species, 16 genera and 13 families are utilised for cold treatment (Table1). While 32 species 30 genera and 24 families are utilised for the treatment of skin diseases in Puducherry region (Table 2). The enumeration of medicinal plants in Puducherry for the treatment of cold and skin diseases is the first attempt so

**Table 1.** Plants, Species, Vernacular name, family and plant parts used to treat cold in Puducherry.

Sl. No	Name, Species, (Vernacular), family	Part used and procedure
1.	<i>Adhatoda vasica</i> , (Vasaka), Acanthaceae	Leaves; Juice and bit of salt to children for cold and cough. The leaf decoction and little amount of honey mixed to give person affected cold and cough.
2.	<i>Alpinia galanga</i> , (Sitharathai), Zingiberaceae	Rhizome; The powder is mixed with milk to drink as it reduces cough and cold. The decoction of powder is also cures cold and cough.
3.	<i>Azima tetracantha</i> , (Sangan), Salvadoraceae	Leaves; Juice mixed with honey given to cure cold for children. The leaves grind with Red chili, Tamarind, Garlic and salt used to make paste. This paste is very good side dish in our food and it controls cold.
4.	<i>Boerhaavia diffusa</i> , (Muthusartanai), Nyctaginaceae	Leaves; Juice is given after the breakfast. It persists vomiting associated with cold. It is very effective method for children to cure cold.
5.	<i>Cardiospermum halicacabum</i> , (Mudakkatran), Sapindaceae	Leaves; Juice gives relief from common cold.
6.	<i>Coleus aromaticus</i> , (Karpuravalli), Lamiaceae	Leaves; Raw or fresh juice and pepper making decoction with water very good result for common cold and cough.
7.	<i>Cleome gynandra</i> , (Nalvelai), Cleomaceae	Leaves; Juice with a pinch of salt is mixed to give children for severe cold. The leaves are added as one of the food items to control cold.
8.	<i>Erythrina variegata</i> , (Kalyanamurungai), Papilionaceae	Leaves; Juice with cumin seed powder little bit of garlic and salts are mixed to give persons affected for cold especially children.
9.	<i>Leucas aspera</i> , (Thumbai), Lamiaceae	Leaves; Juice is used for skin diseases like ring worm, scabies. Flower; Boiled with milk. The flower juice mixed with milk it is given to cold affected children.
10.	<i>Melothria maderaspatana</i> , (Musumusukai), Cucurbitaceae	Leaves; Juices is used. The leaves mixed with soaked rice and crushed to make dhosa. It is also used to cure cold.
11.	<i>Moringa pterigosperma</i> , (Murungai), Moringaceae	Leaves; A bunch of leaves, garlic, cumin seeds and little salts boiled, crushed and filtered this is given to children to cure cold and cough. Leaves and pepper decoction is good relief for cold and cough. Flowers are also used.
12.	<i>Ocimum tenuiflorum</i> , (Thulasi), Lamiaceae	Leaves; Juice, decoction and raw leaf taken.
13.	<i>Ocimum canum</i> , (Kanchankorai), Lamiaceae	Leaves; Juice with salt given to children for common cold and cough.
14.	<i>Ocimum basilicum</i> , (Thiruneetrupachilai), Lamiaceae	Leaves; Juice with honey controls cold and cough.
15.	<i>Piper betel</i> , (Vetrilai), Piperaceae	Leaves; Juice and little bits of honey cure cold and cough. The leaves smeared with lime and turmeric and apply externally for wounds and muscular pain.
16.	<i>Pergularia daemia</i> , (Uthamani), Asclepiadaceae	Leaves; Juice is used to given the person affected from common cold and cough.
17.	<i>Solanum trilobatum</i> , (Thuduvalai), Solanaceae	Whole plant; Used to cure cold and cough. The leaves and flowers are mixed to our food items. The dried fruits are soaked with honey then eaten daily to cures cold.
18.	<i>Vitex negundo</i> , (Notchi), Verbenaceae	Leaves; Juice alone used and also mixed with juices like Melothria and ocimum given to cold affected person.

