

A SURVEY ON MEDICINAL PLANTS USED IN SKIN DISEASES OF CHILDREN

Dr. S. Sivashanmugarajah* BSMS(S.L.), MD(s) (India)

Senior Lecturer, Unit of Siddha Medicine, University of Jaffna, Sri Lanka.

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***Corresponding Author**

Dr. S. Sivashanmugarajah

Senior Lecturer, Unit of
Siddha Medicine University
of Jaffna, Sri Lanka.

ABSTRACT

Medicinal plants or herbs used for skin diseases of children by Tamil traditional physicians has been studied in Kilinochci District, Northern Province of Sri Lanka and presented hereunder. 24 Tamil traditional physicians were the informant. A total of 53 medicinal plants used for treating in skin diseases of children were identified in this survey. The details of herbs used with botanical name, family, local name, parts used, method of administration are tabulated. The leaves were the commonly used plants part and paste and decoction were the commonly used prepared drugs for skin disease. The documentation of

this traditional therapeutic knowledge may lead to discover effective unidentified or hidden drugs to light for diseases of children.

KEYWORDS: Medicinal plants, Skin diseases, Tamil traditional physicians.

INTRODUCTION

According to the World Health Organization (WHO) about 80% of world population depends on traditional medicine, mostly herbal medicine for their Primary Health Care needs. WHO is also encouraging and supporting local Governments to increase research efforts, training facilities and exchange of information relating to traditional medicine. Herbal treatment are often cheaper due to their local availability and accessibility (Mel Borins; 1987; 1061). In Sri Lanka, traditional medicine is practiced by Tamil speaking people in the Northern and Eastern provinces from ancient time. Many people in these provinces prefer traditional treatments especially for their diseases of children. They belief traditional herbal treatments are effective and no side effects. Tamil traditional physicians (TTPs) are used several herbs to treat children diseases. Most of their drug preparations are their own formulae and they have preserved these preparations as family secret.

It should be noted that traditional medicine had been handed over from generation to generation mostly by verbal transmission (Subramonium. A and Puspagandan. P: 1995: 354). Their knowledge in the use of herbs and herbal drugs has not been properly recorded (David J. Simbo: 2010). Now a days the descendents of these traditional practitioners are not interested in traditional practices. Hence, we should take necessary steps to record their knowledge of herbal treatment properly. If steps are not taken at this stage to carry out research and record, the valuable treasures will be lost. In this back round, a few studies have been already done in North and Eastern Provinces of Sri Lanka. Herbs used in diseases of children by Siddha traditional physicians in Mannar District was enumerated by Sivashanmugarajah (2013). Survey on commonly using medicinal plants in Muthunagar Grama Niladhari Division, Trincomalee District studied by Vidyadharshini and others (2015).

This survey was conducted to record medicinal plants used in the skin diseases of children by Tamil traditional physicians(TTPs) in Kilinochchi District, Northern Province, Sri Lanka. Skin diseases are common problems in children. A detail description of different types of skin diseases are described in Tamil Siddha Texts. (Ponnaiah.I. 1932, Murukesa Mudhaliyar KS., 1933). Aetiological factors, pathogenesis and prodromal symptoms are expressed in these texts. It is said that skin diseases of the children are successfully treated by TTPs. The documentation of these traditional therapeutic knowledge may lead to discover effective unidentified or hidden drugs to light for diseases of children.

METHODS AND MATERIALS

This survey was conducted in Kilinochchi District, Northern Province of Sri Lanka from March, 2015 – February, 2016. Kilinochchi District is one of the 25 districts of Sri Lanka and located in the north of Sri Lanka in the Northern Province. It has an area of 1,279 square kilometers. Total population is about 112,875 (According to 2012 census). The population of this district is mostly Sri Lankan Tamils. 24 TTPs were identified as informant with the help from the record of Ayurvedic Medical Council, Department of Ayurveda and Ayurveda Preservative Saba, Kilinochchi District. After explained the purpose of the study, informants were interviewed by using open ended questionnaire and open conversation. The interviews and discussions were carried out in local language. Then information of various herbs/plants against skin diseases of children were collected. The collected plants were conformed with the help of various flora, books and other publications (Jeyaweera, D.M.A. (2006), Nadkarani, K.M. (2010), Ramamurthy, K.K., (1978), Sivashanmugarajah. S, (2012). Data of

local names of the plants, plant part/parts used, mode of usage and method of administration were recorded.

