

Traditional healthcare practices among the villages of Rawain valley, Uttarkashi, Uttarakhand, India

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Received 21.04.09; revised 08.04.10

A study on practice of traditional medicine was carried out among the people of Rawain valley, Uttarkashi. The results documented 63 plants to assess their therapeutic significance in managing various diseases in the villages of the valley. Fresh leaves, roots, fruits, bark, stems and some time whole plant are reported to be used for treatment of various ailments. Since, the knowledge of various medicinal plants being used is confined to mostly local healers, it is of utmost importance to document this knowledge for future generation, otherwise it will be lost forever with the death of local healers/knowledgeable person.

Keywords: Traditional healthcare system, Local healers, Indigenous knowledge, Medicinal plants

IPC Int. Cl.⁸: A01D 11/18, A01D 12/17, A01D 6/00, A01D 7/31, A01D 6/04, A01D 11/00, A01D 9/04, A01D 11/14, A01D 9/01

Every culture irrespective of its simplicity and complexity has its own belief and practices concerning diseases. The primitive people acquire knowledge of economic and medicinal properties of many plants by trial and error methods and have extensive knowledge of the properties and use of plant resources prevalent in the nature. Consequently, they became the store house of knowledge of many useful plants. This knowledge was accumulated and enriched, and passed on from one generation to another without any written documents¹⁻⁴. The people of the region are rich in ethnobotanical knowledge owing to their close affinity with the surrounding vegetation. Medicinal plants form the basis of traditional or indigenous systems of healthcare used by the majority of remotely located people. Religious inspiration, inaccessibility and lack of medicinal facilities in these villages seem to be the cause of depending on these medicinal plant species. Traditional system of medicine is a wise practice of indigenous knowledge system, which has saved the lives of poor people in the region. The use method of the plants varies according to the nature of the disease. In some cases most of the plant species are

not used alone but are mixed with other herbs in specific amounts. Most of the decoctions were made just by crushing the plant parts with the help of the pestle, but some were made by boiling plant parts with water, decanting of the liquid and drinking after cooling. Some plant decoctions were also used directly on the wound or the infected part of the body. The present study is an attempt to document the indigenous knowledge of the local medicinal practitioners known as *Vaidhyas* and other knowledgeable people using these wild resources for different purpose.

Methodology

Two different types of data, viz. ethnobotanical and household survey related to questionnaire of plant product consumed/ gathered in large scale were collected. Beside, the literature available two basic approaches were carried out to study the ethnobotany⁵⁻⁸. The first approach, which is called interview, involves asking questionnaire about medicinal use of plant for different purposes. The second approach, which is called inventory include collection of plant specimen and then interweaving names and uses. These people were shown the plant species that are ethnobotanically important and asked for their knowledge about the plant. The *Vaidyas*

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(local herbal healers), elders and women were consulted for the medicinal uses of the plants and this was checked with different people having knowledge of traditional healthcare. Both the approaches were repeated with knowledgeable person, social workers, elders, etc.

Results

The inhabitants in the villages of Rawain valley use a number of medicinal plants for the treatment of various diseases. People preferred to consult with *Vaidhyas* to diagnose their problem, despite of knowing some medicinal plants themselves. The indigenous knowledge about medicinal plants and therapies was composed verbally and passed orally from generation to generation. A total of 63 plants species belonging to 43 families used traditionally for

treatment of more than 41 diseases were documented in the region (Table 1). All these medicinal plant species collected by local communities from the surrounding areas, forests and alpine meadows and used them as remedies for various ailments. Methods of using these plants vary according to the nature of disease and knowledge of individuals. Decoction of leaves, stem, fruits and roots was the dominant form for treatment. Most of the decoctions are made just by crushing the plant parts with the help of a mortar and pestle; but some are made by boiling plant parts in water, decanting of the liquid and drinking after cooling. The dose given to the patient depends on age, physical status and health conditions of the patient. The utilization pattern of the species indicated that leaves (35%), roots (29%), bark (11%), and others (8%) were used by the local inhabitant to diagnose the

Table 1—List of plants used in traditional healthcare system by the people of Rawain valley, Uttarakhand