**Table 2.** Plants, Species, Vernacular name, family and plant parts used to treat skin diseases in Puducherry.

19.	<i>Acalypha indica</i> , (Kupaimany), Euphorbiaceae	Leaves; Paste used to apply externally to cure swelling. The leaf paste with turmeric powder used to apply abscess and itching.
20.	<i>Alangium salviifolium</i> , (Azhingil), Alangiaceae	Leaves; Paste used for scabies and rheumatism knee swelling. Root bark; Powder mixed with coconut oil and applied it for skin diseases.
21.	<i>Abutilon indicum</i> , (Thuthi), Malvaceae	Raw leaves; and raw rice are mixed to make fine powder, then one spoon of powder is mixed with 5 drops of honey it eaten by daily (one month) it cures ulcers, scabies, pyoderma, carbuncle, Eczema, vesicle etc.
22.	<i>Aristolochia bracteolata</i> , (Aadu Thinna Paalai), Aristolochiaceae	Leaf paste; Apply externally for the skin diseases like scabies (without pyoderma and with pyoderma), Lichenplanus, Ring worm, <i>Tinea versicolor</i> .
23.	<i>Azadirachta indica</i> , (Vembu), Meliaceae	Leaves; imparipinnate. Leaf pastes with turmeric apply externally to cure chicken pox, scabies, itching. Barks of this plant dried to make powder and mixed with coconut oil then apply externally for burns and pyoderma.
24.	<i>Cadaba fruticosa</i> , (Vizhuthi), Capparidaceae	Leaves; Paste apply for externally to cure abscess, swelling and sexually transmitted diseases.
25.	<i>Cassia alata</i> , (Seemai Agathi), Caesalpinaceae	Leaves; Paste is applied for externally to cure carbuncle and scar.
26.	<i>Calotropis gigantea</i> , (Erukkam), Asclepiadaceae	Latex; Applied for swellings and joint pains. Root; Paste applied for the abscesses. Flowers; Powder mix with water or milk it cures cough, colds etc.
27.	<i>Citrus limon</i> , (Lemon), Rutaceae	Leaves; With Turmeric smeared and apply for <i>Tinea versicolor</i> , <i>Tinea corporis</i> , <i>Tinea capites</i> and also Insects bites.
28.	<i>Catharanthus roseus</i> , (Nithya Kalyani), Apocyanaceae	Leaves; Paste is used to cure severe itching and scabies. The leaf juice is used to heal wasp sting and snake bites.
29.	<i>Coccinia grandis</i> , (Kovai), Cucurbitaceae	Leaves; Juice and little bit of lime and sesamam oil mixed to applied externally for scabies lichenplanus, <i>Tinea corporis</i> , <i>Tinea capities</i> and <i>Tinea versicolor</i> .
30.	<i>Commelina benghalensis</i> , (Kanavazhai), Commelinaceae	Leaves; Paste applied externally for 5 to 10 days. It cures cellulites and ulcer on skin. The continuous use of this paste cures leprosy.
31.	<i>Clitoria ternatea</i> , (Sanku poo), Papilionaceae	Root; Decoction used to cure filaria, abscesses and leprosy.
32.	<i>Cynodon dactylon</i> , (Arukampul), Poaceae	Whole plants; crushed along with turmeric ( <i>Curcuma longa</i> ) and neem ( <i>Azadirachta indica</i> ) and apply externally for measles chicken pox, wounds etc.
33.	<i>Euphorbia hirta</i> , (Ammanpatcharichi), Euphorbiaceae	Whole plant; Crushed with turmeric and add pinch of salt and applied externally up to 7 days. It cures pyoderma and lichenplanus. Leaves; Juice is used to cure asthma.
34.	<i>Ficus religiosa</i> , (Arasan), Moraceae	Bark; Powdered and mixed with coconut oil to apply 2 times daily. It cures inflammatory swellings and burns. Dried leaves; Burnt to make powder and mixed with camphor, coconut oil and then apply 10 days, it cures carbuncle.
35.	<i>Ficus hispida</i> , (Peyatti), Moraceae	Latex; Apply to cure swelling, abscesses and blister of foot

