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Indigenous knowledge of using medicinal plants in treating skin disease by tribal's of Kupwara, J&K, India.

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Abstract

The present study mainly focuses on the study of plants used to cure skin diseases by tribal's of Kupwara. There is common occurrence of skin diseases among the people so efforts are made to discover the traditional therapeutic plants by community for the management of various skin disorders and ailments. The present survey was carried out during 2012-2013, In this survey we have found that 36 plant species belonging to 25 families are used to cure various skin diseases like cuts, wounds, boils, blisters, itching, leucoderma, swelling, scabies, rash, inflammation etc. Different parts of plants such as leaf, fruit, and roots, are taken in different forms. Traditional folk medicines hold the heritage of community acceptance because these are derived from indigenous knowledge and skills also involve theories, beliefs and experiences. Results show the important role of medicinal plants in curing different kinds of skin ailments.

Keywords: Disease, Ethno botany, folk Knowledge, Kupwara, Medicinal plants.

1. Introduction

Traditional systems of medicines have been in vogue for treating various ailments in many countries such as china, Japan, and India [1]. Our country is commonly called the botanical garden of the world, owing to her wealth of herbal medicines. India with its great topography and climatic diversity has a very rich and diverse flora and fauna [2]. World health organization has stated that 80% of the world's population depends on traditional medicines for its primary health care and has become indispensable for its survival [3, 4]. Plant wealth of the Indian Himalayan region is known for its unique, natural and socioeconomic values. The traditional use of plants as medicines is well known among the native communities of the area. The villagers have their own remedies for medicinal treatment by using various plants or plant products present in their vicinity [5].

Folk medication is used for thousands of years with major offerings made by its practitioners to human fitness for health care of the native public [6]. Traditional folk medicine use the information, expertise and observation based on assumptions, convictions and practices and also holds the legacy of community, acceptance and is exclusively based on the skill gained by local herbalist over a period of time [7, 8]. Skin disease is a general disorder. Illness of skin affects the persons from all age groups and produce damage in many ways. physical inspection of the skin and the mucous membrane, makes foundation of an exact analysis of skin membrane conditions [9].

□ashmir Himalaya harbors a rich diversity of medicinal plants [10, 11]. Chiefly owing to its topographic variations spanning from valley floor through terraced table lands and dense forests up to alpine peaks [12]. The state (J & K) is populated with several ethnic groups [13, 14], with each group having their own knowledge of traditional herbal medicine inherited from their forefathers [15, 16]. up to now a very few studies have been carried out to document ethno medicinal uses of plant in this particular region because of being remote and difficult terrains [17, 18]. the present study has been carried out to explore and document the ethno medicinal uses of plant species used to cure skin ailments in the inaccessible areas of Kupwara (Chowkibal, Karnah, Keran, Hihama, Jungand, Lolab) J & K India.

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2. Material and Methods

2.1 Study Area

The Kashmir division has 10 districts, among 10 districts Kupwara is one of the backward and border district .it lies in the north of the Kashmir and located between 34°45 and 75°20 east longitude (fig.1). The district has a total geographical area of 2,379sq Km comprising of 368 villages. As per 2011 censuses, 870,354 persons

with population density of 366 persons per sq Km .the schedule caste and schedule tribe population of the area comprises of 7.97%. The languages spoken here are Pahari, Gojree, Pastu, and Kashmiri. The study area includes high mountains, like Sandna Top, Rawat, Rajram ladi, Duhamari and Kumkudi, Jumgand and deep valleys like Teetwal, Budnambel, Kudian, Mudian and famous valley of Lolab.