Botanical name	Vernacular name	Family	Uses
<i>Aconitum balfourii</i> (Bruhl) Muk.	<i>Meetha</i>	Ranunculaceae	Paste of tubers is used to cure snake bite and rheumatism.
<i>Aconitum heterophyllum</i> Wall. Ex Royle	<i>Atees</i>	Ranunculaceae	Root is used to cure fever, cough, and stomachache.
<i>Aesculus indica</i> Colebr.	<i>Pangar</i>	Hippocastanaceae	The paste of fruits is used to cure galactagogue in goat and also applied a remedy on externally for sore throat. Seed oil is useful in rheumatic pain.
<i>Ajuga bractifolia</i> Wallich ex Benth.	<i>Neelkanthi</i>	Lamiaceae	Leaves are used in malarial fever.
<i>Artemisia nilagirica</i> (Clarke) Pamp.	<i>Kunj</i>	Asteraceae	Juice extracted from fresh leaves is used to cure cuts, wound, and intestinal worm. Leaf paste is used for skin infection especially for ringworm. Flower tip is used in debility and asthma.
<i>Asparagus racemosus</i> L.	<i>Satavari</i>	Liliaceae	Root powder is used to cure epilepsy.
<i>Bauhania variegata</i> L.	<i>Kachnar</i>	Ceasalpinaceae	Gargling is done with dried bark boiled in half glass of water to cure throat problem. Leaf paste is used for skin infection. Bark powder is useful in balancing blood pressure.
<i>Berberis aristata</i> DC.	<i>Kingore</i>	Berberidaceae	Used as a good remedy for stomachache, diaphoretic and for treating hemorrhoids. Juice from bark is used for eye diseases and root infusion for fever.
<i>Berberis lyceum</i> Royle.	<i>Kingore</i>	Berberidaceae	Powder of dried bark with butter is used to cure conjunctivitis disease and blister in mouth.
<i>Bergenia ciliate</i> Haworth Sternb.	<i>Silphori</i>	Saxifragaceae	Rhizome is used to cure kidney stone, piles and paralysis.
<i>Betula utilis</i> D. Don	<i>Bhojpatra</i>	Betulaceae	Bark and leaves are used to cure rheumatism, blood purify, bone fracture and asthma.
<i>Cannabis sativa</i> L.	<i>Bhaang</i>	Cannabaceae	Leaves are used to cure piles, cuts and ulcer. Seeds oil is used to cure burn and muscular pain.
<i>Cedrus deodar</i> Loud.	<i>Devdaar</i>	Pinaceae	Bark is used to cure rheumatism, back pain; oil is used to cure wounds and cuts.
<i>Chenopodium album</i> L.	<i>Bethuwa</i>	Chenopodiaceae	About 20 leaves boiled in water with one spoonful of lemon juice is used daily for 2-3 days to take cure of constipation. Vegetable prepared from leaves along with spinach is taken to cure jaundice.
<i>Coriandrum sativum</i> L.	<i>Dhaniya</i>	Apiaceae	Leaf paste is applied in skin diseases and stomach disorder.

Contd.

Table 1—List of plants used in traditional healthcare system by the people of Rawain valley, Uttarakhand —(Contd.)