36	<i>Heliotropium indicum</i> , (Thelkoduksu thazhai), Boraginaceae	and also it cures the scar of leprosy. Leaves; Paste cure scabies, Lichenplanus and pimples on face.
37	<i>Jatropha glandulifera</i> , (Katamanakku), Euphorbiaceae	Leaves; Paste is good for cut injury, wounds and ulcers. Seeds; Used for wounds and swelling. Seed oil; Apply externally rheumatism and paralytic affections.
38	<i>Lannea coromandelica</i> , (Othiyam), Anacardiaceae	Leaves; Paste is used to apply externally for the cellulites ulcer and swellings. Bark; Paste is used for swellings or cuts.
39	<i>Lawsonia inermis</i> , (Maruthani), Lythraceae	Leaves; Paste useful in wounds, ulcers etc. ..
40	<i>Mirabilis jalapa</i> , (Andhimalli), Nyctaginaceae	Bruised leaves; Applied to boils and abscesses. Leaves: Juice applied to wounds and bruises and for allaying itching in urticaria.
41	<i>Mimosa pudica</i> , (Thotasurungi), Mimosaceae	Root; Decoction treating leprosy insect bites and vaginal diseases.
42	<i>Morinda citrifolia</i> , (Nuna), Rubiaceae	Leaves; paste apply externally for vaginal diseases, cellulites, ulcer and white mole. Bark; Paste apply externally for swelling and rheumatism. Tender leaves and Flowers; Used for cold treatment.
43	<i>Prosopis cineraria</i> , (Vanni), Mimosaceae	Leaves; Pastes apply externally for carbuncle, scabies, Lichenplanus.
44	<i>Phyla nodiflora</i> , (Poduthalai), Verbenaceae	Leaves; Pastes apply externally for 5-10 days it cures dandruff and carbuncles.
45	<i>Solanum surattense</i> , (Kantankattiri), Solanaceae	Berry; Fried with ghee it mixed with our meal as it controls cold. Leaves; Past apply continuously for ventilago. Whole plant; used as a anti-inflammatory agent.
46	<i>Solanum nigrum</i> , (Manithakkalai), Solanaceae	Root; Decoction is used for treating leprosy insect bites and vaginal diseases. Leaves; Cure acute stomatitis and cold.
47	<i>Tamarindus indica</i> , (Tamarind), Caesalpiniaceae	Bark; Powder mix with turmeric heated, then it packed on the place of abscess and swelling.
48	<i>Thespesia populnea</i> , (Poovarasu), Malvaceae	Flower; Turmeric and flower crushed to make paste and apply externally for skin diseases like cellulites and ulcer. Leaves; Paste with turmeric heated, and then it's packed in place of abscess and swelling.
49	<i>Tridox procumbens</i> , (Thatha thalai vetti), Asteraceae	Leaves; Juice insecticidal and piscicidal, also check hemorrhage of wounds.
50	<i>Wedelia chinensis</i> , (Manjal Karisalai),	Leaves; Turmeric and leaf paste applied externally for skin diseases like wounds and ulcers. Leaf is vegetable use daily in our meal it controls leprosy.

far which has provided information in Medicinal plants and parts used for the treatment of cold and skin diseases. This is a preliminary investigation accounted to 50 species of Medicinal plants providing cold and skin diseases. This survey reveals the fact that the Puducherry and its surrounding regions are rich in medicinal plants which are shrubs, herbs and trees comprising about 50 species, 46 genera and 32 families of Angiosperms (Table 1-2). The present study is compared with both national and

International enumeration of medicinal plants in which it includes 47 species of Ethanobotanical wealth of district Muzaffarnagar<sup>7</sup>, 51 species of Cholistan desert<sup>8</sup>, 115 species of Bankara district of West Bengal<sup>9</sup>, 96 species of Gharwal and Kumaon forests of Uttar Pradesh, 74 species of Tirap district, Arunachal Pradesh<sup>10</sup>, 44 species of Karnataka<sup>11</sup>, 106 species of Dharmapuri district of Tamil Nadu<sup>12</sup>, and 54 species, 52 genera, & 32 families used by tribes of Parvara, Mawachi of Konkani, Maharashtra<sup>13</sup>.

The literature revealed that more than 85 % of Indian plants have been known to possess antimicrobial activity. Out of these nearly 50 plants are frequently used species in cold treatment namely *Azima tetracantha*, *Leucas aspera*, *Ocimum tenuiflorum*, *Solanum trilobatum*, *Mukia maderaspatana*, *Moringa pterigosperma*, *Piper betel* etc. For skin diseases the plants such as *Euphorbia hirta*, *Ficus religiosa*, *Lawsonia inermis*, *Cynodon dactylon*, *Coccinia grandis* etc., are being commonly used by the local practitioners of indigenous system of medicine in India.

The study is to provide basic information to the pharmacists, Phytochemists, Pharmacognists and herbal scientists to discover new medicinal compound that could be useful in treating cold and skin disease. This study will make people of Puducherry aware of the plants found in Puducherry and its surroundings that help in management of cold and skin diseases and its related health problems.

#### Acknowledgement

We thank to Dr. N.Gururajan, Director and, Head of the Department of Botany, K.M. Centre for Post Graduate Studies, Puducherry for providing laboratory facilities.

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