Journal of Global Biosciences
ISSN 2320-1355
Volume 4, Number 4, 2015, pp. 2077-2086
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Research Paper

ETHNOMEDICINAL PLANTS USED AGAINST VARIOUS DISEASES IN JHALAWAR DISTRICT OF RAJASTHAN, INDIA

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Abstract

The Jhalawar district area is part of south-east Rajasthan. Recently ethnomedicinal studies have gained importance during recent years. However, this valuable source of knowledge is not adequately documented, which impedes their widespread use, evaluation and validation. Here, in the present work ninteen selected medicinal plant species, used extensively by local people and tribal communities residing in Jhalawar district have been screened qualitatively to find out their ethnomedicinal properties. These plants are commonly used in vomiting, diarrhea, ringworm, ear pain, gastric problem, stone, infertility, diabetes and blood pressure etc. The present work listing includes botanical name, family and ethnomedicinal uses of some plants. This work highlights updated information that may provide incentive for proper evaluation of the plant as medicinal agent against many human diseases.

Key words: Ethnomedicinal, Jhalawar, Diseases, vomiting, diarrhea.

INTRODUCTION

The study of medical practices and use of medicinal herbs by the primitive aboriginal societies – the ethnic people gave birth to an interdisciplinary science called "Ethnobotany" a term first coined by Hershberger [1]. Schultes [2] interpreted ethnobotany as usually the study of relationship which exists between people of a primitive society and their plant environment. Ethno botany must have been the first knowledge, which the early man had acquired by sheer necessity [3, 4].

Jain laid down that ethnobotany deals with the study of total natural and traditional interrelationships between man and plants and his domesticated animals [5].

Since 20th Century traditional knowledge is being threatened. Firstly, due to destruction of forest with which native home of tribes and environment, where traditional knowledge took birth flourished and survived, is being destroyed. Secondly due to rapid acculturation affecting the ethnic culture due to this pressure and also the renewal of interest shown by many in natural foods and drugs has made ethnobotany an organized science in very short period [6].

Forests are not only the source of major and minor forest products but it also provides and fulfills the basic needs and demands directly and indirectly in life pattern of tribal's. Man acquired knowledge on selective uses of plants through trial and error. The healing properties

of certain herbs or their parts were discovered either through the domestic animals or by accident.

This knowledge was passed on from generation to generation mainly through oral folklore and to some extent through sign language on rocks and rock art or Pictography etc. [7].

Progress in research works on ethno-medicinal plants has undergone a phenomenal growth during the three decades; worldwide trend towards the utilization of natural plant remedies has created an enormous need for information about the properties and uses of medicinal plants. India is known for its wealth of medicinal plants which are found in its diverse climatic and physiographic condition. This has a enriched us with an estimated 45000 plant taxa of which 2000 are referred to frequently in literature. The storage of ethno botanical traditional knowledge of plants and animals origin in memory is really a God gift for a resource person in each tribal group. Each tribal group has different ethno botanical knowledge than its neighbors, which is either acculturated or lost with the knowledgeable person of that tribe.

The present study is towards the importance of ethnomedicinal plants and their medicinal uses by the people of Jhalawar district of Rajasthan. Communities of this district have a rich knowledge of plants based traditional medicines used in herbal and folk remedies.

STUDY AREA

Rajasthan has rich biodiversity consisting of a large number of plants, some of which are used for their medicinal value. Rajasthan is one of the largest states of India. Rajasthan state is a broadly divided into three main parts viz., Western Rajasthan, Central Rajasthan and South-east Rajasthan. South-east Rajasthan is also known as Hadoti region and it comprises of Kota, Bundi, Baran and Jhalawar districts. The region of Jhalawar which has its name from famous Jhala worriers has a glorious past early man lived here as per evidence available in some of the hilly tracts.

In the year 1947 soon after independence, Jhalawar was merged into India union. In March 1948 Jhalawar, along with other South-Eastern states of Rajasthan, then merged into the united states of Rajasthan. In 1950 it was integrated into the present state of Rajasthan after which it was given the status of a fully fledged district and placed under the administrative control of a District Magistrate. Figure -1 shows that the Jhalawar district on the South , West and East to the North-East are Ramganj mandi, Kanwas and Sangod tehsils of Kota plus Atru and Chhipabarod tehsils of Baran district. To the North Mukundra ranges' running from North West to East forming a rough boundary between Kota and Jhalawar districts but Khanpur tehsil is beyond the main range.

Geography- - 23°45'20'' to 24°52'17'' North latitude and 72°27'35''to N 76°56'48''East longitude.

Area - 6928 sq.km

Population - 11, 80,342

Temperature - 47°c (Max.) and 9.5°c (Min.)