RESULTS AND DISCUSSION

A total of 24 TTPs were interviewed amongst them 67% (16) were males and 33%(08) were females. 29% (07) were studied below General Certificate of Education (Ordinary level) [G.C.E.(O/L)]. Their age range from 40 to 80 years. 54% (13) of them were above 60 years. 54% (13) of the informants were above 4th generation.

A total of 53 plants used for treating in different skin diseases of children were documented in the survey. Among them 32% were trees, 51% were shrubs and herbs and 09% were climbers and creepers. All the plants were found their surroundings. The largest number of commonly used plant parts were leaf (57%) followed by stem bark(17%) and whole plant(17%) some species, different parts are used for skin diseases. The paste (36%) and decoctions (32%) were the most common prepared drugs used for treating different skin diseases. Liquid forms like juice, and decoction are easy to administer in children. Most of the drugs were external applications.

The plants details are given in the table – 1. The plants are arranged in alphabetical order. Botanical name(B.N.), family(F), local name((L.N.), English name(E.N.), the method of usage and actions (Ramanathan. P; 2002: Murukesa Muthaliyar. K.S; 2013: Emmnuel Roberts; 1931) of the plants are tabulated.

Table 1.

Serial No.	Plant	Method of usage	Actions
01	B.N. Abrus precatorious L., F- Papilionaceae, L.N. – Kuntrimani, E.N. – Crab’s eye	An extract of the leaves is boiled with gingerly oil and this oil is applied on the dermatitis (<i>karappan</i>), skin allergy(<i>kiranthy</i>) etc.	Antisuppurative
02	B.N. Acalipha indica L., F – Euphorbiaceae, L.N. – Kuppaimeni, E.N. – Indian Acalipha	1. Decoction of the leaves or whole plant is used to wash the eczema (<i>karappan</i>) 2.The extract of the whole plant is boiled with gingelly oil and turmeric (<i>Curcuma domestica</i>) powder and this oil is applied on dermatitis(<i>karappan</i>), scabies(<i>sirangu</i>) etc.	Anodyne, diuretic,
03	B.N.Alhagi pseudalhagi (Bieb) Desv., F- Papilionaceae,	5 – 10 ml of decoction of the root is given for dermatitis(<i>karappan</i>), itching, and scabies(<i>sirangu</i>)	-

	L.N. – Sirukansontri, E.N. – Camel's thorn		
04	B.N. Aloe vera L. , F- Liliaceae, L.N. – Pillai katalai, E.N. – Indian Aloe	An extract of the leaves with turmeric is applied on the dermatitis with swelling (<i>veengu karappan</i>),	-
05	B.N. Anderographis echioides Nees. , F-, Acanthaceae L.N. – Kopuram thaangi,	The extract of the whole plant is applied on eczema.	Astringent
06	Azadiracta indica L. , F – Meliaceae, L.N. – Vempu, E.N. – Margosa tree	1. 5ml of juice of the leaves is given morning and evening for three days for dermatitis and other skin diseases 2. A paste of the leaves with turmeric is applied on the dermatitis, scabies, and ring worm (<i>vattakadi</i>) 3. decoction of the leaves or stem bark or both is used to wash the wounds. 4.Oil is applied on the dermatitis and scabies	stimulant, discutient tonic, astringent antiseptic, insecticide, antipruritic
07	B.N. Basella alba L. , F- Chenopodiaceae, L.N. – Pasali, E.N. – Indian spinach	Leaves ground with <i>Curcuma domestica</i> and coconut milk and applied on the head for seborrhoeic dermatitis. The child should take head bath few hours after this application.	Demulcent, cooling,
08	B.N. Borassus flabelifer L. , F – Palmaceae L.N. – Panai E.N. – Palmyra Palm	Latex from outer bark is applied on tinea (<i>Padar Thamarai</i>) Dust of the leaves is used to arrest bleeding from wound.	Astringent
09	B.N. Calotropis gigantean L. F – L.N. Erukku E.N. - Mudar	Heated yellow leaf is applied on the abscess(<i>kattu</i>) Latex is applied to remove warts.	Anodyne, antiseptic, parasiticide
10	B.N. Capparis aphylla Roth. , F- Capparidaceae, L.N. – Senkaththari, E.N. – Caper plant	Decoction of the root is used to wash the eczema wound.	
11	B.N. Cassia occidentalis L. , F- Caesalpiniaceae, L.N. – Thakarai,	A paste of the leaves with turmeric is applied on the dermatitis with swelling (<i>veengu karappan</i>) The seeds ground with water and applied on ringworm(<i>vattakadi</i>)	Parasiticide
12	B.N. Cassia lata L. , F – Caesalpinoideae L.N. – Vandu kolli, Aanaithakarai	1.tender leaves ground with lime juice and applied on psoriasis(<i>kalansakappadai</i>) and Tinea versicolor (<i>padar thamarai</i>)	
13	B.N. Clitoria tenata L. ,	1. 5ml of juice of the leave is given	Diuretic, demulcent

