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Plants of Haryana useful in dermatological disorders: An Ethnobotanical Survey

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ABSTRACT

Haryana is a state of northern India has a great history and diversity of medicinal plants. The importance of medicinal plants in traditional healthcare practices provides clues to new areas of research. In the present study, we have enlisted the traditional medicinal plants knowledge of people of rural communities of Haryana in curing several skin diseases. The information was collected by questionnaires and interviews of old experienced people and local healers of villages. Local people are using the crude formulations to cure their skin problems. It was found that 35 different plant species are commonly used to cure skin problems, out of these 40% herbs, 32% shrubs, 25% are trees and 3 % climbers. In most of cases aerial parts of plants were used. Some of these plants are well tested on scientific basis but others are less known in scientific world. This study will provide a complete documentation of traditional knowledge to researchers for skin diseases treatment. The hidden aspects of these formulations can be tested scientifically in future.

KEYWORDS: Herbal plants, Medicines, Skin diseases, Traditional knowledge.

INTRODUCTION

Haryana is a landlocked state in northern India. It is located between 27°37' to 30°35' N latitude and between 74°28' and 77°36' E longitude. The altitude varies between 700 to 3600 ft (200 metres to 1200 metres) above sea level. The climate is hot in summer and cold in winters. Rainfall varies like the Shivalik Hills region being the wettest and the Aravali Hills region being the driest. About 80% of the rainfall occurs in the monsoon season. An area of 1,553 km² is covered by forest and dry, deciduous thorny shrubs can be found all over the state. In Haryana, there is a great biodiversity of medicinal plants (1-2). Major population resides in villages where life supporting facilities are lacking. The people are mostly dependent on plant resources for their livelihood including the native therapy for health care (1). Traditional medicines based on herbal remedies have always played a key role in the health system of many countries. Skin diseases are common in all age groups and cause harm in a number of ways (3-5). Dermatological problems are most frequent due to climate conditions and illiteracy prevailing in the study area (6). In Haryana region, there is a long tradition of using herbal products for skin and other problems by healers and old peoples (7). They are using these herbal remedies because they are cheap and fast healing. Healers and few old people acquire such knowledge which is verbalized and is limited only to their knowledge, it may get lost in near future (8). Considering these facts, it has been aimed to document folklore medicine used for the treatment of skin diseases. This study may prove to be effective for herbal drug development by further research.

MATERIAL AND METHODS

In order to document the medicinal plant, we have conducted a survey during October 2008 to January 2009 covering four different districts of Haryana (Mohindergarh, Bhiwani, Rohtak and Hissar). The climate is subtropical with an average annual

rainfall of 450mm. The area surveyed has a lot of farmers and home gardeners who are self employed. The village people complained that during the course of their work in the field, dermatitis is the main problem. The information was collected during field trips on the basis of interviews, a total of 24 resource persons, comprising of 19 males and 5 females were identified. These are old village peoples, traditional practitioners, local vaid, old women and herbal healers. They have sound knowledge on medicinal plants and are highly related to society. Occasionally, the help of some trained people were also taken for collection of specimens. The information about the ethnomedicinal use, local name and mode of treatment was recorded by the conversations and discussion with local old people and healers. The collected plant was identified with the help of available taxonomic literatures and floras. We have also recorded some polyherbal formulations that they usually use in skin problems.

RESULTS

From our study, we have identified 35 plant species from 20 families as enlisted in Table – I. These plants included 40% herbs, 32% shrubs, 25% are trees and 3% climbers (Figure 2). A total of 25-30 prescriptions for skin diseases were noted. Mixture of plants was used in some cases. Several medicinal plant parts were used in herbal preparations such as leaves, stem, fruit, seeds, bark and roots. Out of these, the leaves are used in 30% of the cases. The leaves are observed to be top priority followed by stem bark, seeds, roots, and fruits. The detailed description of these plants along with ethnomedicinal use is enlisted in Table – I. These plants include some wild and some cultivated ones. Some polyherbal formulations which those villagers are incorporating in their regular practices are-

- Raw Haldi mixed with fresh leaves of pudina and Tulsi and then crushed with cow milk and applied

- over the skin. It is usually good herbal mixture to treat pimples like skin problems.
- Shade dried leaves of neem plant mixed with multani meetti and used to cure skin problems.
- Leaf paste of Kasundi and neem are externally applied on healing wounds, sores, itch and cutaneous diseases.

Table 1: List of locally used medicinal plants to cure dermatological problems.