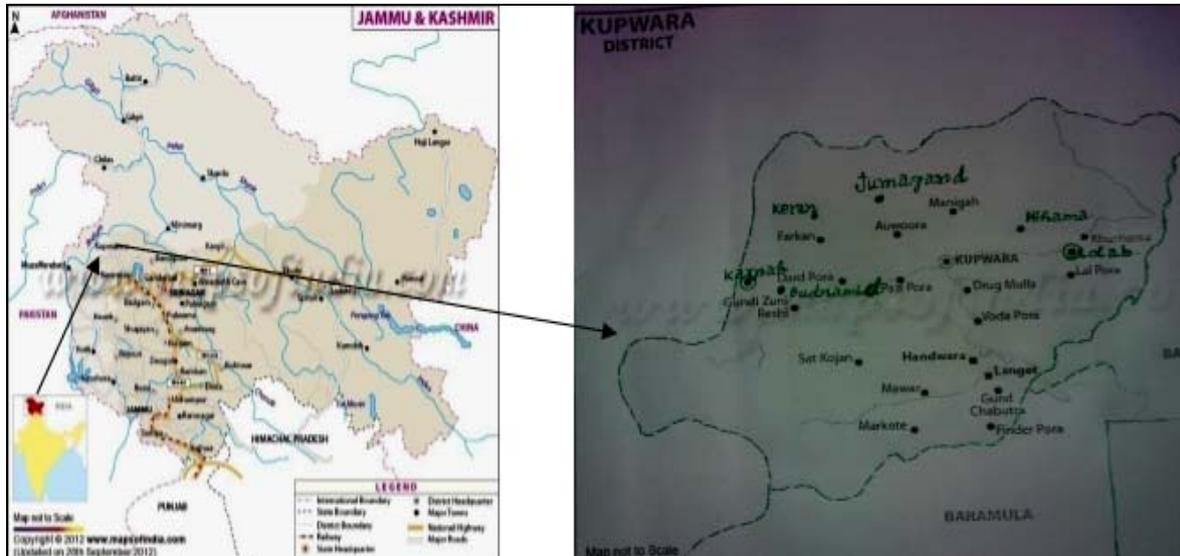


Fig 1: Map of the Kupwara showing study area (Chowkibal, Karnah, Keran, Jumgand, Hihama, Lolab)

2.2 Data Collection

Ethnobotanical surveys were conducted periodically in different flowering/fruited seasons. The survey was conducted during 2012-13. A preliminary survey was done along with local persons having knowledge of plants used traditionally as medicines, locally known as “HAKEEMS”. Appropriate methodology was used to obtain the

ethno medicinal knowledge about plants from the local populations [19, 20, 21, 22, 23, 24]. All the entire relevant information, in particular the method of use ,about each medicinal plant species was recorded in field note book. To bring the element of accuracy, the information obtained from the locality was crosschecked with the literature available [25].



(Author on field trip accompanied by a Gujjar at Rawat Budnambel Kupwara.)



(Author on field trip during Oct-Nov to collect the information about the dried parts of a plant used to cure skin ailments)

3. Results

The present study revealed that 36 plant species belonging to 25 families are used as medicine in the studied area to cure

skin ailments, each plant species is provided with the scientific names, vernacular name, family, parts used, habitat, and mode of administration (Table 1).

Table 1: Medicinal plant species used to cure skin ailments based on the information gathered from the locals.

S.N	Botanical Name, (family)	Vernacular Name	Parts Used.	Mode of Administration.	Habitat.
01.	<i>Aconitum heterophyllum</i> Wall. Ex-royal, (Ranunculaceae)	Patris.	R	The paste is made from the roots which are applied on skin for treatment.	WH
02.	<i>Ajuga bracteosa</i> , (Lamiaceae)	Jainadam.	LE	A poultice made from the leaves is applied to burns for rapid healing.	WH
03.	<i>Allium cepa</i> L, (Liliaceae)	Gande.	B	The bulb is crushed and tied on the boils, to help ripen them and evacuate the pus.	CH
04.	<i>Allium sativum</i> Linn, (Liliaceae)	Rohun.	B	Bulbs are used for curing skin diseases. Fresh bulbs are ground into a poultice and rubbed along the affected part of the body for 15 days.	CH
05.	<i>Anagallis arvensis</i> Linn, (Myrsinaceae)	Charisaban.	WP	Fresh herb is crushed to obtain juice which is applied on hands and arms and then washed with water to cure skin itches.	WH
06.	<i>Anaphalis nubigena</i> , (Asteraceae)	Daderi – Dawa.	WP	The herb is dried and crushed into powder mixed with ghee or oil to make paste. Paste is applied on effected portions externally.	WH
07.	<i>Anemone sp</i> , (Ranunculaceae)	Batkul.	TU	Bulb powder mixed with ghee is used to cure skin infection, burned skin and cuts and wounds	WH
08.	<i>Arisaema Jacquemontiana</i> Blume, (Araceae)	Hapat makei.	RH	Rhizomes are mixed with edible oil form a paste, which is used for massage in order to regain muscular strength and to treat skin problems such as blisters and pimples.	WH
09.	<i>Artemisia absinthium</i> L, (Asteraceae)	Teethwen.	LE	Leaves are crushed, boiled in warm water, fried in mustard oil mixed with salt and Haldi and is applied on effected portions externally.	WH
10	<i>Arnebia benthamii</i> (Boraginaceae)	Kahazaban.	WP	The whole plant is boiled in water; the boiled water is used by pregnant women for bathing.	WH
11.	<i>Brassica oleraceae</i> Var. haka Linn, (Brassicaceae)	Hakh.	LE	It is used to cure Corns. Fresh leaf is gently placed in warm oil with Haldi and salt till it becomes soft. It is then tied with muslin cloth on painful corns of toes and fingers which helps them to ripe, burst and evacuate pus and hence to alleviate the pain.	CH

