

ETHNO - MEDICINAL PLANTS USED IN CHILDREN DISEASES AMONG THE TRIBALS AND RURAL PEOPLE OF JAMMU PROVINCE (J&K STATE)

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Jammu province is harbouring rich biodiversity in terms of medicinal plants and is also the home of many tribal communities. The major tribes of the region includes Gujjars, Bakerwals, Gaddis and Paharis. These tribes and other ethnic communities being the residents of far flung and remote areas still depend upon herbal/plant based medicines to cure different ailments of the children. The present paper provides a brief ethno-medicinal account of 33 plant species belong to 27 families and 33 genera used against children (new born to baby to 10 years old) diseases. 5 plant species belong to monocots while 28 plant species belong to dicots. Out of total 33 plant species, 7 are used externally whereas 26 are administered orally. Mode of external application includes paste, filtrate, extract while internal ones include decoction, dried powder etc.

Keywords : Children diseases; Ethno-medicines; Jammu Province; Tribes.

Introduction

Jammu, the winter capital of the J&K State is situated at longitude 74° to 76° - 15' E and latitude 30°-30' to 32°-mean seal level. Jammu province of J&K State exhibit sub-tropical to alpine climate conditions and divided into six districts - viz Jammu, Udhampur, Kathua, Doda, Rajouri and Poonch, situated at different altitudes. Jammu province is the home of many tribes, mostly living in remote areas. Physiographically most of the parts of the province are hilly terrain.

Plants are huge source of natural products. The therapeutic use of plants for the treatment of human sufferings is known since antiquity. The earliest mention of the medicinal use of plants is found in Rigveda, perhaps the oldest repository of human knowledge having been written between 4500 and 1600 B.C.

The rich heritage of indigenous herbal practices have helped to sustain the health of most rural people of India. About 75% of the population consult mainly traditional indigenous medicines^{1,2}.

Plant therapy in Jammu province is quite prevalent particularly in villages and far flung areas where hospitals/medical facilities are not available. Due to the lack of health care and medicinal facilities, the life of children in the backward and tribal areas is adversely affected. Many children of the remote areas suffer from malnutrition and are the first target of poverty and unhygienic conditions. Tribals and rural people being

inhabitants of remote areas found it feasible to rely upon herbal medicines for the treatment of number of children diseases rather than going to hospitals or health care centers. Even the people who are having easy access to modern medical facilities preferably shifted to herbal/plant based medicines, because of the awareness of the side effects and toxicity associated with long term use of synthetic drugs.

Regarding the ethno-medicinal potential of plants against different children diseases, little information has been documented from J&K State except some stray references^{3,5}. Keeping in view the importance of herbal medicines in treating different ailments of children, fast vanishing of indigenous traditional knowledge of plants and to cover the unexplored areas, the present study was undertaken.

In the present compilation the information is gathered pertaining to the utilization of ethno-medicinal plants to check various children diseases from different regions of Jammu province. The target group of the children in the present study ranges from new born to 10 years old.

Material and Methods

Ethno-medicinal surveys were conducted in different regions of Jammu province from June 2007- August 2008. Information was collected from well knowledgeable people like hakims, v aids, heads of tribes, eldersmen, women, shephards etc., belonging to diverse communities and

ethnic sections. During the exploration, local informants were contacted and accompanied to locate the plants of the interest, used in their system of medicine and also to know the local names as well as their uses and mode of administration. Repeated field trips were carried out to verify and confirm the observation. Names of the plants have been arranged alphabetically. The traditional knowledge gathered in this way was further compared with the relevant published literature for authentication.

