

ETHNOBOTANICAL SURVEY OF MEDICINAL PLANTS USED FOR DIFFERENT DISEASES IN MANDI DISTRICT OF HIMACHAL PRADESH

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ABSTRACT

Man has always made use of medicinal plants to cure sufferings and diseases. This review documented information on the various therapeutic applications of plants used in traditional medicine. As the rural folk and old aged peoples have long been using plants for their various ailments but these information related traditional medicinal uses of plants are not well documented. There is a urgent need for documenting these folklore and traditional knowledge in some form before such valuable knowledge becomes inaccessible and extinct.

Keywords: Ethnobotany, traditional knowledge, folklore and medicinal plant.

INTRODUCTION

Right from its beginning, the documentation of traditional knowledge especially on the medicinal uses of plants, has provided many important drugs of modern day. Even today this area holds much more hidden treasure as almost 80% of the human population in developing countries is dependent on plant resources for healthcare. The Himalayas have a great wealth of medicinal flora and traditional and folklore medicinal knowledge. Himachal Pradesh, one of the pioneer Himalayan States is a rich repository of medicinal flora. Because of the geographical position and difficult means of transport and communication; the traditions and folklore medicinal knowledge of the ancients are carefully persevered in the temples and historical places of this state. Mandi District of Himachal Pradesh is also well known medicinal plants hot spot in the western Himalaya that has rich diversity of flora (Dhaliwal and Sharma, 1999, Singh, 1999). The traditional healers and old village peoples

have a sound knowledge related to medicinal uses of plants around them. Traditional herbal medicines used by different communities in this region play an important role in alleviating different diseases. They are safe, effective and inexpensive. In the interior areas of Mandi district plants become the only source of medicine. However, information on the uses of plants as traditional medicines has not been documented well from various interior areas of Mandi district. The people of these communities, particularly the rural folk and old aged peoples have long been using plants for their various ailments. With the recent development undergoing in this region the people of this region specially the rural folks gained access to modern health care facilities, but still the rural folk at large prefer to stay with their traditional herbal medication due to the easy availability, cost effectiveness and efficacy of the traditional way of healing using medicinal plants (Rao, 1996).

The climatic conditions prevailing in the region maintains an ideal habitat for the

natural growth of variety of medicinal plants and herbs. These are the sources which provide raw materials for pharmaceutical, phytochemical, food, flavoring and cosmetic industries. Therefore, the present study aims at exploring and documenting the plants used in different diseases by different communities of Mandi district.

Area for the study

Mandi district (Figure 1) is one of the most fertile areas situated on national highway (NH) 21 in Himachal Pradesh (H.P.). The district is situated 76°37' - 77°23' East longitudes and 31°13' - 32°04' North latitudes. It is located between Bilaspur-Manali on national highway (NH) 21. This region is famous for growing vegetables and other cash crops and the flora of this region is unique and diverse.

Methodology

People of this region can easily understand and speak Hindi, amongst themselves they communicate in pahari dialect. In order to document the utilization of medicinal plants, a total of four field surveys were carried out in the area. The surveys were spread across seasons so as to get maximum information and also to cross check the information provided by the local informants during the earlier visits. The investigation was carried out where the population was dense. During the trips, the village heads, herbal practitioners as well as elderly men and women of the different villages were interviewed. To know the uses of plants, different categories of people like family heads, healers, old experienced and knowledgeable informants were repeatedly interviewed. Specific question based Performa were designed and informations were recorded in the ethnobotanical field notebook along with important medicinal uses. Intensive ethnobotanical exploration were undertaken in selected places of Mandi district to find out various medicinal plants used for different ailments either in flowering or fruiting stage. The plant specimen were freshly collected and were arranged properly within the folded sheets of pressing papers (12"/18"), each of which was placed between two dry blotters of same size to make the herbariums. The whole piles of blotters and pressing sheets was then locked up in a field press for 24 hours. Since drying of plants was done without heat, it

needed five changes of blotters and pressing sheets properly spread over a span of 12 days. Each specimen was mounted on a white card sheet (11.5"/16.5") by using white gum paste (Uniyal and Chauhan, 1973, Ahluwalia, 1952, Khare, 2007, Chopra et al., 1956). The informations collected regarding the medicinal uses of plants were analyzed properly and documented.