Continued Table 1

12.	<i>Calendula officinalis</i> Linn, (Asteraceae)	Hamish bahar.	LE&FL	Leaves and flowers are crushed and paste is made by mixing with cow butter. Paste is then applied on boils, burns.	WH
13.	<i>Cannabis sativa</i> L, (Cannabaceae)	Bang/ chars.	LE&ST	The leaves and stem is crushed and made into powder mixed with oil to make paste. Paste applied externally to cure skin diseases.	WH
14.	<i>Cichorium intybus</i> Linn, (Asteraceae)	Jangle hand /posh hand	WP	The whole plant is boiled in water and crushed, fried in mustard oil mixing with Haldi and Salt and is applied on wounds to cure them.	WH
15.	<i>Cuscuta reflexa</i> , (Convolvulaceae)	Kulkulipot.	WP	The herb is dried and crushed into powder and mixed with ghee oil to make paste. Paste is applied on affected portions externally.	WH
16.	<i>Euphorbia wallichii</i> Wall, (Euphorbiaceae)	Guri-dud.	WP	Decoction made from the leaves and is applied to warts and skin infection.	WH
17.	<i>Ficus carica</i> Linn, (Moraceae)	Anjeer.	ST & LE	The milky latex is obtained from the stem and leaves and is applied on warts.	CT
18.	<i>Fritillaria roylei</i> Hook. (Liliaceae).	Sheethkar.	B	The bulbs are crushed and make powder which is applied on affected portions externally.	WH
19.	<i>Juglans regia</i> , (Juglandaceae)	Doon.	LE	The leaves are boiled in water and are used to cure frost (feet's) bite in children's.	CT
20.	<i>Lamium album</i> , (Lamiaceae)	Zakhmi Dawa.	WP	The herb is dried and powdered. the powder is mixed with oil to make paste, paste is applied externally to effected portions	WH
21.	<i>Lavatera cashmeriana</i> Cambess, (Malvaceae)	Sazposh.	LE & FL	Used to cure skin irritation in pregnant women.	WH
22.	<i>Nepeta cataria</i> , (Lamiaceae)	Gandsoi.	LE	A paste is made from leaves which are applied on wounds for immediate healing.	WH
23.	<i>Parrotiopsis Jacquemontiana</i> , (Hamamelidaceae)	Poh / Poush.	ST & LE	Oil is extracted from the stem which is applied affected area. Leaves are crushed and applied on wounds for 2 to 3 days.	WS
24.	<i>Phytolacca acinosa</i> , (Phytolaccaceae)	Hapatchuri.	R	Roots are harvested during autumn season and are dried, dried roots are changed into powdered form, and powder form is used to cure boils, sores, carbuncles.	WH
25.	<i>Plantago lanceolata</i> , (Plantaginaceae)	Gull.	LE	Crushed leaves are applied to boils and wounds, leaves are also used by pregnant women of the study area or bathing.	WH
26.	<i>Pinus wallichiana</i> A.B.Jakson, (Pinaceae)	Kayar.	ST	The stem of the tree produces latex commonly called as 'KANGUL' that is applied on cracked heels for healing. the latex is also applied on wounds for 2 to 3 days ,it helps in evacuation of Pus and cures wound.	WT
27.	<i>Podophyllum hexandrum</i> Royle, (Berberidaceae)	Wanwagun.	RH	Powdered rhizome is applied to wounds for rapid healing.	WH
28.	<i>Rheum emodi</i> Wall ex. Meissn, (Polygonaceae)	Pambchalan.	R	The roots are crushed and mixed with ash of hair and is applied on the effected portion of the burned skin.	WH
29.	<i>Robinia pseudoacacia</i> , (Kikar)	Fabaceae	LE&ST	The leaves are crushed and made paste, paste is applied externally.	WT
30.	<i>Rosa damascene</i> Mill, (Rosaceae)	Jangle-Gulab.	FL	An extract obtained from crushed leaves is used to cure skin diseases.	WS