	F – Papilionaceae, L.N. – Karuththappookkodi, E.N. – Butterfly Pea	morning and evening for dermatitis. 2.Tender leaves ground with water and applied on the head for seborrhoeic dermatitis (<i>Mandai karappan</i>) and dandruff(<i>poduku</i>) The child should take head bath few hours after this application. 3. 3. 5 – 10 ml of the decoction of the root is given morning. This acts as laxative.	
14	B.N. Cynodon dactylon L., F- Gramineae, L.N. – Aruku, E.N. – Dog grass	The juice of the whole plant is boiled with gingerly oil and this oil is applied on eczema, scabies and pediculosis(rashes of <i>thalaipen</i>)	Emollient, astringent, styptic, antipruritic
15	B.N. Datura alba L., F – Solanaceae, L.N. – Oomaththai, E.N. – Thorn apple	Heated leaves applied on eczema with swelling (<i>veengu karappan</i>)and abscess(<i>kattu</i>)	Antiseptics, anodyne
16	B.N. Enicostema verticillare L. F – Gentianaceae, L.N. – Vellaruku, E.N. – Indian gentian	2 tea spoon of decoction of whole plant is given for dermatitis (<i>Kolli karappan</i>) Paste of the whole plant is applied over the scabies	Tonic, alterative, laxative
17	B.N. Erythrina indica L, F – Papilionaceae, L.N. – Mulmurukku, E.N. – Coral tree	Juice of the leaves is applied on seborrhoeic dermatitis(<i>Mandai karappan</i>) thrice a week. Note – this juice is applied in the morning and after three hours the baby should take head bath	Anti-inflammatory
18	B.N. Eugenia jambolana L., F- Myrtaceae, L.N. – Naval, E.N. – Jambu tree	Decoction of the stem bark is used to wash the eczema (<i>karappan</i>) Decoction is used as gargle for stomatitis and candidiasis.	Astringent, styptic
19	B.N. Euphorbia hirta L., F – Euphorbiaceae, L.N. – Amman pacharisi, E.N. – Australian Asthma weed	Decoction of the leaves or whole plant is used internally for dermatitis Latex is applied on the warts(<i>paalunni</i>) and whitlow	Refrigerant, laxative, astringent, antiseptic
20	B.N. Euphorbia tortilis L. F – Euphorbiaceae, L.N. – Thirukukalli, E.N. – Milk Hedge	Latex is mixed with castor oil and boiled. This oil is used 5ml internally in the morning for 3 days to cure eczema (<i>karappan</i>)	Purgative, rubefacient, parasiticide
21	B.N. Ficus benghlensis L., F- Moraceae, L.N. – Aal, E.N. – Banyan tree	Decoction of the stem bark is used to wash the oozing eczema (<i>Alukuni karappan</i>) Decoction of the stem bark is used to gargle for candidiasis(<i>vaai akkaram</i>)	Astringent, tonic, styptic