Rain fall- 943 mm. (per year)

Soil- Jhalawar district is an expanse of fertile plain having rich black cotton soil. The soil of North Western area of Jhalawar is hard and stony and the soils of Dag area are red in colour.

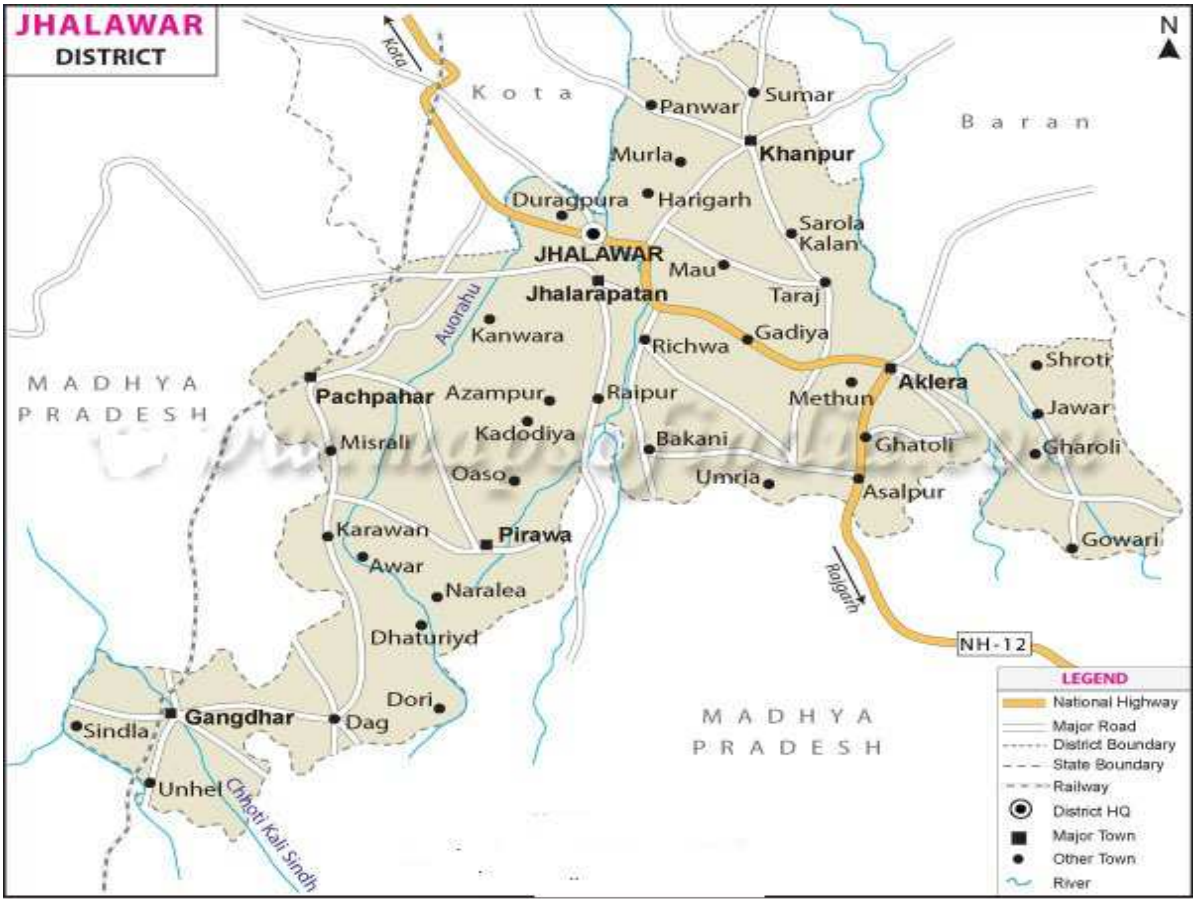

Figure: Map of Jhalawar District

MATERIAL AND METHODOLOGY

In order to organize an intensive survey of the ethnomedicinal important plant visits were arranged around the ethnical area of Jhalawar district (Tribal's covering area). Ethno botany deals with the direct, traditional and natural relationship between human society and plants. It has been recognized as a multidisciplinary science comprising many interesting and useful aspects of plant sciences, history anthropology culture and literature. Its importance has been realized chiefly in respect of the varied economic and medicinally uses of plants among the primitive human societies. During ethnomedicinal field trips in different tribal's villages of the Jhalawar district during 2014. The author came across a large number of tribal people and informants of the villages and medicine men who are using plants as a medicine. The author, therefore, was interested in finding out authentic uses of these plants by the tribe in their day - to - day life. In the research work, the results embroiled are the outcomes of one years of intensive exploration in the region under study of the Jhalawar district enrich with both the primitive tribes and plants.