Continued Table 1

31.	<i>Rumex acetosa</i> L, (Polygonaceae)	Abjie.	WP	The paste is made from the leaves and is applied on affected portions externally.	WH
32.	<i>Salvia moorcroftiana</i> , (Lamiaceae)	Gankual.	WP	The root is dried, then crushed and made into a powder. Powder is applied on affected portion externally.	WH
33.	<i>Salvia sclarea</i> , (Lamiaceae)	Buder tuned.	WP	The whole plant is crushed into powder which is mixed with ghee or oil to make paste. Paste is applied on affected portions externally.	WH
34.	<i>Sorghum halepense</i> , (Poaceae)	Durham.	R	The roots are dried and then crushed into a powder, the powder and oil is mixed to make paste, paste is applied externally.	WH
35.	<i>Urtica dioica</i> Linn, (Urticaceae)	Soi.	R	Roots made into a paste in oil are applied to heal minor wounds.	WH
36.	<i>Viburnum grandiflorum</i> Wall, (Caprifoliaceae)	Kalmach.	LE&ST	The poultice made from the dried parts of the plant is rubbed on skin to heal fractures.	WS

Abbreviations used:- WP (whole plant), R (Roots), ST (Stem), LE (Leaves), FL (Flowers), TU (Tuber), B (Bulb), RH (Rhizome), WH (Wild Herb), WS (Wild Shrub), CT (Cultivated Tree), F (Fern), WT (Wild Tree), CH(cultivated herb).

4. Discussion

During present survey, ethno medicinal data was gathered by consulting people of different ethnic groups such as Gujjars, Paharis, Pastus, Bakerwals and also some knowledgeable persons of the plains. Gujjars, Pastus, and Paharis are the permanent settlers of the study area. While the Bakerwals constitute nomadic tribe who lead a lonely and tough life in the high altitude meadows of the study area (Chowkibal, Karnah, Budnambel, Keran, Jumgand, Hihama Lolab) Actually the Bakerwals belonged to the Jammu division of J & K, they visit the study area every year in the month of May. They take their livestock animals, above the tree line to graze in the lush meadows. During the summer, they move from one meadow to another and ultimately leave the study area; there is lack of Health care system, so the Bakerwals are wholly and solly dependent on the plants. Both of these ethnic groups have their own knowledge of traditional and herbal medicines.

During the present study, the primary source of medicine were Wild Herbs (69.44%), Wild Shrubs (11.11%) Cultivated herbs (8.33%), Wild trees (5.55%), cultivated trees (5.55%) Fig (2). Information related to the plant parts being preferred and

number of plant species of various families used by the people of study area are presented in the Fig (3, & 4) respectively. The following species were the most important based upon their medicinal properties *Podophyllum hexandrum*, *Aconitum heterophyllum* Wall, *Arisaema jacquemontii* Blume, *Artemisia absinthium* L, *Cuscuta reflexa*. *Ajuga bracteosa* and *Podophyllum hexandrum* should be screened for further pharmacological studies. one of the important thing has been noticed in the study area that people of the study area has a belief on *Fritillaria roylei* that it can cure 80 diseases so the local name of the herb has been assigned as SHEETHKHAR. It has been observed during survey that the herb is most important medicinal plant of the area.

The medicine varies according to the symptoms and with the tribe and place it means that a particular plant is sometimes prescribed for different ailments in different localities and sometimes they apply a mixture of plants for remedy of diseases. The observation of present study showed that traditional medicines play a significant role among the tribal's of Kupwara.

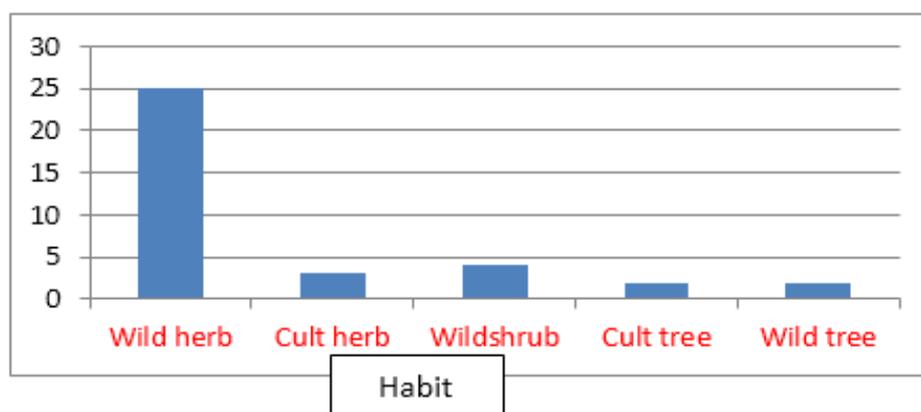


Fig 2: Showing habit of different plant Species in the study area.