RESULTS

The study reveals that in absence of modern health facility people in the area depend on plants for medicinal purposes. Based on the initial reconnaissance survey and group discussions where emphasis was on identification of knowledgeable resource persons it was found that, information on the medicinal uses of plants now seems to be confined to elder people (above 40 years of age) only. Younger generation is ignorant about the vast medicinal resources available in their surroundings and is more inclined towards market resources. All the resource persons identified were in the age group of 40-55 years and all of them were familiar with the medicinal plants growing in their vicinity. It was also found that men knew comparatively more than females. Present investigation revealed information on 25 plant species but after cross checking in follow up visits 15 plant species belonging to 13 families were collected, verified and authenticated (Table 1). The plants documented in this survey were of families such as Asteraceae, Acanthaceae, Berberidaceae, Cannabinaceae, Poaceae, Gentianaceae, Liliaceae, Lamiaceae, Ranunculaceae, Plumbaginaceae, Polygonaceae, Rosaceae, Rutaceae (Chopra et al., 1956, Khare, 2007). Leaf was the most widely used plant part accounting for 7 plant species in a total of 15 reported plants. This was followed by seeds (3 species), roots (3), bark (1 species) and flower (1 species).

DISCUSSION

Many of the plants that are used by the local people in Mandi district find mention in ancient medicinal literature and are also used in different systems medicines such as, the Ayurveda, Siddha and Unani systems. The recorded ethnomedicinal plants were used in the treatment of various ailments such as ulcer, sores, dyspnea, inflammation, as abortifacient, as analgesic, in fever, stomach ache, leprosy, acidity, arthritis, nasal

Table 1: Description of the medicinal plants used by people of Mandi district for different disease conditions

Botanical name	Local name	Family name	Parts used	Disease/ailment	Mode of preparation
<i>Ajuga bracteosa</i> Wallich ex Benth	Neel-kanthi	Lamiaceae	Leaves	Ulcer Sores Dyspnea	Leaf powder is given to cure ulcer of mouth. Decoction of leaves (3-4 drops) is given thrice a day to small children (4-5 months old) who have breathing problems and also to cure internal sores.
<i>Artemisia sieversiana</i> Willd.	Charmara	Asteraceae	Leaves	Inflammation Abortifacient Analgesic	Decoction of leaves is given to the pregnant ladies as an abortifacient. Paste prepared from the leaves is also applied on wounds to cure pain and swelling.
<i>Aconitum heterophyllum</i> Wallich ex Royle	Patish	Ranunculaceae	Roots	Fever Stomach ache	Dried roots are powdered and taken orally to cure stomach ache and fever.
<i>Centratherum anthelminticum</i> (Wild.) Kunze	Kaalijiri	Asteraceae	Seeds	Leprosy	The powder is mixed with water and the mixture is orally taken
<i>Justicia adhatoda</i> L.	Simhaparni	Acanthaceae	Leaves	Leprosy	The juice extracted is mixed with honey and the mixture is orally taken
<i>Berberis aristata</i> DC.	Kshamal	Berberidaceae	Flower	Acidity	The flowers are boiled in water and filtered. The extract is taken orally.
<i>Cannabis sativa</i> Linn.	Bhaang	Cannabinaceae	Seed	Arthritis	Seed oil is extracted by expulsion and is warmed by heating. The warm oil is massaged on the affected part(s). The treatment is undertaken at bedtime once a day.
<i>Cynodon dactylon</i> (L.) Persoon	Drub	Poaceae	Leaves	Nasal bleeding	Entire above ground parts are crushed with water. Two to three drops of this extract are poured in the nostril to cure nasal bleeding.
<i>Swertia chirata</i> Buch.-Ham. ex Wall.	Siretta Bhuunimba	Gentianaceae	Leaves	Leprosy	The dried form is orally taken
<i>Polygonatum verticillatum</i> (L.)	Salam mishri	Liliaceae	Roots	Spermatorrhoea Haemorrhoid	Fresh roots are cleaned, broken into small pieces and kept in water overnight. Next day these are ground in the same water. About 10 ml of this solution is taken regularly empty stomach in the morning to cure spermatorrhoea (locally called <i>Dhat</i>) and piles.
<i>Prinsepia utilis</i> Royle	Bhekal	Rosaceae	Seed	Arthritis	The seed oil is extracted by expulsion and is warmed by heating. The warm oil is massaged on the affected part (s) at bedtime.
<i>Zanthoxylum armatum</i> DC.	Timber, Timru	Rutaceae	Bark	Toothache	The bark is removed from the stem. Small piece of bark is chewed for 4-5 minutes.
<i>Plumbago zeylanica</i> Linn.	Chitra	Plumbaginaceae	Roots	Abortion	Root powder taken for abortion.
<i>Rumex hastatus</i> D.Don	Almoru	Polygonaceae	Leaves	Nasal bleeding	Leaves are believed to have cooling properties and help in stopping nasal bleeding.
<i>Rumex nepalensis</i> Sprengel	Albar	Polygonaceae	Leaves	Wound Allergy	Leaves are crushed and applied on wounds as an antiallergic.

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