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Mini Review

Ethnomedicinal Plants Used for Respiratory Disorders in Udhampur District

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Abstract

The present enumerated data was directly collected by traditional tribal healers of the Udhampur district, Jammu and Kashmir with the aim to identify the ethnic usage of plants used for respiratory disorders. During the survey many local, professional, herbalist, occasional practitioners, traditional healers were brought into confidence to share their ethnic knowledge of their pedigree. After selecting the people discussion was made with the informants in their local language for their ease and were interviewed with a questionnaire. The usage of different plant parts and their different processes before taken as medicine were recorded. 22 plant species belonging to 14 families were collected and identification was done by their local and scientific names. The Mimosaceae, Caesalpinaceae, Solanaceae were the most represented family with three species each, followed by *Menispermaceae*, *Asteraceae* with two species each. All the remaining 9 families were represented by one species each. The plant part most commonly used to take care of respiratory diseases in the study was reported as leaf followed by whole plant, root, stem, fruit followed by bark and flower. Moreover various other plant parts together with gum and latex were brought into being in use in a variety of formulations for respiratory diseases treatment.

Keywords: Ethnomedicinal, Respiratory, Treatment

INTRODUCTION

The association of humans and animals to plants originated with the beginning of life on earth (Namdev, 2012). With the progress and need of humans, they recognize and categorize plant material as their importance and necessities of life by which they separated the plants where they can be used (Lichterman, 2004). In India, traditional system of medicine is serving a large portion of the population particularly in rural areas. In India medicinal plants have been used since ancient time. Indian citizens are using spices in their food daily for better health (Jain et al., 2010; Patel and Mahajan 2004). J and K has a rich heritage of over 300 medicinal plants (Kaul, 1997). Other

ethnomedicinal studies (Sarin and Kapur, 1984; Virjee et al., 1984; Kaul et al., 1990; Siddique et al., 1995; Kirn et al., 1999; Kant and Sharma, 2001; Kumar et al., 2009; Tantray et al., 2009; Sharma et al., 2012) in the State have also listed the medicinal plants of various local areas of Jammu and Kashmir. District Udhampur is a hilly area and many sites have no transport facility till date. Due to less interference of growing population and modernization in these areas or villages, there is a culture, still in existence to use herbs and plants for different ailments and day to day activities for better health.

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Most of the locals use different recipes and formulations for preparing different medicinal solutions. This knowledge is not documented and is just passed from one generation to another generation through oral transmission and this knowledge hub is gradually deteriorating because the modern young generation has access and interest to the modern technological era and is thus least interested to gather the valuable information from their forefathers. Many new health hazards like respiratory disorders, cancer, AIDS, high percentage of hypertension, diabetic patients are increasing day by day, challenging the allopathic system and threatening the mankind. This research work is undertaken to document and reveal the ethnomedicinal properties of the plants used locally in the Udhampur district. The aim of this research work is to identify and enlist the number of ethnomedicinal plants used for respiratory disorders in the district surveyed.

LITERATURE REVIEW

Udhampur is located at 32.93°N 75.13°E in a relatively plain parts of the city itself spreads on under hills of Shivaliks range of Himalayas and the terrain is most mountains. It is the one of the city with largest area of the Jammu region and is ranked as second in area, as far as in consideration with Jammu and Kashmir Normal annual rainfall at Udhampur is 1400 mm. Mostly rainfall (70% of the total annual rainfall) is received from Southwest monsoon. The monsoon regularly arrives in the first week of July and remains active up to September. Rainfall is also received during winter season due to Western disturbances. After February temperature rises progressively. May is generally the hottest month with mean daily maximum temperature at about 43°C and low 29°C. On individual day temperature may rise up to about 47°C. During the monsoon season, the relative humidity is high it being mostly above 70 percent. In the rest of the year the air is comparatively dry. Summer season is the dried out part of the year when

the relative humidity is not as much of 20 percent in the midafternoons. The data for present research were collected from the locals, tribals, herbsellers. This research work was conducted in udhampur district. The ethical approvals were taken from the informants in the form of affirmation with questionnaire. The interviewed and questionnaire studies were recurred a number of times among and between the informants to authenticate and validate the genuineness of their plant based knowledge. Most of the plants, herbarium specimen was significantly examined and acknowledged with the aid of the related literature like flora of British India, flora of India, flora of Jammu, flora of Udhampur, flora of Pir Panjal and from the publications (Table 1).

DISCUSSION

The district of Udhampur is hilly, and many villages in the region are shut off from the town's frequent visits. As a result, they treat numerous ailments with available medicinal herbs and are thus a treasure trove of rich ethnomedicinal knowledge. This information is derived from age-old experience and is passed down verbally from generation to generation as a domestic tradition. However, in the current situation, this tradition and accompanying expertise are fast decreasing since the younger generation is either reluctant or less inclined to acquire their forefathers' legacy of ethnomedicinal treasure. This shift in behavior could be attributed to a love with Western culture, industrialization, migration from rural to urban regions for jobs and education, allopathic medicine, deforestation, and other factors (Table 1). This study anticipated the ethnomedicinal value of 22 plants belonging to 14 diverse families used by the people of Udhampur and are enumerated with their Scientific names, Local name, Family and Ethnomedicinal usage as below.

Table 1. Ethnomedicinal usage their scientific names, local name, family Udhampur.