Results and Discussion

1. *Achyranthes aspera* L. (Amaranthaceae). Dried whole plant boiled and filtered is given to children (5 to 10yrs) for 3-5 days to kill intestinal worms.
2. *Acorus calamus* Linn. (Araceae). One teaspoonful of root paste with a cup of milk at bed time is given to the children (3 to 10 yrs.) for 2 to 3 months to cure stammering. One teaspoonful of root paste with honey/sugar is given once a day to the children (2 to 10 yrs) for 1-2 days.
3. *Adhatoda vesica* Nees. (Acanthaceae). Half cup of decoction made out of dried leaves is given once a day to the children (5 to 10yrs) for 2 to 3 days to treat dysentery.
4. *Aegle marmelos* Corr. (Rutaceae). Powder made out of dried leaves is given with warm water twice a day to the children (2 to 10yrs) for 2-4 days to check fever.
5. *Aesculus indica* Comb. (Hippocastanaceae). Fruit extract is used to bathe abdomen of the children (new born to 10 yrs) for 2-3 days to check constipation.
6. *Ageratum conyzoides* Linn. (Asteraceae). One teaspoonful of dried powdered leaves with sugar is given twice a day to the children (6 to 10yrs) for 1 to 2 days to check diarrhoea.
7. *Ajuga bracteosa* Wall. (Lamiaceae). One teaspoonful of root paste with milk is given twice a day to the children (5 to 10yrs) for 2 to 3 days to cure fever.
8. *Alistonia scholaris* Linn. (Apocyanaceae). One teaspoonful of powdered dried roots with honey is given daily after meals to the children (5 to 10yrs) for 1-2 days to kill intestinal worms.
9. *Alium sativum* L. (Liliaceae). 2 to 3 roasted leaves are given with hot water twice a day to the children (6 to 10 yrs) for 2 to 3 days to treat dysentery.
10. *Alterneanthera Sessilis* Linn. (Amaranthaceae). Half cup of decoction of leaves is given once a day to the children (3 to 10yrs.) for 2-3 days to treat stomach pain and fever. One teaspoonful of dried root powder with honey is given once a day to children (5 to 10yrs) for 1-2 days to kill intestinal worms.
11. *Argemone mexicana* Kuntz. (Papaveraceae). Dried powdered roots mixed with olive oil is applied externally twice a day to the children (5 to 10yrs) for 1 to 3 weeks to treat ringworm infection.
12. *Artemisia abisinthium* L. (Asteraceae). Paste of leaves is made into pills and one pill is given twice a day to the children (3 to 10yrs) for 2 to 3 days to expel intestinal worms.
13. *Azadirachita indica* Linn. (Meliaceae). Dried powdered leaves are given with hot water daily in the morning to the children (5 to 10yrs) for 7 days to check measles.
14. *Berberis lycium* Royle. (Berberidaceae). A pinch of root powder is rubbed on teeth to treat pain and a half cup of decoction of roots is given once a day to the children (2 to 10yrs) for 2-3 days to check dysentery.
15. *Bergenia ligulata* L. (Saxifragaceae). A cup of decoction of roots is given twice a day to the children (3 to 10yrs) for 3-5 days to cure fever.
16. *Butea monosperma* Kuntz. (Fabaceae). Powdered dried flowers are mixed with mustard oil and applied externally 2-3 times a day to the children (4 to 10yrs) for one to two weeks to treat skin diseases.
17. *Calotropis procera* R. Br. (Asclepiadaceae). Decoction of root is given thrice a day to the children (4 to 10yrs) for 2-3 days to treat fever.
18. *Cassia fistula* L. (Caeselpinaceae). A half cup of decoction of leaves is given twice a day to the children (2 to 10yrs) for 1-3 days to check fever.
19. *Catharanthus roseus* Don. (Apocyanaceae). Juice of the leaves is applied externally thrice a day to the children (new born to 10yrs) for 2-3 days to check cuts and wounds.
20. *Curcuma longa* L. (Zingiberaceae). Decoction of rhizome is given twice a day to the children (2 to 10 yrs) for 3-5 days against measles.
21. *Cuscuta reflexa* L. (Convulvulaceae). One teaspoonful of crushed stem juice is applied externally once a day to the children (4 to 10 yrs) for 3-5 days against swollen tonsilitis.
22. *Dioscorea deltoides* Wall. (Dioscoreaceae). 2 to 3 teaspoonful of extract of rhizome is put into scalp of children (2 to 10yrs) for 1-2 days against lice.
23. *Indigofera tinctoria* L. (Papilionaceae). Paste of the leaves is made into pills and 1 to 2 pills are given twice a day to the children (8 to 10yrs) for 2-3 days to check stomach pain and blood dysentery.
24. *Juglans regia* L. (Juglandaceae). A half teaspoonful

of crushed fruits with currant raisin is given with water at bed time to the children for 1 to 2 months to check bed wetting.

