

Plants in child care in Ahmednagar district, Maharashtra (India)

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Abstract

The present ethno-botanical explorations conducted in forest areas of Ahmednagar district resulted in the information about traditional plant uses of 47 plants species belonging to 30 Angiospermic families. Of these, maximum species belongs to Euphorbiaceae with 5 species, 3 species to Fabaceae and Solanaceae each. Information gathered from district indicates that the tribals, and other village people of this region possess good knowledge of herbal drugs for treating diseases of their children, but their continuous and progressive exposure to modernization may result in extinction of the such rich heritage of knowledge in the course of time. Diseases / ailments found prevalent in the area are skin diseases, respiratory diseases, tooth ache, fever, liver disorders and wounds.

Keywords: Traditional plant uses, children health, Ahmednagar, Maharashtra.

INTRODUCTION

The district with its glorious floristic heritage possesses multiple ethnic cultures which have their own way of treating diseases with plant medicine. People reside in villages still depend on the plants and use them to prevent and cure the diseases of their children. The communities, thus, maintain a traditional health care system based on surrounding local natural resources. It has been transmitted from generation to generation through verbal means and mostly restricted among the aged people of the communities or elderly women of the families, vaidyas, and herbal practitioners.

In remote areas within the district there are not enough modern medical facilities and practically health care system of the area mostly depends on traditional system of medicine treated by herbs which they find and think most effective and convenient to use in child health care system.

The present paper deals with 47 angiosperm plant species used in various diseases/ailments of children. The target age group has been considered from newborn baby to children up to 12 years.

During the last few decades several workers have made notable contributions on useful plants of the area (Chaudhari et al, 1976; Mudgal et al., 1977; Mukherjee et al., 1978; Naskar and Guha Bakshi, 1986, Naskar, 1993; Pal et al., 1998; Trivedi et al., 1993, Gayake & Sharma) but meager attention has been given to children health care.

METHODOLOGY

The present work included survey and documentation of

plants useful in children health care. The methodology used for procuring information through interviews of villagers and forest dwellers with knowledge of plants for medicinal, purposes. Interviews consisted of open and semi-structured questions and the information collected was verified during different occasions with same informant and in different localities with other informers on different occasions. Plants identified in the laboratory using keys for botanical determination given in different floras such as, Singh *et al*, (2000 & 2001) Cooke (1958), Pradhan and Singh (1999), etc. Some earlier studies on ethnomedicinal practices are Jain (1991); Kumar & Sharma (1996); Reddy & Sudarshana (1987); Sabastian (1984); Sabastain & Bhandari (1984); Sensarma (1991); Sharma & Singh (2001).

Enumeration of plants includes botanical name and family in parenthesis which is followed by local name and uses with detailed formulation, mode of use and doses.

From the plant species collected during the field studies 47 angiosperm plants have been sorted out and provided in Table I. They are related to the various pediatric problems in the area. These species have been utilized as home remedies.

1. *Abrus precatorius* L. (Fabaceae). *Gunj*

Use: Cough: Leaf juice about 5 ml is taken twice a day for 3 days to cure cough.

2. *Acacia nilotica* (L.) Delile ssp. *indica* (Bth.) Brenan (Mimosaceae). *Bubul*.

Uses:

- Dysentery: Gum 5 ml is dissolved in 1 cup of water and is given in the morning on empty stomach for 3 days to cure dysentery.
- Diarrhea: About 2 gm Leaf bud paste mixed with a pinch of dried rhizome powder of *Zingiber officinale* Rosc. Is given with water, twice a day for 2-3 days.
- Swelling and painful mumps: Leaf paste is applied on affected area to reduce the swelling and pain.

Received: Aug 10, 2012; Revised: Sept 10, 2012; Accepted: Oct 25, 2012.

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3. ***Acalypha indica*** L. (Euphorbiaceae). *Deepmal*.

Uses:

- Fits in Children: 5 ml decoction of tender aerial shoots with a pinch of common salt is given with water twice a day for 2-3 days.
- Cough and other respiratory diseases: 1 gm powder of dries whole plant is given with honey twice a day for 4-5 days.
- Cough and congestion of respiratory track: 10 ml plant juice mixed with 5ml ghee, warmed over fire and massaged gently over chest and neck to get relief.
- Ear ache: One drop of plant juice is pored in the ear.

4. ***Achyranthes aspera*** L. (Amaranthaceae). *Aghada*.

Uses:

- Cough and Cold: Whole plant juice 5 ml is used twice a day for 2-3 days to cure cough and cold.
- Swelling and pain due to insect bite: Root paste is applied on affected area of insect bite.