		Heated leaf is applied on abscess(<i>kattu</i>)	
22	B.N. Ficus glomerata Roxb., F- Moraceae, L.N. – Aththi, E.N. – Country Fig	Decoction of the stem bark is used to wash the oozing eczema (<i>Alukuni karappan</i>)	Astringent, styptic, emollient
23	B.N. Ficus religiosa L., F- Moraceae, L.N. – Arasu, E.N. – Bo tree	1. Decoction of stem bark is used internally for dermatitis. It is believed that it reduces itching. 2. decoction of the stem bark is also used externally to wash the eczema wound.	Astringent, styptic
24	B.N. Ficus retusa L., F- Moraceae, L.N. – Iththi,	Decoction of the stem bark is used to wash the oozing eczema (<i>Alukuni karappan</i>)	Astringent, styptic
25	B.N. Gmelina asiatica L. F – Verbenaceae L.N. – Kumil E.N. – Small Kashmere	Outer cover of the fruit is applied on whitlow(<i>nakasutru</i>)	Astringent
26	B.N. Gossipium arboretum L., F – Malvaceae, L.N. – Semparuththi	5ml.of juice of the flower is given morning and evening for dermatitis (<i>karappan</i>)	Cooling, astringent, diuretic, demulcent
27	B.N. Gossipium herbaceum L. F – Malvaceae L.N. – Paruththi E.N. – Cootton Plant	Paste of the leaves applied on the abscess	Astringent, tonic
28	B.N. Hibiscus rosa sinensis L., F – Malvaceae, L.N. – Sevvaraththai, E.N. – Shoe flower	Flower is boiled with gingerly oil and this oil is applied for dermatitis. 2. A paste of the leaves is applied on the head for seborrhoeic dermatitis (<i>Mandai karappan</i>) and dandruff(<i>poduku</i>) in the morning twice a week. The baby should take head bath few hours after using this paste.	Emollient, demulcent, refrigerant, astringent
29	B.N. Indigofera tinctoria L., F- Papilionaceae, L.N. – Avuri, E.N. – Indigo plant	The extract of the leaves is boiled with gingerly oil and this oil is applied on the dermatitis (<i>karappan</i>), pediculosis(<i>thalaipen</i>), dandruff(<i>poduku</i>) and psoriasis (<i>Kaalanchakapadai</i>)	Germicide, stimulant
30	B.N. Jasminum angustifolium Vahl., F- Oleaceae, L.N. – Kaattu mallikai, E.N. – Wild jasmine	A Paste of the leaves is applied on the eczema	Astringent, deobstruent,
31	B.N. Lippia nodiflora Rich., F- Verbinaceae, L.N. – Poduthalai, E.N. – Mal-grass	A paste of the leaves is applied on the head for seborrhoeic dermatitis (<i>Mandai karappan</i>)	Astringent, demulcent, deobstruent, tonic

