

ETHNOMEDICINAL PLANTS USED TO CURE DIARRHOEA AND DYSENTERY IN SIVAGANGAI DISTRICT OF TAMIL NADU, INDIA

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ABSTRACT

The people residing in Sivagangai district of Tamil Nadu mostly depend on the vegetation around them for the prevention as well as the treatment of diseases and ailments. Information on ethnomedicinal uses of plants, their doses and mode of administration have been collected from the local traditional medicine practitioners (Vaithiyar) as well as experienced men and women. The paper deals with 34 ethnomedicinal plants of 32 genera belonging to 27 families used by the villagers for diarrhoea and dysentery in Sivagangai district. Most of these plants are commonly available in natural sources in the district and some were obtained from local dealers. Taking the medicine as extract either with milk or honey is the major mode of treatment. Isolation of active principles, pharmacological investigations, and the potent anti-microbial activity should be studied on these medicinally important species. Attention should also be made on proper exploitation and utilization of these medicinal plants.

KEY WORDS: Diarrhoea, Dysentery, Medicinal plants, Sivagangai, Tamil Nadu.

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INTRODUCTION

The value of medicinal plants to the mankind is very well proven. It is estimated that 70 to 80% of the people worldwide rely chiefly on traditional health care system and largely on herbal medicines¹⁻³. India harbours about 15 percent (3000 – 3500) medicinal plants, out of 20,000 medicinal plants of the world. About 90 percent of these are found growing wild in different climatic regions of the country⁴. Scientific investigations of medicinal plants have been initiated in many parts of our country because of their contributions to health care. The tribal and rural people of various parts of India are highly depending on medicinal plant therapy for meeting their health care needs. This is attracting the attention of several botanists and plant scientists who directing vigorous researches towards the discovery or rediscovery of several medicinal plants along with their medicinal remedies for various diseases. Few works have been carried out on the medicinal plants used for the treatment of diabetes and jaundice⁵ and menstrual disorders⁶ among the rural people of Sivagangai district. In such a way, the present work was carried out to explore the

medical remedies of some medicinal plants used by the people of Sivagangai district in Tamil Nadu to cure diarrhoea and dysentery.

MATERIALS AND METHODS

The entire area of Sivagangai District lies between 9° 30' N and 10° 30' N latitude and 77° 00' E and 78° 30' E longitude. The district is spread over an area of about 4189 sq. km and is bounded on the North and Northeast by Pudukkottai district, on the Southeast and South by Ramanathapuram district, on the Southwest by Virudhunagar district and on the West by Madurai district. The district receives an annual rainfall is about 635 – 1000 mm. The maximum and minimum temperature varies between 24° and 40°.

The study area was surveyed randomly in 30 locales including remote villages of Sivagangai district during different seasons from July, 2010 to December, 2010. Interviews and detailed personal discussions were conducted with the local people who have unique knowledge about the medicinal uses of plants. A total of 100 respondents were interviewed, these included 50

males, 30 females and 20 herbal doctors (*Vaithiyar*) that depended on plant as sources of medicines either for self-medication or for treating others. The age of the interviewed persons ranged 30 – 85. Before each interview Prior Informed Consent was taken from the interviewed persons to record the conversations. Flora of Tamil Nadu Carnatic⁷ and An Excursion Flora of Central Tamil Nadu⁸ were used to ascertain the nomenclature of the plant species.

RESULTS AND DISCUSSION

The paper includes 34 mode of remedies prepared from 34 plant species belonging to 32 genera of 27 families were used by the inhabitants of different localities in Sivagangai district to cure diarrhoea and dysentery. The botanical names are arranged in the alphabetical order followed by the family local name and a brief note on plant parts, mode of administration, dosage, etc. were given in the table 1. Out of 34 mode of remedies from 34 different plants, 11 herbal remedies from 11 plants (*Bauhinia purpurea*, *Borassus flabellifer*, *Ficus glomerata*, *Hibiscus vitifolius*, *Moringa oleifera*, *Pedaliium murex*, *Psidium guajava*, *Sesbania aegyptiaca*, *Solanum torvum*, *Tamarindus indica* and *Vernonia cinerea*) were used to cure diarrhoea and 14 remedies from 14 plants (*Carica papaya*, *Cissus quadrangularis*, *Cynodon dactylon*, *Desmodium triflorum*, *Euphorbia hirta*, *Fimbristylis cymosa*, *Melochia corchorifolia*, *Mollugo cerviana*, *Morinda tinctoria*, *Pavonia odorata*, *Punica granatum*, *Sida cardifolia*, *Myristica fragrans* and *Typhonium trilobatum*) were used for the treatment of dysentery. 9 modes of remedies from 9 different plant species (*Asparagus racemosus*, *Desmodium gangeticum*, *Ficus benghalensis*, *Mimusops elengi*, *Murraya koenigii*, *Nelumbium speciosum*, *Papaver somniferum*, *Phyllanthus niruri* and *Stachytarpheta indica*) were used to cure both diarrhoea and dysentery. Out of 14 remedies used for dysentery, 4 from 4 plants (*Carica papaya*, *Cynodon dactylon*, *Myristica fragrans* and *Typhonium trilobatum*) were used to cure blood dysentery by the rural people of Sivagangai district. Most of these plants are commonly available in natural sources in the district and some were obtained from local dealers. Taking the medicine as extract either with milk or honey is the major mode of treatment.