5. ***Acorus calamus*** L. (Arcaceae). *Vekhand*.

Uses:

- Diarrhea: Rhizome paste (1-2 gm) with water is given thrice a day for 2-3 days.
- Chicken pox: 5 gm rhizome paste with a little water is applied twice a day up to 7 days to treat boils.
- Mouth Ulcer: A pinch of rhizome paste mixed with and applied inside mouth, twice a day for 1-2 days or till cure.
- Cough, cold and fever: 5 ml decoction of rhizome is given twice a day till cure.

6. ***Aegle marmelos*** (L.) Corr. (Rutaceae). *Bel*.

Uses:

- Fever: Juice extracted from 2-3 fresh leaves with a pinch of salt is given on empty stomach for 2-3 days to cure fever.
- Dysentery and Diarrhea: Powder of dried green fruit pulp with water is given once day for 2-3 days to treat dysentery, diarrhea.
- Constipation: Ripen fruit pulp mixed with sugar and juice is prepared, given once at night for 7-8 days.

7. ***Ageratum conyzoides*** L. (Asteraceae). *Osadi*.

Uses:

- Dysentery: Plant extract 5 ml with a pinch of common salt is given twice a day for two days
- Stomach pain: Leaf juice 5 ml is given in stomach pain.

8. ***Ailanthus excelsa*** Roxb. (Simaurubiaceae). *Maharuk*.

Uses:

- Scabies and sores: Leaf paste is applied till cure.

- Dysentery: 1-2gm root paste is given twice a day for 2-3 days.

9. ***Amaranthus viridis*** L. (Amaranthaceae). *Math*.

Use: Constipation: Boiled tender twigs with a pinch of salt is used to care.

10. ***Argemone mexicana*** L. (Papaveraceae). *Pivala dhotra*.

Uses:

- Plant juice 5 ml is used once a day for 3 days for the treatment of whooping cough.
- Latex of stem is mixed with equal quantity of coconut oil. It is applied once a day for 2-3 days for treatment of scabies.
- Stem juice 1-2 drops is applied on eye to cure ophthalmic infections.

11. ***Asparagus racemosus*** Willd. (Liliaceae). *Shatavari*.

Use: Root juice about 20ml with water is used daily for 2-3 days to cure blood dysentery.

12. ***Azadirachta indica*** A. Juss. (Meliaceae). *Kadu Limb*

Uses:

- Fever: 1 teaspoonful powder of dried leavest in a glass of water, mixed applied over body once daily to cure fever in infants.
- Scabies: Stem bark ash is mixed with coconut oil and applied.

13. ***Bacopa monnieri*** (L.) Penn (Scrophulariaceae). *Nira-Brahmi*

Uses:

- Brain tonic: 5-10ml plant juice with ½ cup of cow's milk given once a day for 20-25 days.
- Cough and chest congestion: 10 ml juice of whole plant mixed with 25ml mustard oil and 5 gm of black 'mung' flour (*phaseolus mungo* L. seeds) warmed and gently massaged over chest to get relief from pain due to congestion.
- Cold: Plant juice of 5 ml with ½ cup lukewarm cow's milk, given twice a day for 2-3 days to cure cold.

14. ***Boerhavia diffusa*** L. (Nyctaginaceae). *Punamava*.

Uses:

- Cough: 10ml leaf extract with and few ml of honey is given twice a day 5-6 days to cure cough.
- Boils: Leaf paste is applied to treat boils.

15. ***Carica Papaya*** L. (Carocaceae). *Papai*

Use: Jaundice and Liver problems: 3-5 drops latex of green fruit mixed with sugar given once a day in the morning for 20-25 days to reduce the enlargement of liver.

16. ***Cassia fistula*** L. (Caesalpiniaceae). *Bahawa*.

Uses:

- Tonsillitis: Paste of ripe fruit is applied on throat once in a

day to cure tonsillitis.

b) Pus in Ear: Fruit pulp is applied to cure ear pus.

17. *Centella asiatica* (L.) Urban. (Apiaceae). *Bramhi*.

Uses:

a) Dysentery and Diarrhea: 5 ml leaf juice given twice a day for 2-3 days.

b) Brain Tonic: Leaf juice 5 ml or powder of leaves 1-2 gm with $\frac{1}{2}$ cup cow's milk given for 20-25 days to school going children.

c) Skin diseases and rashes in infants: Leaf paste is applied.

18. *Chenopodium album* L. (Chenopodiaceae). *Chakawat*.

Uses:

a) Intestinal worms: 5-10 ml juice of tender twigs with few ml of honey is given empty stomach in the morning for 3-4 days to kill and expel worms.