Botanical name	Vernacular name	Family	Uses
<i>Cotoneaster microphyllum</i> Wallich ex Lindley	<i>Bhedda</i>	Rosaceae	Decoction of fruits of 60 to 120 ml twice a day is used in uterine bleeding.
<i>Cuscuta europaea</i> L.	<i>Makriau</i>	Cuscutaceae	Whole plant is useful in sciatica.
<i>Cynodon dactylon</i> L.	<i>Doob</i>	Poaceae	Different parts of the plant are used for treatment of dysentery, vomiting and burning sensation.
<i>Dactyloctenium aegyptium</i> (L.) Gaertn.	<i>Hatazari</i>	Chenopodiaceae	Paste prepared from tuber is applied externally to cure wound and cuts, fever, dysentery and bilious fever.
<i>Diplazium esculentum</i> Sw.	<i>Lingra</i>	Polypodiaceae	It is anti-malarial and is used to cure jaundice and constipation.
<i>Emblica officinalis</i> Gaertn.	<i>Aonla</i>	Euphorbiaceae	Fruits are used to cure cough, anaemia and piles.
<i>Fagopyrum dibotrys</i> (D. Don) Hara	<i>Phaphariya</i>	Polygonaceae	Leaves Vegetable are used to cure anaemia.
<i>Ficus palmate</i> Forsk.	<i>Bedu</i>	Moraceae	Milky latex of fruit is used to cure wounds and cuts.
<i>Galium aparine</i> L.	<i>Kuri</i>	Rubiaceae	Leaves are used as cooling agent in heat while applying its paste on body.
<i>Geranium wallichianum</i> D. Don ex Sweet	<i>Ratijari, Kaphlya</i>	Geraniaceae	Roots are used in headache and rheumatic pain. One gram of dried root powder is taken with tea to relieve headache and rheumatic pain. Root paste is given in stomach disorder of infant and also applied on breakage of horn of cattle.
<i>Glycine max</i> (L.) Merrill	<i>Soyabean</i>	Fabaceae	Seed paste is useful for eyesore.
<i>Grewia optiva</i> Drummond ex Burret	<i>Bhimal</i>	Tiliaceae	Extract of bark is given to pregnant women for smooth delivery.
<i>Hedera nepalensis</i> K. Koch	<i>Laguli</i>	Araliaceae	Leaves and berries are used as expectorant in bronchitis and whooping cough.
<i>Hippophae salicifolia</i> D. Don	<i>Amil, Ames</i>	Elaeagnaceae	Fruits are used for stomachache due to gastric trouble, cold and cough. Fruit sauce is used to cure neuralgia and rheumatism.
<i>Hordeum vulgare</i> L.	<i>Jau</i>	Poaceae	Leaf juice is useful in cataract.
<i>Hypericum elodeoides</i> Choisy	<i>Vasanti</i>	Hypericaceae	Leaves powder is used as febrifuge and root decoction is given to control vomiting.
<i>Juglans regia</i> L.	<i>Akhrot</i>	Juglandaceae	Fruit peel is used for treatment of ringworm.
<i>Lyonia ovalifolia</i> (Wall.) Drud.	<i>Anyaar</i>	Ericaceae	Buds is used to cure itching problem, leaves paste is used in allergy and fungal infection.
<i>Nardostachys grandiflora</i> DC.	<i>Jatamasi</i>	Valerianaceae	Rhizome is used to cure BP, jaundice and heart diseases. Hot mixture of root paste (10 gm) and butter (50 gm) is rubbed on joint four times a day to cure rheumatism.
<i>Origanum vulgare</i> L.	<i>Bantulsi</i>	Lamiaceae	Fresh leaves extract is used to cure cough, fever and also used as ointment in skin disease.
<i>Oryza sativa</i> L.	<i>Dhaan</i>	Poaceae	Grains are used to cure dysentery and jaundice.
<i>Paeonia emodi</i> Wall ex Royle	<i>Chandra</i>	Paeoniaceae	Infusion of root is given to children in treatments of whooping cough and intestinal spasm. Root paste is applied on cuts and foul ulcers to kill maggots. Vegetable of young shoot and leaves used by the mother in post natal care.
<i>Perilla frutescens</i> (L.) Britton	<i>Bhangjeera</i>	Lamiaceae	Seed oil is used by local women of the region for massaging new born infants. Leaves are used in the treatment of colds and abdominal pain.
<i>Picrorhiza kurrooa</i> Royle ex Benth	<i>Kutki</i>	Scrophulariaceae	Roots are used to cure stomachache, fever, typhoid and jaundice.
<i>Pinus roxburghii</i> Sarg.	<i>Chir</i>	Pinaceae	Resin is used as crack cream. Pollen dust and resin with water is useful for cancer and tuberculosis.
<i>Pinus wallichiana</i> Jacks.	<i>Kail</i>	Pinaceae	Resin is used to cure arthritis. Unripe cone is applied on swelling breast to flow milk smoothly.
<i>Podophyllum hexandrum</i> Royle	<i>Bankakari</i>	Podophyllaceae	Root is used to cure ulcer, cuts, wounds and skin diseases.

Contd.

Table 1—List of plants used in traditional healthcare system by the people of Rawain valley, Uttarakhand —(Contd.)

