



Ethnomedicinal Plants Used Against Skin Diseases in Asansol Raniganj Coalfield Area of West Bengal, India

KEYWORDS

Skin diseases, ethnomedicinal plants, Asansol Raniganj coalfield area, West Bengal.

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ABSTRACT Every tribal community in India has some species of ethnomedicinal plants which are considered essential for its survival and well being. Asansol Raniganj coalfield area in West Bengal is an important mineral resource area with a rich vegetation of ethnomedicinal plants used in traditional medicine. Now-a-days skin diseases are common which can affect people of all ages starting from new born babies to the elderly people. An ethnobotanical study was conducted in Asansol Raniganj coalfield area and it was found that many ethnomedicinal plants are used to treat skin diseases apart from other ailments cured.

Summary

Ethnomedicinal plants are popular among the tribals and people of other castes in Asansol Raniganj coalfield area. The preference of traditional medicine by the people of this area strengthens the need for documentation of ethnomedicinal plants. In this study, stress was given on ethnopharmacological application of ethnomedicinal plants to cure skin diseases.

INTRODUCTION

Human skin is the outer covering of our body which constitutes the first line of defense. Skin plays an important role in protecting our body against foreign agents, pathogens, excessive dehydration, temperature regulation, sensation, storage and synthesis of Vitamin D, etc. (Tabassum and Hamdani, 2014). Traditional medicinal plants have been found to play a major role in managing skin disorders. They have been employed in the treatment of skin ailments in many countries around the world where they contribute significantly in the primary health care of the population (Abbasi et al. 2010). An attempt was made to explore the ethnomedicinal plants used by tribals and people of other castes in Asansol Raniganj coalfield area of West Bengal, India for the treatment of various ailments especially skin diseases. Asansol Raniganj coalfield is situated on western part of Burdwan district of West Bengal. The edaphoclimatic conditions of this area support rich plant diversity and are a treasure house of ethnomedicinal plants. Skin diseases have become major concern today due to their association with HIV. (Wet et al. 2013). More than 80% of people in India depend on traditional health care for curing skin problems according to WHO. (Shankar and Majumdar, 1998). They are safe and cost effective treatment of skin diseases compared to modern medicine.

MATERIALS AND METHODS

The ethnobotanical investigation was conducted in tribal areas of Namojamdo, Mohisila gram, Bansra and Satgram collieries of Asansol Raniganj coalfield area. For collecting information regarding plants used for medicinal purpose by tribals a number of field trips were made to document the ethnomedicinal plant diversity from January 2013 to March 2014 in different seasons to avail most of the plant resources in their flowering condition. The information about medicinal uses of the plants were collected on the basis of interview with authentic traditional herbal

healers and experienced old persons belonging to tribal communities in different tribal areas by repeated consultation. The queries were done by the authors to indigenous community as suggested by Jain (1964); Martin (1995) and Maundu (1995) for carrying out systematic study in ethnobotanical investigations. Regular visits to patients regarding information about recovery were noted. In case information differed from experts to experts, rule of maximum was applied and sixty percent positive answers were taken as confirmed. Herbarium specimens and photographs were identified by taxonomists and stored for future use. Data collected was also compared with available literature to found out their usages in different parts of India.

RESULTS AND DISCUSSION

Asansol Raniganj coalfield area has an old heritage of medicinal phytotherapy. Here, though the tribals are influenced by recent development and modernization, but they continue to live in close association with their surrounding vegetation due to cultural faith and lack of modern medical facilities. Some of the common skin problems of this area are ringworm, sores, boils, pimples, leucoderma, psoriasis, scabies and eczema, etc. In this survey forty two plant species were recorded of which five are monocotyledons and thirty seven are dicotyledons. The different plant parts were mostly applied topically as a paste, powder, sap or latex on the affected skin area followed by decoctions that were taken orally. The dose of children was less than those of adults. Baths were suggested for treating rashes and itches, enemas for cleaning the body from inside and steaming for acne and pimples. The following plant species were identified for their use in Asansol Raniganj coalfield area against skin diseases (Table 1). The findings suggest that ethnomedicinal plants have great potentiality to cure different kinds of dermatological ailments.