19. *Clerodendron indicum* (L.) O.Kuntz. (Verbenaceae). *Bethua Sak*.

Uses:

a) Intestinal worms: 5-10 ml juice of tender twigs with 2-3 drops of honey given empty stomach in the morning for 3-4 days to kill intestinal worms.

b) Cough and childhood asthma: Root paste about 5 gm is given with water, once a day for 12-15 days.

20. *Clitoria ternatea* L. (Fabaceae). *Gokarna*.

Use: Leaf paste is applied on forehead to treat watering and burning sensation in eyes.

21. *Coccinia grandis* (L.) Voigt (Cucurbitaceae). *Tondli*.

Uses:

a) Boils: Leaf paste applied to treat boils.

b) Fever: Leaf juice applied over body to reduce body temperature.

22. *Cocculus hirsutus* (L.) Diels (Menispermaceae). *Wasan vel*.

Use: Fever: Leaf extract applied on forehead during fever to reduce temperature.

23. *Croton bonplandianum* Baill (Euphorbiaceae). *Halud*.

Uses:

a) Cuts and injuries: Watery latex of the tender twig is put on fresh cut/injury to stop bleeding and pain.

b) Rickets: Leaf paste with common salt applied over the body in rickets.

24. *Curcuma longa* L. (Zingiberaceae). *Halad*.

Uses:

a) Blood dysentery: Leaf juice and lime water (1:1) about 5ml,

given 2-3 times a day for 1-2 days in blood dysentery.

b) Liver disorders: About 0.5 ml juice of fresh rhizome with a pinch of sugar is given once a day for 20-25 days in treating liver troubles.

c) Scabies: Rhizome and leaf of *Azadirachta indica* A. taken in equal proportion, crushed to make paste and applied over scabies.

25. *Datura metel* L. (Solanaceae). *Kala dhotra*.

Uses: Mumps: 1-2 fresh leaves, about 5 gm of lime and is rubbed by two hands until greenish froth comes out. This froth is applied 2-3 times on inflamed ear glands for 1-2 days.

26. *Eclipta prostrata* L. (Asteraceae). *Maka*.

Uses:

a) Cold: 3-5 ml leaf juice with few drops of honey is given in cold, once a day for 2-3 days.

b) Jaundice: 3-5 ml Leaf juice with $\frac{1}{2}$ cup of water is given once a day for 10-15 days to cure jaundice.

c) Cuts: Leaf juice is applied to stop bleeding in fresh cuts.

27. *Euphorbia hirta* L. (Euphorbiaceae). *Dudhi*.

Use: Loss of appetite in babies: A pinch of root paste is given with water, twice a day in case newborn babies avoid feeding. (And to improve lactation: 5-6 gm of root paste given with water to mother, twice a day for 1-2 days).

28. *Hemidesmus indicus* (L.) Schult. (Asclepiadaceae). *Anantamul*.

Uses:

a) Diarrhea: Root extract about 5 ml is given twice a day for 2-3 days to treat diarrhea.

b) Dysentery: Root decoction 5-10ml given twice for two days.

29. *Holarrhena pubescens* Wall. ex DC. (Apocynaceae). *Pandharakuda*.

Use: Diarrhea & Dysentery: Stem bark decoction about 2-3 ml is given twice a day for 2-3 days to treat dysentery.

30. *Justicia adhatoda* L. (Acanthaceae). *Adulsa*.

Uses:

a) Cough and Cold: 5 ml leaf juice given twice a day in cold and cough.

b) Fever: 10 ml leaf decoction with few drops of honey is given twice a day for 2-3 days in fever.

31. *Jatropha curcas* L. (Euphorbiaceae). *Mogali erand*.

Use: Blood Dysentery: 3-4 drops latex is given along with sugar for 2-3 days to treat blood dysentery.

32. *Kalanchoe pinnata* (Lam.) Pers. (Crassulaceae). *Panphuti*.

Uses:

a) Dyspepsia: 5 ml leaf juice with 1-2 ml of lime water given

once a day in morning for 2-3 days to treat dyspepsia.

b) Jaundice: 5-7 ml leaf juice given once a day for 12-14 days.

33. *Mimosa pudica* L. (Mimosaceae). *Lajalu*.

Use: Blood dysentery: 2-3ml root juice with 10-20ml of water given twice a day for 2-3 days to treat blood dysentery.

34. *Nyctanthes arbor-tristis* L. (Oleaceae). *Parijata*.