Botanical name	Vernacular name	Family	Uses
<i>Prinsepia utilis</i> Royle	<i>Bhaikal</i>	Rosaceae	Seed oil is used to reduce body pain and muscular pain and root paste is used to heal wounds.
<i>Prunus armeniaca</i> L.	<i>Chulee</i>	Rosaceae	Seed paste mixed with water is given to children in stomachache. Seed oil is used as massage oil after delivery well as to relief body pain.
<i>Pyrus pashia</i> Buch-Ham.	<i>Molu</i>	Rosaceae	Fruit juice are used in eye injury, ripe fruits are eaten for the treatment of mouth sores
<i>Quercus leucotricophora</i> A Campus ex Bahadur	<i>Banj</i>	Fagaceae	Root is used to cure fever; dry resin of bark with water is taken to cure stomach pain.
<i>Quercus semecarpifolia</i> Smith	<i>Kharsu</i>	Fagaceae	Seed is used to cure snake bite.
<i>Ranunculus arvensis</i> L.	<i>Chambul</i>	Ranunculaceae	Whole plant is used in treatment of fever and asthma.
<i>Reinwardtia indica</i> Dumortier	<i>Pauyoli</i>	Linaceae	Petal is used in tongue wash.
<i>Rheum emodi</i> Wall. Ex. Meissn.	<i>Dolu</i>	Polygonaceae	Root paste mixed with water used to cure boils, fever, wound and cuts.
<i>Rhododendron arboretum</i> Smith	<i>Burans</i>	Ericaceae	Flower juice useful in blood pressure and as heart tonic. Bark juice is used to cure coughs and dysentery.
<i>Rosa macrophylla</i> Lindl.	<i>Jangali gulab</i>	Rosaceae	Plant is useful in bilious affections.
<i>Rubus ellipticus</i> Smith	<i>Hinsul</i>	Rosaceae	Root is used to cure intoxicating ingredient. Contd.
<i>Rumex hastatus</i> (D. Don)	<i>Almoru</i>	Polygonaceae	Leaves are applied on wounds, bleeding and fresh leaves juice is used to cure internal heat.
<i>Saussurea costus</i> (Falc) Lipsch.	<i>Kut</i>	Asteraceae	Root is used to cure toothache, jaundice, asthma and skin diseases.
<i>Sinarundinaria falcate</i> Nees Chao & Renvoize	<i>Ringal</i>	Poaceae	It is used to cure bone fracture.
<i>Skimmia anquetilia</i> Taylore & Airy Shaw	<i>Kedarpatti</i>	Rutaceae	Leaves paste made with turmeric is used to cure rheumatism and swellings. Bark powder is applied in healing of wounds.
<i>Swertia chirayita</i> Roxb. Ex Flem	<i>Chirayata</i>	Gnetianaceae	Whole plant is used to cure fever, leucoderma, diabetes and dyspepsia.
<i>Taxus baccata</i> L.	<i>Thuner</i>	Taxaceae	Bark is anti-cancer and used to cure bone fracture.
<i>Typhonium diversifolium</i> Wall ex Schott	<i>Nakdoon</i>	Araceae	Tubers are energetic, 5-8 gm of tuber powder mix with honey to avoid feeling of hunger for complete day.
<i>Utrica dioica</i> L.	<i>Kandali</i>	Urticaceae	Leaves decoction is used to cure stomach disorders and anemia.
<i>Valeriana jatamansi</i> Jones	<i>Babansi</i>	Valerianaceae	Leaves paste is mixed with milk and given to children to cure stomachache and dysentery.
<i>Zanthoxylum armatum</i> DC.	<i>Timuru</i>	Rutaceae	Bark, fruit and branches are used for toothache. Branches are also used as toothbrush in gum trouble.

various diseases. Frequency of plant species to cure a particular disease was also estimated and found that maximum 11 medicinal plants were used to cure fever, 8 cuts and skin diseases, 7 cough, 6 boils, wounds and rheumatism, 5 stomach disorders, jaundice, arthritis and menstruation, 2 vomiting, toothache, burns, muscular pain, bleeding and cancer.

Discussion and Conclusion

The people residing in the studied villages use many plant species collected from the wild for medicine in traditional healthcare system. About 63

plant species are used as medicine by the people of the region (Table 1) and this is also supported by the previous study conducted in the region⁵⁻⁸. People used these medicinal plants for the treatment of more than twenty various diseases like fever, stomachache, asthma, jaundice, anaemia, diarrhoea, rheumatism, cold, cough, cancer, tuberculosis, skin diseases, cuts and wounds. They preferred to visit *Vaidhyas* to diagnose their problem although they know some medicinal plants themselves. They said the effectiveness of the herb was connected to the knowledge of the exact nature of diseases. They also

added that dose response differs from person to person and also for the same person from time to time because the cause and effect varies. But at present scenario the traditional values, faith and indigenous knowledge of healthcare system of the present society are facing serious challenges due to migration of youths to cities and these urban migrants tend to undermine their own cultural beliefs and knowledge based on traditional healthcare system. Throughout the region, there is an urgent need to support for the protection and promotion of the cultural and spiritual values of traditional medicines.

Since, the knowledge of various medicinal plants being used is confined to mostly local healers, it is of utmost importance to document this knowledge for future generation, otherwise it will be lost forever with the death of local healers/knowledgeable person. Therefore, there is a need to develop an appropriate mechanism for benefits sharing and also to protect the rights of the tribal and non-tribal communities over indigenous knowledge of medicinal plants used in healthcare system in the region. Thus, the recording of indigenous healthcare system becomes increasingly important and it is hoped that the information will be of use to plan future research in this direction.

Acknowledgement

The authors are thankful to Director, GB Pant Institute of Himalayan Environment and Development, Kosi-Katarmal, Almora, Uttarakhand

for providing facilities to undertake this work. The authors are thankful to the people of Rawain valley for providing valuable knowledge/information and for their kind cooperation during the field work.

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