CONCLUSION

Due to the growing importance of ethnobotanical studies, it is necessary to collect the informations about the knowledge of traditional medicines, preserved in tribal and rural communities of various parts of India before it is permanently lost. Diarrhoea and dysentery are one of the

common diseases in rural areas of Sivagangai district. Having the above facts in mind, an attempt was made to explore the medical remedies of some medicinal plants used by the people living in Sivagangai district in Tamil Nadu to cure diarrhoea and dysentery. These ethnomedicinal data may provide a base to start the search the new compounds related to phytochemistry, pharmacology and pharmacognosy. Therefore, Isolation of active principles, pharmacological investigations, and the potent anti-microbial activity should be studied. This may provide new sources of herbal drugs and help to understand the molecular basis of their activities. Moreover, it may further be mentioned that over exploitation of these species in the name of medicine may lead some species ultimately to the disappearance in future. Therefore, attention should also be made on proper exploitation and utilization of these medicinal plants.

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Table 1: Plants used to cure diarrhoea and dysentery in Sivagangai district, Tamil Nadu

S. No.	Botanical Name	Family	Local Name	Uses
1	<i>Asparagus racemosus</i> L.	Liliaceae	Thanneervittaan Kizhangu	100 grams of tuber is dried and powdered. The powder in 200 ml of milk is given to drink twice daily for 2 – 3 days to cure diarrhoea and dysentery.
2	<i>Bauhinia purpurea</i> L.	Caesalpiniaceae	Mandhaarai	Decoction of root bark is taken orally twice daily for 2 days to cure diarrhoea.
3	<i>Borassus flabellifer</i> L.	Arecaceae	Panai	4 – 5 tender endosperms are eat as raw for 2 days to cure diarrhoea.
4	<i>Carica papaya</i> L.	Caricaceae	Pappaali	50 grams of fruit pieces are soaked in honey for few minutes and eat twice daily for 4 – 5 days to cure blood dysentery.
5	<i>Cissus quadrangularis</i> Mant.	Vitaceae	Pirandai	50 grams of young tops are cooked and eaten 3 times per day with normal diet for 3 days to cure dysentery.
6	<i>Cynodon dactylon</i> (L.) Pers.	Poaceae	Arugambull	3 teaspoon of root extract is given to drink with 200 ml of cow milk twice a day for 4 days to cure blood dysentery.
7	<i>Desmodium gangeticum</i> (L.) DC.	Fabaceae	Pulladi	Leaf decoction is given to drink twice a day for 2 – 3 days to cure diarrhoea and dysentery.
8	<i>Desmodium triflorum</i> (L.) DC.	Fabaceae	Sirupulladi	Decoction of leaves is taken orally along with 100 ml of milk twice a day for 2 days to get relief from dysentery.
9	<i>Euphorbia hirta</i> L.	Euphorbiaceae	Amaanpachcharisi	20 grams of leaf paste is mixed with 150 ml of goat milk and consumed thrice a day for 2 days to cure diarrhoea and dysentery.
10	<i>Ficus benghalensis</i> L.	Moraceae	Aalam	Stem bark decoction is taken orally with 40 – 50 ml of honey twice a day in empty stomach for 3 days to cure diarrhoea and dysentery.
11	<i>Ficus glomerata</i> Roxb.	Moraceae	Athi	3 teaspoon of root extract is given to drink with 100 ml of cow milk three times a day for 3 days to cure diarrhoea.
12	<i>Fimbristylis cymosa</i> R.Br.	Cyperaceae	Kothuppullu	Root extract is taken orally in empty stomach along with 100 ml of milk for 2 – 3 days to cure dysentery.
13	<i>Hibiscus vitifolius</i> L.	Malvaceae	Aattuparuthi	Leaf infusion is taken with 50 ml of milk twice day for 2 days to cure diarrhoea.
