Medicinal knowledge system of tribals of Nandurbar district, Maharashtra

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The paper reports 33 tribal medicinal preparations for curing different ailments. It includes 10 preparations for 6 types of skin diseases, 3 preparations for 2 types of eye diseases, 2 for tuberculosis, 5 for piles, and 13 for other diseases. Need has been emphasized for putting the tribal knowledge system of Nandurbar to validation test by pharmacologists.

Keywords: Ethnomedicine, Folk medicine, Maharashtra, Medicinal plants, Nandurbar district, Tribal medicine

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Ethnobotanists, all over the world, have been actively working to collect, document and conserve the indigenous medicinal plants. In the last two decades, many reports on medicinal plants have been published from the states like Bihar, Madhya Pradesh, Northeastern hill states and Orissa, owing to large tribal population of the regions1-8. Voluminous work on tribal medicine has also been published, in which medicinal plants without giving details of preparation of medicine have been described9-11. The knowledge of traditional herbal medicine is very important for the people who generate it. While the rural households holds remedies can be obtained easily, the medicinal plant knowledge of tribals living in forests and hill areas is not available so easily. For this reason, the ethnomedicinal documentation of tribal health system will be of great advantage to our biochemists, pharmacists and biotechnologists to develop potential medicine for the treatment of several dreaded diseases. Eighty per cent of the rural population still depends on herbal/tribal medicine for their treatment12,13.

Maharashtra being the fifth largest tribal populated state, 47 tribal communities reside in hilly regions of the state14. Western Ghats and Satpura hill ranges provide natural inhabitation for these tribals. While much of the ethnobotanical work reported from this state was from western Ghats, the Satpura hill ranges remained mostly unexplored15. The Satpuras in Maharashtra extend across Dhule and Nandurbar districts. Of these, Nandurbar district comprises more tribal population and two of its six talukas (Tahsils), viz. Dhadgaon and Akkalkuwa are found on Satpura hills. As much as 80% of the population of these talukas is tribal. The prominent tribes inhabiting these tropical dry deciduous forests are Bhil, Pawara, Kokan, Movchi, Gavit and Dhanka. Usually, tribal community has the knowledge of medicinal and other uses of the plants growing in the forests; tribal doctors (Vaidus, Maharaj or Bhagat) specifically know the exact preparation of the medicine and its administration to the patients. In the present paper, herbal medicine preparations for curing some prominent health disorders by the tribal Vaidus in Nandurbar district have been enumerated.

Methodology

Frequent visits to the tribal villages called, Padars in the forests of Toranmal, Navapur, Dhadgaon, Akkalkuwa and Taloda regions of the district were made during the yrs 2001-2003. A close association was maintained with the people to understand their indigenous knowledge systems. Tribal Vaidus were frequently interviewed and their medicinal preparations were closely watched. A gathering of the Vaidus was also arranged to ensure cross checking of the information. Only those medicines, which were accepted and followed by most of the Vaidus have been presented

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in the paper. The medicinal plants collected were identified with the help of the established flora. The names of the Vaidus have also been provided (in parenthesis) as the original reference for the source of the medicine.

**Enumeration**

1 Eye infections

1.1 Conjunctivitis

Leaf paste of young saplings of *Salai* (*Boswellia serrata* Roxb.) applied over the cloth is put over infected eyes around the head at night till cured. (Suklal Pawara, Toranmal). One drop of gum solution from *Pivala Dhotra* (White flower of *Datura innoxia* Mill.) prepared is put only once at night. (Chandrasing, Legapani).

1.2 Night blindness

Eyes are covered with the paste of *Moglierand* (*Jatropha curcas* L.) and *Chandrajyot* (*Jatropa gossypifolia* L.var. *elegans* Muell.) leaves for 2-3 days. *Behda* [*Terminalia belerica* (Geartn.) Roxb.] seed oil is applied on the skull at night. (Suklal Pawara, Toranmal).