Serial no.	Scientific Name	Local name	Family	Ethnomedicinal usage
1	<i>Acacia modesta</i> Wall	Phulai	Mimosaceae	Bark is used as decoction for throat infection
2	<i>Acorus calamus</i> Linn	<i>Mimosaceae/Acoraceae</i>	Baria	Rhizome used in preparation of medicine for bronchial disorders and asthma
3	<i>Albizia odoratissima</i> (L.f.) Benth	<i>Mimosaceae/Fabaceae</i>	Janaglisiri	Flowers and root are used for lung disorders, bronchitis. Decoction of bark helps in cough.
4	<i>Bauhinia variegata</i> Linn	<i>Caesalpinaceae</i>	Karar	Gargles with bark boiled water helps in throat infections, toothache and strengthens gum. Flowers decoction helps in cough
5	<i>Butea monosperma</i> (lam) kuntze	<i>Fabaceae</i>	Palash	Fresh gum is applied to ulcers and sore throat
6	<i>Capsella bursa pastoris</i> Medik	<i>Brassicaceae</i>	Chirihalian	A tea made from the plant is used for lung disorders
7	<i>Cassia fistula</i> Linn	<i>Caesalpinaceae</i>	Karangal	Leaves are useful against skin diseases, dry cough and fever
8	<i>Cissampelos pareira</i> Linn	<i>Menispermaceae</i>	Battalbel/Thangugli	The plant has been used in cough, asthma and bronchitis root decoction is used in pneumonia

9	<i>Datura stramonium</i> Linn	<i>Solanaceae</i>	Datura	Fruit, branch and leaves crushed and dried, if smoked helps in bronchitis and lungs disorder
10	<i>Dioscorea belophylla</i> (Prain) Haines	<i>Dioscoreaceae</i>	Talad	Its root extract is used to treat asthma
11	<i>Grewia optiva</i> J. R. Drumm. ex. Burret	<i>Tiliaceae</i>	Dhaman	Leaves cure throat infections Powdered plant leaves are taken with honey can stop nose bleeding
12	<i>Jurinea dolomiaea</i> Boiss	<i>Asteraceae</i>	Dhup/Gugul	Plant is used in the treatment of asthma
13	<i>Morus alba</i> Linn	<i>Moraceae</i>	Toot	Extract of leaves and dried fruits used in cough
14	<i>Phanera vahlii</i> Benth	<i>Caesalpinaceae</i>	Maloungarh	Leaves are used in decoction for cough and lung disorders. Meal on leaf plates are believed to cure throat infections
15	<i>Plantago lanceolata</i> Linn	<i>Plantaginaceae</i>	Goba	Young leaves are used for throat infections. Leaves and roots are helpful in lung diseases
16	<i>Plumbago zeylanicum</i> Linn	<i>Plumbaginaceae</i>	Chitra	Root is used for treatment of lung disorders
17	<i>Rubus ellipticus</i> Smith	<i>Rosaceae</i>	Aakhey	The juice of fruit is used in the treatment of coughs and sore throat
18	<i>Solanum nigrum</i> Linn	<i>Solanaceae</i>	Khayakhothi	Fruit is useful for high cough, root bark is useful in burning sensation of throat
19	<i>Solanum surattense</i> Burm.f	<i>Solanaceae</i>	Neeli Kandiyari	Whole herb is useful in asthma
20	<i>Sonchus oleraceus</i> Linn	<i>Asteraceae</i>	Phuldudli	Latex is used for ascites and hydrothorax
21	<i>Tinospora cordifolia</i> (Thunb.) Miers	<i>Menispermaceae</i>	Gloe	Plant is effective for the treatment of tuberculosis. Leaf and stem extract is useful in asthma and cough
22	<i>Vitex negundo</i> Linn	<i>Verbenaceae</i>	Bana	The whole plant is effective in treatment of asthma, cough, bronchitis

In this research work, number of explorations and investigatory studies were conducted to know the extent of conventional knowledge amid tribal people, such explorations have resulted in a record of medicinal plant species for the treatment of different respiratory disorder. The tribals are not adoring to contribute their ancient knowledge with more persons and their wisdom ends with the culmination of their life. However, once evolving understanding with some well-informed and talented medicine men and more customary healers, some details on medicinal service of the plant species have been observed earlier. Although a brief account on ethno-medicinal application of indexed plant species have been confirmed by verifying with the medicine men, well-informed persons, healers and specialized informants of the area, even then further surveys on medicines, healing as well as safety aspects are very much anticipated for human welfare The investigation collected information on 22 plant species noted by the informants for their medicinal use. The *Mimosaceae*, *Caesalpinaceae*, *Solanaceae* were the most represented family with three species each, followed by *Menispermaceae*, *Asteraceae* with two species each. All the remaining 9 families were represented by one species each.

CONCLUSION

The plant part most commonly used to take care of respiratory diseases in the study was reported as leaf followed by whole plant, root, stem, fruit followed by bark and flower. Moreover various other plant parts together with gum and latex were bring into being in use in a variety of

formulations for respiratory diseases treatment. This ethnomedicinal survey of Udhampur district have revealed the maximum percentage of plant part used by the locals of the district Udhampur for respiratory disorders as Leaves with 21.22% followed by the whole plant with 18.18% then the root usage with 15.15%. The stem/rhizome and fruit with 12.12%, bark with 9.09%, flower with 6.06%, Gum with 3.03% and Latex with 3.03%. The usage of latex and gum with 3.03% have also been reported. Leaves, whole plant and roots are the foremost employed plant parts for respiratory ailments and share of other parts like Stem and Fruits is a bit higher than bark and flower that is comparatively low. Latex and gum are used in very low percentage.

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