14	<i>Melochia corchorifolia</i> L.	Sterculiaceae	Pinnaakkuppoondu	Leaf decoction is taken orally thrice daily for 2 days to cure dysentery.
15	<i>Mimusops elengi</i> L.	Sapotaceae	Magizham	2 – 3 teaspoon of fruit extract is given to drink with 100 ml of cow milk once daily in morning for 3 days to cure diarrhoea and dysentery.
16	<i>Mollugo cerviana</i> (L.) Ser.	Aizoaceae	Parpaadagam	20 – 30 grams of leaf paste is mixed with 200 ml of rice water and taken orally once daily in empty stomach for 2 – 3 days to cure dysentery.
17	<i>Morinda tinctoria</i> Roxb.	Rubiaceae	Manjanathi	5 – 10 leaves are boiled and a decoction is prepared and 30 – 50 ml is taken orally three times a day for 3 days to cure dysentery.
18	<i>Moringa oleifera</i> Lam.	Moringaceae	Murungai	Hand full leaves are roasted with small amount of salt. The roasted leaves are powdered and the powder is mixed with 100 ml hot water and given to drink twice daily for 3 days to cure diarrhoea.
19	<i>Murraya koenigii</i> Spreng.	Rutaceae	Kariveppilai	Leaf extract is taken once daily for 2 days to cure diarrhoea and dysentery.
20	<i>Myristica fragrans</i> Houtt.	Myristicaceae	Jaadhikkaai	10 grams of fruits are powdered and powder is taken orally with 50 ml of honey twice a day for 3 – 4 days to cure blood dysentery.
21	<i>Nelumbium speciosum</i> Willd.	Nymphaeaceae	Thaamarai	Rhizome decoction is taken orally once daily in morning for 2-3 days to cure diarrhoea and dysentery.
22	<i>Papver somniferum</i> L.	Papaveraceae	Kasakasaa	2 teaspoon of seed oil is given to drink with 50 ml of honey three times daily for 2 – 3 days to cure diarrhoea and dysentery.
23	<i>Pavonia odorata</i> Willd.	Malvaceae	Peraamutti	Root decoction is given to drink once daily in morning for 3 – 4 days to cure dysentery.
24	<i>Pedaliium murex</i> L.	Pedaliaceae	Yaana nerungil	Fruit decoction is given to drink with 50 – 100 ml of hot water twice a day for 2 – 3 days to cure diarrhoea.
25	<i>Phyllanthus niruri</i> L.	Euphorbiaceae	Keelaanelli	Leaf extract is taken orally once daily in empty stomach for 2 – 3 days to cure diarrhoea and dysentery.
26	<i>Psidium guajava</i> L.	Myrtaceae	Koyyaa	Stem bark decoction is given orally two times per day for 2 days to cure diarrhoea.
27	<i>Punica granatum</i> L.	Punicaceae	Maadhulai	Extract of young flower is taken orally twice daily for 2 – 3 days to cure dysentery.
28	<i>Sesbania aegyptiaca</i> Pers.	Fabaceae	Chithagathi	200 grams of leaves are cooked and giving to eat three times a day for 2 days to cure diarrhoea.
29	<i>Sida cordifolia</i> L.	Malvaceae	Nilathuthi	3 teaspoon of leaf extract is given to drink once a day in

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				morning with 100 ml of cow milk to cure dysentery.
30	<i>Solanum torvum</i> Sw.	Solanaceae	Sundai	5 – 10 fruits are roasted and powdered. The powder is eaten with normal diet thrice daily for 2 days to cure diarrhoea.
31	<i>Stachytarpheta indica</i> (L.) Vahl	Verbenaceae	Seemainaayuruvi	Infusion of root bark is taken twice a day for 3 days to cure diarrhoea and dysentery.
32	<i>Tamarindus indica</i> L.	Caesalpiniaceae	Puli	10 grams of seed coat powder is mixed with 100 ml of milk and given to drink thrice a day for 3 – 4 days to cure diarrhoea.
33	<i>Typhonium trilobatum</i> Schott.	Araceae	Karunaikkizhangu	50 – 100 grams of rhizome is cooked with 10 grams of Onion (Vengaayam) and given to eat with normal diet twice daily for 5 days to cure blood dysentery
34	<i>Vernonia cinerea</i> Less.	Asteraceae	Seedevishengaluneer	Root decoction is given to drink once daily in empty stomach for 2 days to cure diarrhoea.

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