Table 1.
List of ethnomedicinal plants used to cure skin diseases in Asansol Raniganj coalfield area

S.N.	Botanical Name	Family	Local Name/ Santhali Name	Uses
1.	<i>Anacardium occidentale</i> L.	Anacardiaceae	Hijlibadam	The extract of the bark is applied externally to cure ringworm

2.	<i>Artocarpus lakoocha</i> Roxb.	Moraceae	Dahua	The powder of the bark is applied on sores and boils.	20.	<i>Ipomoea aquatica</i> Forssk.	Convolvulaceae	Kalmi shak	The juice of the whole plant is used to treat leucoderma and wounds.
3.	<i>Borassus flabellifer</i> L.	Arecaceae	Tal	The pulp of the fruit is used in skin diseases.	21.	<i>Jatropha gossypifolia</i> L.	Euphorbiaceae	Lal Bherenda	Oil from the seeds is applied topically on skin itches.
4.	<i>Cassia nodosa</i> Buch.-Ham. Ex Roxb.	Caesalpiniaceae	Golapi	Paste of the bark is used in skin infections.	22.	<i>Leea macrophylla</i> Roxb. Ex Hornem.	Vitaceae	Hatikan	The paste of tuberous roots is used on wounds, sores and to treat ringworm
5.	<i>Cayratia pedata</i> (Lam.) Juss ex Gagnep.	Vitaceae	Goyale lata	Paste of the whole plant is applied on burns and boils to promote healing.	23.	<i>Leonotis nepetifolia</i> (L.) R.Br.	Lamiaceae	Dare dhompo	Flowers are boiled with mustard oil and then it is applied to cure wounds.
6.	<i>Chrozophora plicata</i> A. Juss	Euphorbiaceae	Kshudi okra	Paste of the leaves is useful to treat skin infections.	24.	<i>Leucas cephalotes</i> Spreng.	Lamiaceae	Ghalghasa	The fresh juice of the plant is externally applied in scabies.
7.	<i>Crotalaria juncea</i> L.	Papilionaceae	Shon	The oil from seeds is used to treat psoriasis and skin cancer.	25.	<i>Leucas plukenetii</i> (Roth.) Spreng.	Lamiaceae	Dronpuspa	The extract of the leaves is used to treat chronic skin eruptions and psoriasis.
8.	<i>Croton bonplandianum</i> Baill.	Euphorbiaceae	Churchuri	Latex of the plant is topically applied on skin infections and to heal cut and wounds.	26.	<i>Lindenbergia indica</i> (L.) Kuntze.	Scrophulariaceae	Halud basanta	The juice of the whole plant is taken orally for skin diseases.
9.	<i>Cynodon dactylon</i> (L.) Pers	Poaceae	Durba	Fresh juice of the whole plant is applied to cuts and wounds.	27.	<i>Litsea glutinosa</i> (Lour.) C.B. Robins.	Lauraceae	Leda	The paste of the bark is applied on boils.
10.	<i>Enydra fluctuans</i> Lour.	Asteraceae	Hinche	The paste of the leaves is used in leucoderma.	28.	<i>Luffa cylindrica</i> (L.) M. Roem.	Cucurbitaceae	Dhundul	The paste of the leaves is used for dressing sores.
11.	<i>Euphorbia antiquorum</i> Linn.	Euphorbiaceae	Bajbaran	The leaf juice is used to treat cutaneous infections.	29.	<i>Mangifera indica</i> Linn.	Anacardiaceae	Ul/Aam	The dried kernel powder of the fruit is applied on wounds with warm water.
12.	<i>Gloriosa superba</i> Linn.	Liliaceae	Siric samano	The extract of the tubers is used to cure pimples.	30.	<i>Melochia chorifolia</i> L.	Sterculiaceae	Tikiokra	The leaves are smashed and applied on sores.
13.	<i>Glycosmis pentaphylla</i> DC.	Rutaceae	Ban jamir	The paste of the leaves is used to treat eczema.	31.	<i>Merremia chryseides</i> Hallier f.	Convolvulaceae	Bilaikan	The paste of the leaves is used to treat cracked feet.
14.	<i>Hemigraphis hirta</i> T. Anders	Acanthaceae	Musha kani	Paste of the ripe fruits is used to treat scabies.	32.	<i>Mirabilis jalapa</i> L.	Nyctaginaceae	Sandhyamani	The paste of the tubers is applied on carbuncles and the seeds are used in cosmetics.
15.	<i>Hibiscus syriacus</i> L.	Malvaceae	Swet jaba	Extract of the flowers is applied for itches.	33.	<i>Polygonum hydropiper</i> L.	Polygonaceae	Packurmul	The decoction of the roots is taken orally to treat skin disease.
16.	<i>Hiptage benghalensis</i> Kurz.	Malpighiaceae	Madhavi	The paste of the leaves is used for scabies.	34.	<i>Saccharum spontaneum</i> L.	Poaceae	Kash/Kariba	The extract of the roots are taken for allergic eruptions on skin.
17.	<i>Hydrolea zeylanica</i> Vahl.	Hydrophyllaceae	Ishlangula	Paste of the leaves is used to heal wounds.	35.	<i>Spilanthes acmella</i> L.	Asteraceae	Pirazha	The decoction of the whole plant is applied to treat scabies and psoriasis.
18.	<i>Hyptis suaveolens</i> Poit.	Lamiaceae	Ban tulsii	The infusion of the whole plant is used to treat parasitic cutaneous disease.					
19.	<i>Ichnocarpus frutescens</i> R. Br.	Apocynaceae	Shyamлата	The paste of the leaves is applied between the fingers to treat sores.					