Uses:

a) Whooping cough: 3-5 ml leaf juice with a pinch of common salt given twice a day for 3-4 days in whooping cough.

b) Fever: 5 ml leaf juice with few drops honey, given twice a day for 2-3 days to treat fever.

35. *Oxalis corniculata* L. (Oxalidaceae). *Amboshi*.

Uses:

a) Blood dysentery: 5 ml juice of aerial shoots with a pinch of common salt is given twice a day for 2-3 days to treat blood dysentery.

b) Insect bite: Paste of aerial shoots is applied topically over insect bite.

c) Boils: Paste of aerial shoots applied on boil to promote suppuration.

d) Cold and chest congestion: Juice of aerial shoots mixed with equal volume of mustard oil, warmed and gently massaged over chest to treat congestion due to cold.

36. *Ocimum tenuiflorum* L. (Lamiaceae). *Tulsi*.

Uses:

a) Cough and cold: 5 ml of leaf juice with 2-3 drops of honey is given to children once a day for 2-3 days to treat cough & cold.

b) Cough: Leaf decoction 5 ml given twice a day as an expectorant.

c) Ear ache: Fresh leaf juice used as drops to treat earache.

37. *Phyllanthus fraternus* Webster (Euphorbiaceae). *Bhui awala*.

Uses:

a) Dysentery: Plant juice 7-10 ml is given once a day for 2-3 days.

b) Jaundice: 5 ml plant juice with water given for 14-15 days in jaundice.

38. *Psidium guajava* L. (Myrtaceae). *Peru*.

Use: Diarrhea: Few tender leaves boiled in 100 ml water till the water quantity becomes half, 10 ml decoction is given twice a day to treat diarrhea.

39. *Ricinus communis* L. (Euphorbiaceae). *Erandi*.

Uses:

a) Boils: Fresh young leaf is used as poultice on boils.

b) Constipation: 4-5 drops of seed oil with ½ cup of cow's milk is given to children, once in morning for 2 days.

40. *Solanum nigrum* L. (Solanaceae). *Kangoni*.

Uses:

a) Irruptions: Leaf juice is mixed with juice of fresh rhizome of *Curcuma longa* and applied over the body to cure prickly heat irruption due to allergy.

b) About 2-3 ml juice of ripe fruit (or powder of dried root ½ gm with honey) is given in convalescence of children.

41. *Syzygium cumini* (L.) Skeels (Myrtaceae). *Jambul*.

Uses:

a) Blood dysentery: 5 ml of leaf juice with a pinch of common salt is given twice a day for 2-3 days to treat blood dysentery.

b) Bed wetting: 5-10 ml leaf juice with a few drops of ghee is given once in morning for 4-5 days to treat bed wetting.

42. *Trigonella foenum-graecum* L. (Fabaceae). *Methi*.

Uses:

a) Chicken pox: The seeds soaked in ½ glass of water for overnight. 10 ml of that water is given 2-3 time a day for 2-3 days till the eruption of pox is brought out completely.

b) Measles: Seeds soaked overnight in water and 10-20 ml of that water is given twice a day for a week.

43. *Tinospora cordifolia* (Willd.) Miers ex Hook. (Menispermaceae).

Gulvel.

Uses:

a) Fever: Decoction of aerial shoots about 5 ml, given twice a day for 2-3 days to treat fever.

b) Sun stroke: Plant juice and rhizome paste of *Curuma longa* L. in proportion of 1:1 is applied over the body.

44. *Vitex negundo* L. (Verbenaceae). *Nirgudi*.

Uses:

a) Itching: Leaf juice is applied on body.

b) Bed wetting: 1 gm powder of dried leaves or 5 ml juice of freshly collected leaves with water is given once a day in afternoon for at least 7 days to treat bed wetting.

45. *Withania somnifera* (L.) Dunal (Solanaceae). *Aswagandha*.

Uses: Childhood Asthama: 5 gm root paste is boiled with 20 ml of mustard oil after straining, the oil is gently massaged over chest to reduce asthmatic troubles.

46. *Thespesia populnea* (L.) Soland. ex Correa. (Malvaceae).

Paraspimpal

Uses: Tonsils: Leaf paste is applied on inflamed glands

47. *Zingiber officinale* Rosc. (Zingiberaceae). *Ale*.

Uses:

- a) Cough: Rhizome decoction 10 ml is given as expectorant.
- b) Cough and cold: Juice of rhizome about 2-4 ml with ½ cup of water and a pinch of common salt is given to treat cough and cold.
- c) Jaundice: 5 gm dried ginger powder and of *Piper longum* L. pinch of the mixture is given with honey twice a day for 14-15 days to treat jaundice.