25. *Mallotus philipensis* Muell. (Euphorbiaceae). one teaspoonful of dried powdered fruit is given twice a day to the children (6 to 10yrs) for 1-2 days to check stomach pain and as anthelmintic.
26. *Murraya koenigi* Linn. (Rutaceae). A half cup of decoction of leaves is given to the children (4 to 10yrs) for 3 to 5 days to cure fever.
27. *Narcissus tazetta* L. (Amaryllidaceae). 2-3 teaspoonful of water extract of crushed bulbs is given once a day to the children (5 to 10yrs) for 10 to 15 days to treat anaemia.
28. *Ocimum sanctum* L. (Lamiaceae). A cup of decoction of leaves is given once a day to the children (4 to 10yrs) for 3 to 5 days to cure cough and bronchitis.
29. *Shorea robusta* Gartrn. (Dipterocarpaceae). Paste of the leaves mixed with mustard oil is applied externally twice a day to the children (6 to 10 yrs) for 1 to 15 days to check itching and other skin diseases.
30. *Vallisneria spirallis* Linn. (Hydrocharitaceae). One teaspoonful of paste of leaves with fennel is given to the children (3 to 10 yrs) twice a day for 1-3 days to check green stools and stomach pain.
31. *Vitex negundo* Linn. (Verbenaceae). A half cup of decoction of leaves with black pepper is given once a day to the children (6 to 10yrs) for one to two weeks to check skin diseases.
32. *Viola odorata* L. (Violaceae). Decoction made out of dried flowers is given once a day to the children (2 to 10yrs) for 10 to 15 days to cure cough and respiratory problems.
33. *Xanthoxylum armatum* Roxb. (Rutaceae). A half cup of decoction of seeds is given twice a day to the children (5 to 10yrs) for 1-2 days to check diarrhoea, dysentery and as anthelmintic.

During the course of study, 33 plant species belonging to 27 families were found to be widely used by tribals and rural people in different ways against various children diseases like fever, stammering, bedwetting, dysentery, diarrhoea, stomach pain, intestinal worms, skin allergies, cough, constipation, measles, tonsillitis, tooth ache, cuts and wounds, anaemia etc. Of the total 33 plant species, maximum number of plant species are being used to check fever (8 species) followed by dysentery (5 species), intestinal worms (5 species), stomach pain (4 species), skin allergies (4 species), cough and respiratory diseases (3 species), bedwetting (2 species), measles (2

species) diarrhoea (2 species) stammering (1 species), tooth ache (1 species), cuts (1 species), tonsillitis (1 species), constipation (1 species) and anaemia (1 species). Among these plant species, use of *Acorus calamus* L., *Alterneanthera sessilis* Linn, *Vitex negundo* Linn, *Ocimum sanctum* L. and *Viola odorata* L. have been reported earlier as potent child care herbal medicines^{6,9}.

Fever, intestinal worms, cough, dysentery and stomach pain are the most common children diseases found to be treated by *Aegle marmelos* Corr., *Acorus calamus* L., *Viola odorata* L., *Berberis lycium* Royle. and *Mallotus philipensis* Muell, respectively.

Further it has been observed that leaves are the most frequently utilized plant parts against various ailments. The ranking of the parts of plant species being used against different diseases is as follows- Leaf > Root > Fruit > Rhizome > Flower > Seed > Bulb > Bark > Whole plant. The present study is based on verbal interaction and personal interviews with authentic local informants like hakeems, vaid, heads of tribes, shepherds, eldermen, women etc. Identical uses of plants for various ailments from sub tropical to alpine regions in distantly located places of the study area, is not mere a co-incidence, but a positive indication of some useful properties in these plants. Gujjars and Bakerwals are the nomadic tribes of Jammu and Kashmir state. They keep on moving from place to place, with their livestock in search of fodder and forage. In summer they migrate from the plains of Jammu region to the Pir-Panjal ranges of the North-Western Himalayas and upper reaches of Shivalik hills with the onset of winter, they come back to plains of Jammu region mainly in districts, Rajouri, Poonch, Udhampur and Kathua.

Indigenous phytotherapy is being extensively and quite effectively used by tribals and rural people for primary health care treatments of children. Elders and women folk are the main source of knowledge of herbal remedies. They collect specific plants from surroundings, as forests and guide others for further processing and storage for future use or direct use in their combination or singly. The choice of plant used, depends upon the availability of the particular plant species in vicinity of different regions.

The information gathered in the present compilation has also been compared with the relevant published literature on children diseases¹⁰⁻¹⁹. It has been found that many plants used by tribals and rural people of province Jammu have not been mentioned in the published literature.

There has been no documentation of these

indigenous practices, rather it has been transmitted across generations by oral tradition and therefore is in danger of extinction. Documentation of the above mentioned plant species to cure different children diseases is a first hand report to fulfill the needs of remote and hilly areas, where neither medical nor primary health care facilities are available. The vast potential of such traditional knowledge needs to be carefully evaluated on modern scientific lines.

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