32	B.N. Lawsonia inermis L. F- L.N. – Maruthontri E.N. – Henna Plant	1. Leaves ground with cucumber and this paste is applied on the fissured foot(<i>pitta vedippu</i>). 2. A paste of the leaves prepared with lime juice and is applied on the whitlow(<i>nakachchutru</i>), scabies(<i>sirangu</i>)	Astringent, detergent, deodorant
33	B.N. Mimosa pudica L., F- Mimosoideae, L.N. – Thottal surungi, E.N. – Sensitive plant	Decoction of the leaves is used to wash the eczema wound.	Astringent, Alterative, tonic, antipruritic
34	B.N. Nelumbium nuciferum Gaertn F – Nymphaeaceae L.N. – Thaamarai E.N. – Sacred Lotus	Tender leaves or flowers ground with lime juice and applied on Tinea versicolor(<i>padar thamarai</i>).	Cooling, astringent,
35	B.N. Ocimum sanctum L., F – Labiaceae L.N. – Thulasi E.N. – Sacred Basil	The extract of the leaves is applied on the head for pediculosis(<i>thalaipen</i> rashes). The child should take head bath few hours after using this paste.	-
36	B.N. Odina wodier Roxb., F- Anarcadiaceae, L.N. – Othi, E.N. – Odina tree	1. A paste of the tender leaves is applied on eczema. 2. Decoction of the stem bark is used to wash the eczema (<i>karappan</i>) and other skin rashes	Astringent, tonic, disinfectant, styptic
37	B.N. Pongamia pinnata L., F – Fabaceae, L.N. – Punku, E.N. – Indian Beach tree	Latex is mixed with coconut oil and boiled. This oil is applied on the dermatitis.	Astringent, alterative, parasiticide, antiseptic
38	B.N. Portulaca quadrifida L., F – Portulacaceae L.N. – Pajiri E.N. – Garden purslane	Whole plant is ground with butter(white ghee) and applied impertigo(<i>akki</i>)	Astringent, refrigerant, demulcent, emollient
39	B.N. Premna tomentosa L., F- Verbenaceae, L.N. – Purankai naari, E.N. – Wooly – leaved Fire brand Teak	A paste of leaves along with Curcuma domestica is applied on eczema every other day.	-
40	B.N. Psidium guajava L., F- Myrtaceae, L.N. – Koiyaa, E.N. – Guava	A paste of the tender leaves is applied on eczema.	Astringent, tonic
41	B.N. Psoralea corylifolia L. F – Papilionaceae L.N. – Kaarpokarisi E.N. – Babchi seeds	Seeds ground with lime juice and applied on the leucoderma(<i>venpadai</i>).	Antiseptic

42	B.N. Ruellia strepens L., F - Acanthaceae, L.N. – Kiranthi naayan,	Juice of the leaves or whole plant is applied on the dermatitis.	Germicide
43	B.N. Rungia repens Nees F – L.N. - Kodakasaalai	Paste of the whole plant is applied on dermatitis, wound etc.	-
44	B.N. Sapindus trifolius L., F- Sapindaceae, L.N. – Punalai pazham, E.N. – Soap nut tree	the fruit is ground with hot water and applied on the head for seborrhoeic dermatitis. The child should take head bath few hours after this application.	-
45	B.N. Sida carpinifolia L., F- Malvaceae, L.N. – Pazhampaasi	A paste of leaves is applied on eczema every other day.	-
46	B.N. Solanum nigrum L. F – Solanaceae L.N. – Manithakkali E.N. – Balck night shade	5-10ml of juice of the leaves is given internally for mouth ulcers(<i>vaai pun</i>)	Alterative, diuretic, demulcent
47	B.N.Sphaeranthus amaranthoides Burn., F- Compositae, L.N. – Sivakaranthai, E.N. – East Indian Globe – Thistle	50 – 100mg of powdered whole plant is given with sugar morning and evening after meals for 10 days to cure eczema.	Aromatic, astringent, diuretic
48	B.N. Tamarindus indicus L., F- Caesalpiaceae, L.N. – Puli, E.N. – Tamarind	Decoction of the leaves or stem bark is used to wash the eczema with swelling (<i>veengu karappan</i>)	Astringent, tonic, anti pruritic
49	B.N. Terminalia chebula L., F- Combritaceae, L.N. – Kadukkai, E.N. – Ink nut	1. Powder of the dried fruit is used with hot water for constipation in eczema. 2. Decoction of the fruit with the fruits of Nelli and Thantri is used to was the eczema wound. 3. 5 – 10ml of this decoction is also given internally for one week to cure dermatitis.	Laxative, astringent
50	B.N. Thespesia populnea L., F- Malvacea, L.N. – Poovarasu, E.N. – Tulip tree	1. Decoction of the stem bark is used to wash the eczema (<i>karappan</i>) 2. Decoction of the stem bark is boiled with gingerly oil and this oil is applied on the dermatitis. 3. A paste of the tender leaves is applied on eczema and scabies.	Detergent
51	B.N. Trianthema decandra L. F- Aizoaceae, L.N. – Saranai,	1-2 teaspoon of the decoction of rhizome is given orally, morning and evening to cure eczema with swelling (<i>Karappan veekkam</i>)	Laxative, diuretic,
52	B.N. Verninia zeylanica Less.,	1. A paste of the leaves is applied on eczema.	