DISCUSSION AND CONCLUSION

The district Ahmednagar enjoys a rich heritage of ethnic as well as floristic diversity, having medicinal and agro industrial importance. The tribal population and the people of other ethnic communities use many plants for medicine, food, fodder, oil seed, beverage, material culture, etc. The tribal medicine men and vaidyas and the older women of the villages are repositories of indigenous knowledge about home remedies and their clinical parts, which have the efficacy, usefulness and are without side effects in local health care system. Due to rapid growth of industrialization depletion of soil due to poor agricultural practices, erosion of soil due to deforestation and poor water holding capacity of soil, etc. have adversely affected the region

The prevailing pediatric diseases in Ahmednagar are diarrhea, dysentery, dyspepsia, fever, skin diseases like scabies, itching and ulcers, etc. besides these, some diseases are reported as specific to children.

Common diseases among the children are due to intestinal worms, anemia, bronchitis, caries of teeth, cough, cold, eruptions (like measles, chicken pox), mumps tonsillitis etc. The liver disorders are also very commonly occurring pediatric disease.

Diseases like chicken pox, measles, mumps, conjunctivitis etc. become epidemic or in sporadic forms. Indigestion, diarrhea dysentery in rainy season and skin diseases, viz., itching, scabies, boils are of very common occurrence in summer season.

ACKNOWLEDGEMENTS

Mrs. J. R. Mulay is thankful to University Grant Commission, New Delhi for granting facilities and F. I. P. Authors are thankful to Principal of the College and Secretary, M.S.P. Mandal, Aurangabad for support and facilities.

REFERENCES

- [1] Chaudhuri Rai, H.N. & G.N. Tribedi, 1976. On the occurrence of some medicinal plants in 24 Parganas, West Bengal. *Bull. Bot. Surv. India* 18:161-165.
- [2] Mudgal, V., D.C. Pal and P.K. Hajra, 1977. Anthropogenic effects on Sundarbans Biosphere Reserve of West Bengal. *J. New Sci. Coll. Rewa* (M.P.)
- [3] Mukherjee, B.B. & J. Mukherjee, 1978. Mangroves of Sundarbans of India. *Phytomorphology* 28(2):217-220
- [4] Naskar, K.R. and D.N. Guhabakshi, 1986. Economic importance of the dominant mangrove family Rhizophoraceae from Sundarbans delta of 24 parganas districts West Bengal.
- [5] Naskar, K.R., 1993. Plant wealth of the Lower Ganga Delta. Vol

– I & II Daya Publishing House, Delhi.

- [6] Pal, D.C & S.K. Jain, 1998. Tribal Medicine, Naya Prakash, Kolkata
- [7] Trivedi, G.N. V. Mudgal and D.C. Pal, 1993. Some less known ethnomedicinal uses of plants in Sundarbans. *Bull. Bot. Surv. India*. Vol. 35(1-4): 6-10.
- [8] Singh, N. P & S. Karthikeyan.(Eds). 2000. Flora of Maharashtra State Dicotyledones. Vol (1), Botanical Survey of India, Kolkata.
- [9] Singh, N. P & Laxminarasimhan. P., Karthikeyan. S & P. V. Prasanna. (Eds). 2001. Flora of Maharashtra State, Dicotyledones. Vol (2), Botanical Survey of India, Kolkata.
- [10] Cooke, T. 1958. The Flora of the Presidency of Bombay, Vols 1-3 Reprinted edition, Government of India.
- [11] Pradhan S. G. and N. P.Singh (1999). Flora of Ahmednagar district, Maharashtra, Deep Publ. Dehradun.
- [12] Jain, S.K. 1991. Dictionary of Indian Folk Medicine and Ethnobotany.
- [13] Reddy, K.J. & G. Sudarshanam, 1987. Plants used as veterinary medicine in Chittoor district of Andhra Pradesh, India. *Int. J. Crude Drug Res.* 25(3):145-152.
- [14] Sebastian, M.K. 1984. Plants used as veterinary medicines, galactogogues and fodder in the forest area of Rajasthan. *J.Econ. Tax. Bot.* 5:785-788.
- [15] Sebastian, M.K. & M.M. Bhandari, 1984. Some plants used as veterinary medicine by Bhils. *Int. J. Trop. Agri* 2:307-310.
- [16] Sen Sarma, P., 1991. Herbal veterinary medicine in an ancient Sanskrit work – the Garuda Puran. *Ethnobotany* 3: 83-87.
- [17] Sharma, P. P. and Singh, N. P. 2001. Ethnobotany of Dadra Nagar Haveli and Daman, (Union Territories), Botanical Survey of India, Kolkata.