2 Skin diseases

2.1 Leucoderma

Paste of *Ghatbor* [*Zizyphus xylopyra* (Retz.) Willd.] leaves and *Dhotra* (*Datura innoxia* Mill.) flowers is applied on the patches for 5-10 days. Medicine works well during early stages of the disease development. (Suklal Pawara, Toranmal). Root paste of *Jangli bhendi* [*Abelmoschus manihot* (L.) Medik. subsp. *tetraphyllus* (Roxb.ex.Horn.) Borssum] prepared on stone is applied on patches till cured. (Suklal Pawara, Toranmal).

2.2 Eczema

Two spoonfuls once a day of *Jangli keli* [*Ensete superbum* (Roxb.) Cheesm.] seed powder along with milk is fed to infants and children for 2 days. (Uttam Kokani, Khohlgar, Nandurbar).

2.3 Psoriasis

Hot infusion prepared from stem pieces of *Gulvel* [*Tinospora cordifolia* (Wild.) Miers.] is given to the patient. In addition, stem powder is applied over the affected areas in the morning and evening for 6-7 days. (Chandrasing, Legapani).

2.4 Scabies

Paste prepared from stem ash of *Bajri* (*Pennisetum typhoides* Rich.) mixed with *til* oil (*Sesamum orientale* L.) is applied over the affected area for 6-7 days. (Rama Gavit, Dab). Decoction of stem pieces of *Gulvel* [*Tinospora cordifolia* (Wild.) Miers.] is given to the patient. Stem powder is also applied over the affected area in morning and evening for 6-7 days. (Chandrasing, Legapani). Neem (*Azadirachta indica* A. Juss.) bark paste is applied daily over the affected area at night for relief. (Sayalibai, Itwai).

3 Boils

Root powder of *Jangli kand* [*Tacca leontopetaloides* (L.) O. Ktze.] mixed with *til* oil (*Sesamum orientale* L.) is applied over the boils 1 or 2 times at night. (Chandrasing, Legapani). Tuberous roots of *Baman kand* [*Drimia indica* (Roxb.) Jessop] crushed on stone is applied over boils for 2-3 days at night. (Chandrasing, Legapani).

4 Toothache

Pills prepared from the bark powder of *Chilar* [*Caesalpinia decapetala* (Roth) Alst.] are applied on infected tooth at night. (Gunjarya Patil, Kakadda).

5 Earache

Two to three drops of powdered tubers of *Kali musali* (*Curculigo orchioides* Gaertn.) mixed with *til* oil (*Sesamum orientale* L.) is put in the affected ear for 2-3 days. (Chandrasing, Legapani).

6 Stomachache

Powder of immature fruits of *Jangli keli* [*Ensete superbum* (Roxb.) Cheesm.] in a cup of water is taken for about 15 days in morning and evening in chronic case, and for 7 days in normal case. (Chandrasing, Legapani). Whole plant of *Aghada* (*Achyranthes aspera* L.) crushed and soaked in a glass of water is taken twice a day for 2 days. (Chandrasing, Legapani).
7 Headache
Two to three drops of a mixture prepared from 1-2 gm seed powder of Aghada (Achyranthes aspera L.) mixed in a cup of water and boiled for 10-15 min is put in nostrils at night for 6-7 days. (Shivaji Gavit, Haldani).

8 Fever
A spoonful of powder or a pill prepared from leaves and stem pieces of Gulvel [Tinospora cordifolia (Wild.) Miers.] is taken with a cup of water twice a day for 7 days. (Chandrasing, Legapani). Whole plant or roots of Aghada (Achyranthes aspera L.) crushed and soaked in water for 3-4 hrs is taken twice for 2 days. (Chandrasing, Legapani).

9 Cough and common cold
9.1 Cough
Paste of one kg leaves of Neem (Azadirachta indica A.Juss.) crushed and soaked in water is applied on the body at night for 2-3 days. (Sayalibai Valvi, Itwai).