	F- Compositae, L.N. – Kuppilai,	2. An extract of the leaves is boiled with gingelly oil and this oil is applied on the dermatitis(<i>karappan</i>).	
53	B.N. Zizyphus jujuba Lam., F- Rhamnaceae, L.N. – Elanthai, E.N. –Indian Plum	Paste of the leaves is applied on the head for seborrheic dermatitis (<i>kapala karappan</i>) in the morning for twice a week. The baby should take bath few hours after using this paste.	Astringent, emollient

CONCLUSION

This survey revealed that 53 herbs/plants used for treating different types of skin diseases of children like dermatitis(Karappan), skin allergy(kiranthi), dandruff(*poduku*), abscess(*kattu*), psoriasis(kalanchakapadai), urticaria(Kolli karappan), scabies(sirangu), candidiasis(vai akkaram), Tinea capitis(puzhu vettu), Tinea corporis(vatta kadi), Tinea versicolor(*padar thamarai*), impetigo(*akki*), pediculosis(thalai pen), whitlow(*nakasutru*), fissure foot(*piththa vedipu*), leucoderma (*venpadai*), warts(*paalunni*).

The purpose of this study was to report information concerning medicinal plants used in skin diseases of children. This survey documented that single medicinal plant is used for treating different skin diseases in children. Different parts of same plant also used to treat skin conditions. The drugs which are used to the patients especially in pediatric patients must be no or less adverse effects. Most of these plants used for externally for skin diseases. These herbs and herbal preparations are also economical due to locally and easily availability. According to Material Medica most of these plants have astringent, alterative and antiseptic actions. Further investigations, experimental trials and clinical studies of these plants are necessary for scientific validation. Most of the TTPs are above 50 years. There fore their descendents should be encouraged to practice.

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REFERENCES

1. Mel Borins, *Traditional Medicine in India*; CAN.FAM.PHYSICIAN, 1987; 33: 1061.

2. David J Simbo, (2010). *An ethnobotanical Survey of Medicinal Plants in Babungo, North Region Cameroon*; Journal of Ethnobiology and Ethnomedicine; <http://www.ethnobiomed.com/consent/6/1/8>
3. Pushpangandan and others, *Glimpses of Indian Ethnopharmacology, Thiruvananthapuram*, 1995; 354.
4. Sivashanmugarajah S. *A Survey on Herbs used in diseases of children by Siddha Traditional Physicians in Mannar District*; 1st International Conference on Unani, Ayurveda, Siddha and Traditional Medicine, 2013.
5. Vidyadharshini. K, Dharshikah. S, Gunadasa. HLTN, Mohanalohini. N *Survey on commonly using medicinal plants in Muthunagar Grama Niladhari Division, Trincomalee District, Sri Lanka* ; 2nd International Conference on Agriculture and Forestry, 2015.
6. Murukesa Mudhaliyar KS., *Diseases of Children (Balavagadam)*; 1st ed. Government press, Chennai, 1933.
7. Ponnai. I, *Parrasasekaram Balaroga Nidhanam*: Elalai Thirugnanasampanthar press, 1932.
8. Jeyaweera, D.M.A. *Medicinal Plants used in Ceylon – Part 1 -5*. The National Science Foundation, 2006.
9. Nadkarani, K.M. *Indian Materia Medica – Vol 01*. Popular prakashan Pvt.Ltd., 2010.
10. Ramamurthy, K.K. *Tamil Nadduth Thavarankal*. Tamil Nadu, 1978.
11. Sivashanmugarajah, S. *Dictionary of Medicinal Plants*. Siddha Medical Development Society, 2012.
12. Ramanathan, P. *Action of Herbs*. Mahathma Printers, Ealalai, 2002.
13. Murukesamuthaliyar, KS. *Siddha Materia Medica*. Indian Medicine & Homeopathy, Chennai, 2013.
14. Emmanuel Roberts. *Vegetable Materia Medica*. Colombo Plate Limited, 1931.