Common Name	Botanical Name	Family	Uses
Aak	<i>Calotropis procera</i> (Aiton)	Asclepiadaceae	Latex is used against skin ailments.
Amaltas	<i>Cassia fistula</i> Linn.	Fabaceae	Bark decoction is used for leucoderma and skin eruption.
Arand	<i>Ricinus communis</i> L.	Euphorbiaceae	Seed oil is used to cure skin diseases.
Babchi	<i>Psoralea corylifolia</i> Linn.	Fabaceae	Whole plant paste is used to cure leprosy and leucoderma.
Babool	<i>Acacia arabica</i> (Lamk.) Willd.	Fabaceae	Leaves juice is used to cure leucoderma.
Beri	<i>Zizyphus jujuba</i> Lam.	Rhamnaceae	Paste is applied to treat ringworm.
Bhui amala	<i>Phyllanthus amarus</i> Schumacher & Thonn.	Euphorbiaceae	Leaf juice is used for pimples.
Brahmi	<i>Centella asiatica</i> L.	Apiaceae	Plant decoction is used in leprosy.
Chanderjote	<i>Jatropha curcas</i> L.	Euphorbiaceae	Latex and seed oil is used to treat boils and pimples.
Channa	<i>Cicer arietinum</i> Linn.	Papilionaceae	Seed paste is used to cure leprosy.
Choulaii	<i>Amaranthus spinosus</i> L.	Amaranthaceae	Root juice is applied to treat itching.
Dhak	<i>Butea monosperma</i> Lam.	Fabaceae	Plant juice used to cure ringworm and leprosy.
Doob grass	<i>Cynodon dactylon</i> (L.) Pers.	Poaceae	Whole plant used.
Ghumchi	<i>Abrus precatorius</i> L.	Fabaceae	Seed paste is used.
Haldi	<i>Curcuma longa</i>	Zingiberaceae	Rizome is used for skin diseases.
Hansraj	<i>Adiantum capillus-veneris</i> Frond	Adiantaceae	Used for treating skin allergies.
Imli	<i>Tamarindus indica</i> L.	Fabaceae	Bark powder and leaves are used.
Jangli dhania	<i>Fumaria indica</i>	Fumariaceae	Whole plant is used.
Kachnaar	<i>Bauhinia variegata</i> Eight & Arn.	Fabaceae	Leaves juice used for curing skin infection.
Kasaundhi	<i>Cassia occidentalis</i> Linn.	Fabaceae	Leaf paste is applied to treat leucoderma, ringworms and skin boils.
Kela	<i>Musa pardisica</i> L.	Musaceae	Root used in skin diseases.
Khareti	<i>Sida acuta</i> Brum. F.	Malvaceae	Root is used for itching.
Lasun	<i>Allium sativum</i> L.	Liliaceae	Paste applied to treat ringworm.
Neem	<i>Azadirachta indica</i> A. Juss	Meliaceae	Bark paste applied on pimples, scabies and boils of skin.
Nimbu	<i>Citrus lemon</i> L.	Rutaceae	Fruit is used.
Papita	<i>Carica papaya</i> L.	Caricaceae	Latex used to cure ringworm.
Pawad	<i>Casia tora</i>	Fabaceae	Whole plant used in skin diseases.
Pili Kateli	<i>Argemone mexicana</i> L.	Papavaraceae	Seed juice used for itching.
Pudina	<i>Mentha arvensis</i> L.	Lamiaceae	Leaf paste is used in pimples.
Saphed aak	<i>Calotropis gigantea</i> L.	Asclepiadaceae	Root latex is used in skin disease.
Shankpushpi	<i>Evolvulus alsinoides</i> L.	Convolvulaceae	Plant juice used to cure scabies.
Til	<i>Sesamum indicum</i> Linn.	Fabaceae	Plant paste used for pimples.
Tulsi	<i>Ocimum sanctum</i> L.	Lamiaceae	Leaf is used to cure skin problems.
Ula Kanta	<i>Achyranthes aspera</i> L.	Amaranthaceae	Juice of root is applied to treat ringworm.
Vasa	<i>Adbatoda vasica</i> L.	Acantheceae	Decoction is used for scabies and other skin diseases.



Figure 1: Study Area

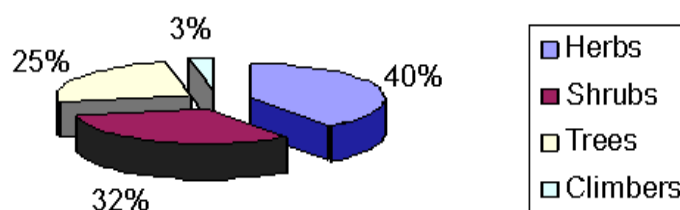


Figure 2: Percent distribution of plants of folk use.