9.2 Cough and cold
Twenty five to fifty gm seed powder of Jangli wal (Dolichus trilobus L.) is taken with a cup of water twice a day till cured. (Lalsingh Khetya Pawara, Lakadihanuman). 1-2 pieces of Fang [Rivea hypocrateriformis (Desr.) Choisy.] roots crushed, soaked in half glass of water for 4-5 hrs is given to the patient for 7 days at night. (Pahadsigh, Toranmal). Aghada (Achyranthes aspera L.) leaf paste is applied externally at night until relief. (Chandrasing, Legapani). Leaf paste of Kurchul (Erythrina suberosa Roxb.), Papada [Holoptelea integrifolia (Roxb.) Planch.] and Tobacco (Nicotiana tabacum L.) crushed and mixed (in equal proportions) is applied externally at night until relief. (Mohan Sada Thakre, Amlad).

9.3 Dry cough
Two to three Inflorescence heads of Akkalkara (Spilanthes calva DC.) crushed and mixed in a spoon with honey is given to patient twice a day for 2-3 days., (Sunkya Padvi, Velheri).

10 Stomach ulcer and hyperacidity
One pill prepared from Sal (Shorea robusta Roxb. ex. Gaertn.) gum is administered daily after diet. (Khumsing, Ranipur).

11 Abortion
Five gm powder of Shivlingi [Diplocyclos palmatus (L.) Jeffery] seeds and Ashwagandha [Withania somnifera (L.) Dunal] roots in equal proportions mixed with sugar is administered with a cup of milk twice a day. (Bhawdya Janya Sarkya, Amlad).

12 Piles
A cup of Moya [Lannea coromandelica (Houtt.) Merr.] leaf juice is given early in the morning and evening before meal for 4-5 days. (Chandrasing, Legapani). Paste prepared from root powder of white flowered Dhotra (Datura innoxia Mill.) and Bottle gourd [Lagenaria siceraria (Molina) Standl.] fruit powder mixed in til oil is used for external application till cured. (Lalsingh Khetya Pawara, Lakadihanuman), 1-2 pieces of Fang [Rivea hypocrateriformis (Desr.) Choisy.] roots crushed, soaked in half glass of water for 4-5 hrs is given to the patient for 7 days at night. (Pahadsigh, Toranmal). Aghada (Achyranthes aspera L.) leaf paste is applied externally at night until relief. (Chandrasing, Legapani). Leaf paste of Kurchul (Erythrina suberosa Roxb.), Papada [Holoptelea integrifolia (Roxb.) Planch.] and Tobacco (Nicotiana tabacum L.) crushed and mixed (in equal proportions) is applied externally at night until relief. (Mohan Sada Thakre, Amlad).

13 Tuberculosis
Two spoonful powder of Mokha (Schrebera swetennoides Roxb.) tender leaves and Bel [Aegle marmelos (L.) Corr.] leaves is given with two-spoonful of honey once a day till cured. (Gangaram Velgi Pawara, Budki). Gum of Salai (Boswellia serrata Roxb.) dissolved in water is given thrice a day for nine days. Consumption of onion and potato is prohibited during the treatment. (Mohan Sada Thakare, Amlad).

Discussion
Though some of the plants mentioned in the present study are common medicinal plants, some workers have reported them as useful for different other ailments. Some workers have reported knowledge systems of tribal medicine of Nandurbar region for mumps, lethargy and oozing of sticky saliva in cattle from Nandurbar district. The present has paramount importance as it restores and documents the fading out knowledge system of the tribes and can be applied to immediate pharmacological tests for working out effective formulations. The medicine used for cough and cold by the tribals of Nandurbar district are very peculiar. Leaf paste of Neem is applied externally to the body, but no internal medicine is given, while lablab bean seed powder is taken internally as well as applied on forehead for cough and cold. The medicines for skin diseases, tuberculosis, abortion and piles mentioned in this paper are reported for the first time. Documentation of tribal medicine will go a long way in providing lead to new drug development for various ailments.

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