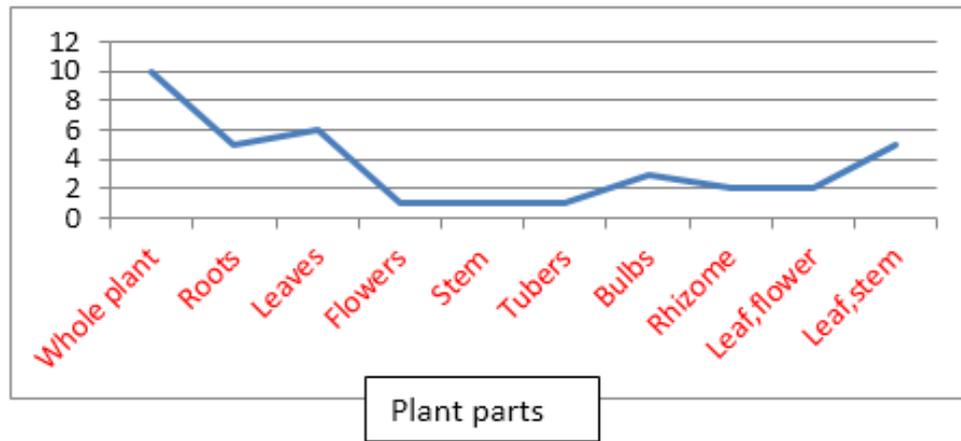


Fig 3: Plant parts being preferred for medicines by the people of study area.

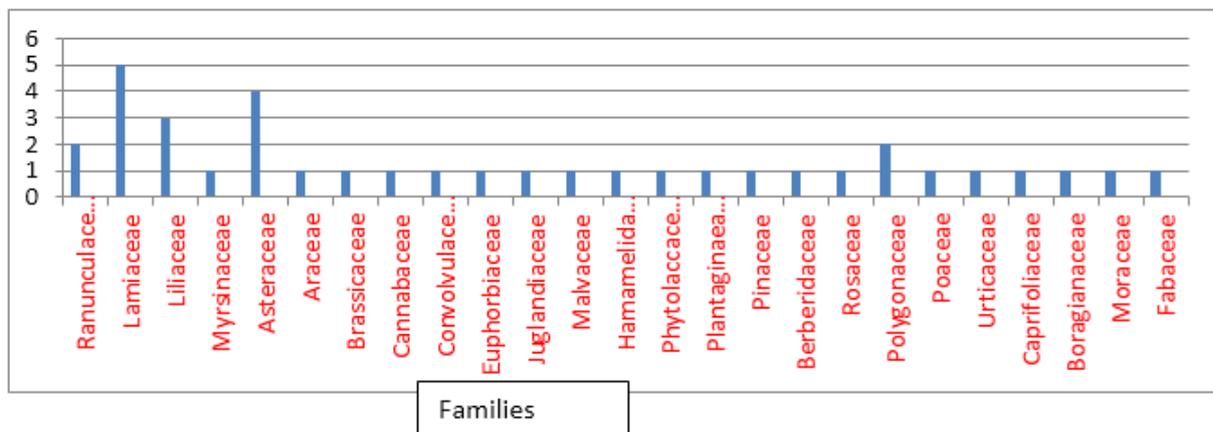


Fig 4: No of plant species of various families used by people of study area.

5. Conclusion

The aim of the study is to document the ethno medicinal plants which have been utilized by the locals in district Kupwara. This data should be useful for pharmaceutical industries which can study the photochemistry and prepare new medicines. It has been observed that rich information contents are lying with old generations must be recorded before it is last forever. By publishing their practical experiences will not make only young generation to aware about their traditional knowledge related to uses of plant parts, but also the people will have easy and cheap remedy to cure some minor diseases.

The commercial harvesting of threatened medicinal plants should be banned strictly. Most importantly the native communities need to sensitize the sustainable use and conservation of these species.

6. Acknowledgment

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