DISCUSSION

Due to recent shift towards herbal medicines the market of medicinal plants is expanding rapidly now a days. In India, about 1.5 million practitioners of ISM (Indian System of Medicines) use around 25000 effective plant based formulations (9). According to the all Indian co-ordinate projects sponsored by Ministry of Environment & Forests,

New Delhi, 40% of the 16,000 recorded flowering plants in India have ethnomedicinal value, whereas, only 10% of these are used in drug and pharmaceutical industries (10,11). But the younger generation is ignorant about the vast medicinal resources available in their surrounding and is more inclined towards market resources. It has also found that men knew comparatively more than females (12). There could be many

reasons for this; females have more household working pressure so they have limited time. From our survey, we have also noted that people are hesitant to disclose their knowledge because this knowledge is a sort of recognition to them in the society. In most cases, we have also observed that this knowledge has been orally transferred from one generation to other and at each level a bit of it has been lost (13,14). The people themselves say that, compare to them their forefathers knew much more. The local people are concerned about the degradation of medicinal plants in wild. The study provides sufficient ground to believe that the traditional medicinal practices using native medicinal plants are alive well functioning in the study area. This study corroborates the findings of Egharevba and Ikhatua who believed that rural communities have immense knowledge and their areas contains a lot of plants suitable as medicinal remedies (15). But this medicinal heritage is at the corner of extinction. According to one estimate, more than 700 mono and poly herbal preparations in the form of decoction, tincture, tablets and capsules from more than 100 plants are in clinical use. As confirmed by Okafor (16) lack of conservative measures will increase the number of endangered species resulting in gradual extinction of numerous plant taxa that are useful as herbal remedies (16).

CONCLUSION

It is concluded that the indigenous methods of treatment are still an important part of culture and life of study area. However due to lack of documentation, the traditional knowledge of local people is being lost gradually. Hence proper documentation of medicinal plants is a vital necessity. We have found that chemical analysis of some of these plants has not been reported. So, chemical analysis and their pharmacotherapeutics will provide much useful information for new drug development in future.

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REFERENCES

1. R.K.A. Egharevba and M.I. Ikhatua. Ethno-Medicinal uses of plants in the treatment of various skin diseases in Ovia North East, Edo State, Nigeria. *Research Journal of Agriculture and Biological Sciences*. **4(1)**:58-64 (2008).
2. M. Srivastav and S.C. Tripathi. Ethnomedicinal flora of Fabaceae used for dermatological problems in district Bahrich of U.P. *J. Natcom*. **20(1)**:141-144 (2008).
3. S.K. Uniyal, K.N. Singh, P. Jamwal and B. Lal. Traditional uses of medicinal plants among the tribal communities of Chhota Bhangal, Western Himalaya. *J. Ethnobiology and Ethnomedicine*. **2**:14 (2006).
4. S.J. Deka, M. Ahmed and S.P. Deka. Survey of medicinal plants used by tribal (Lalung) people of Mayong area, Morigaon district, Assam, India. *Plant Archives*. **6(2)**:667-670 (2006).
5. J. Singh and S. Kant. Wild Medicinal plants of Kalakot range, Rajouri (J&K). *National Journal of Ljescience*. **5(2)**:135-138 (2008).
6. R. Mishra. A study in ecology of low lying lands. *Indian Ecology*. **1**:1-27 (1946).
7. A. Tomar and H. Singh. Ethnomedicinal uses of some weeds plants from Baghpat district (U.P.), India. *Plant Archives*. **6(2)**:691-693 (2006).
8. A. Rahman, A. Jalil, S.K. Basumatary and M. Ahmed. Study of some common medicinal plants used by Adivasi (Saontal) people of Dhubri district of Assam. *Plant Archives*. **6(2)**:603-605 (2006).
9. N.S. Chauhan. Important medicinal and aromatic plants of Himachal Pradesh. *Indian Forester*. **129(8)**:979-998 (2003).
10. S.K. Uniyal, A. Awasthi and G.S. Rawat. Traditional and ethnobotanical uses of plants in Bhagirathi valley (Western Himalaya). *Ind. J. Traditional Knowledge*. **1**:7-19 (2002).
11. A.K. Pandey, A.K. Patra and P.H. Shukla. Medicinal plants in Satpura plateau of Madhya Pradesh: Current status and future prospects. *Indian Forester*. **131(7)**:857-883 (2005).
12. S.K. Basumatary, M. Ahmed and A. Rahman. Some medicinal plants used by Hajong (tribal) people Goalpara district, Assam. *Journal of Current Science*. **5(2)**:741-744 (2004).
13. N.C. Shah. Prospect of botanical drug from Hill district of Uttar Pradesh. *Indian drugs*. **12(11)**:17-20 (1975).
14. J.C. Okafor. Improving edible species of forest products. *Unashria*. **42(165)**:17-22 (1991).
15. A. Singh. Herbal medicine – dream unresolved. *Pharmacognosy reviews*. **1(2)**:375-376 (2007).
16. A.K. Verma, M. Kumar and R.W. Bussmann. Medicinal plants in an urban environment: the medicinal flora of Banarea Hindu University, Varanasi, Uttarpradesh. *J. Ethnobiology and Ethnomedicine*. **3**:35 (2007).