36.	<i>Tabernaemontana divaricata</i> Bl.	Apocynaceae	Tagar	Juice from the flowers are extracted and applied on skin infections.
37.	<i>Tephrosia purpurea</i> (L.) Pers.	Papilionaceae	Kulathia	The paste of the whole plant is applied to treat pimples, boils and skin eruptions.
38.	<i>Thevetia nerifolia</i> Juss.	Apocynaceae	Kolkephul	Leaf juice is used as an antimicrobial in skin diseases.
39.	<i>Tridax procumbens</i> Linn.	Asteraceae	Targanda	The extract of the whole plant is used for hemorrhage of cuts and wounds.
40.	<i>Typhonium trilobatum</i> (Linn.) Schott.	Araceae	Ghetkachu	The extract of the tubers is applied on boils and eruptions.
41.	<i>Ventilago denticulata</i> Wild.	Rhamnaceae	Raktapita	The stem bark is powdered, mixed with Sesame oil and then applied on itches.
42.	<i>Vitex negundo</i> Linn.	Verbenaceae	Nishinda	The leaf juice is applied on boils and eruptions.

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CONCLUSION

The ethnomedicinal plants are popular among the tribals and people of other castes in Asansol Raniganj coalfield area as they are not only cheap but also have little or no side effects compared to modern medicine. They show better patient tolerance and are easily acceptable due long usage by forefathers. Ethnomedicinal plants are suitable raw materials for production of new synthetic drugs to treat skin problems. But anthropogenic activities such as deforestation, habitat destruction, urbanization, coal mining and overexploitation by pharmaceutical companies pose a serious threat to the ethnomedicinal plants of this area. Most of the ethnomedicinal plants are wild and rare. So, these important plant resources should be conserved and used sustainably. Most of the skin disease is caused by microorganisms like bacteria, virus and fungi, etc. It is recommended that phytochemical screening of ethnomedicinal plants should be done by chemists and pharmacologists for the preparation of herbal and modern drugs to cure skin diseases which can be a boon for mankind.

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