RESULTS AND DISCUSSION

Here, in the present work total 19 plant species belonging to 16 families have been enumerated. Proper scientific evaluation of these plants might lead to the discovery of some interesting and important information. However, this valuable source of knowledge is not adequately documented, which impedes their widespread use, evaluation and validation. In the enumeration, the collected ethnomedicinal plants were arranged in alphabetical order according to botanical names, family, their uses and some photographs were given in Table-1 and Figure-2.

These plants are being used by various ethnic group and rural people of Jhalawar district. Medical administration included inhalation, oral administration, poultice and paste/applying and rubbing/massage. These plants are commonly used in vomiting, diarrhea, ringworm, ear

pain, gastric problem, stone, infertility, diabetes and blood pressure, leucorrhea, leprosy, insect bite, sperm scarcity, asthma, brain weakness, birth control, gout, cuts and wounds, tuberculosis, fever, piles, mouth sore, irregular menstruation, headache, scorpion sting and scortoum swelling.

The observations and findings made under present investigation reveals that the ethnic groups and local people of the area are highly dependent on the natural plant resources surrounding their vicinity and these resources play an important role in their routine life.

Table -1 Ethnomedicinal uses of plants by the rural people of Jhalawar district of Rajasthan.

Plant Botanical/ Local Name	Family Name	Part used	Medicinal use	Mode of administration
Abutilon indicum Khanghi, bel-Khateti, Tala Kunji	Malvaceae	Roots, Seeds, Leaves	Gonorrhea, Sexual potential & sperm scarcity, Pneumonia, Asthma and Constipation	Leaves Powder taken orally with cow milk to cure diabetes Whole plants Decoction taken orally to treat Gonorrhea Whole plants Powder mixed with sugar and taken orally to treat Sexual potential & sperm scarcity Roots Decoction taken with milk or honey, orally to long life span with strongness Seeds powder taken orally as a Constipation
Adhatoda zeylamica	Acanthaceae	Seeds and Whole plant	Diarrhoea, Cough	Powder of seeds taken orally with milk to cure Decoction of whole plant given orally to treat cough
Abrus precatorius (Ratti, Safed gunja)	Fabaceae	Roots, Seeds, Leaves	Leucorrhea, Abortion, Leprosy, Estrus and Insect bite	Roots Decoction taken orally twice a day to treat leucorrhoea Seeds Powder taken orally with water to

				abortion Paste of seeds mixed with *Sesamum, Cannabis* and applied locally to cure leprosy Crushed seeds are soaked in water overnight and given orally in the morning to cure lack of estrus Leaves extract with goat milk given orally to treat insect bite
Acalypha indica (Kuppi**)**	Euphorbiaceae	Whole plant	Brain weakness and asthma	Whole plants Extract given orally to treat brain weakness Whole plants Decoction taken orally thrice in day to treat asthma and pneumonia
Ailanthus excelsa (Ardu**)**	Simaroubaceae	Stem bark	Birth control and Dysentery	Stem barks Juice mixed with sugar or honey given orally to birth control Stem bark Decoction given orally mixed with honey to treat Dysentery
Alangium salvifolium (Ankol)	Alangiaceae	Roots	Piles and seasonal fever	10 gm powder of its root bark take in morning and evening to destroy worms in intestine 20 gm powder of its root with black pepper powder to treat piles 2-4 gm powder of its root take in morning and

				evening to relief in seasonal fever
*Argemone maxicana (*Satyanasi)	Papaveraceae	Leaves	Gonorrhea and ring worm	10 ml juice of its leaves with 10 gm ghee take three times in a day to treat gonorrhea Leaves juice with oil applied to treat ring worm
Asparagus racemosus (Satawari)	Liliaceae	Pods, Roots	Sexual weakness, Gout and Rheumatism	Dried pods powder mixed with ginger and Gorakh mundi taken with ghee and wheat flour daily in breakfast to treat sexual weakness Roots Powder taken orally with milk to sexual potential Roots Taken orally as tea to cure Gout, Rheumatism
Balanites aegyptica (Hingotiya)	Balanitaceae	Fruits, Seed	Asthma, Cuts and wounds	5 gm ash of the fruit is administered internally with one teaspoonful honey once a day for at least a week to cure asthma Its seed oil used to treat cuts and wounds
Butea monosperma (Dhank)	Fabaceae	Flowers and Gums	Fever and Birth control	Powder of flowers mixed with in milk and candy to drink for three days to cure fever Gums take with water Orally to

				as a birth control
Centella asiatica (Brahmi*)*	Apiaceae	Leaves	Blood pressure and Urine problem	One spoon juice of its leaves take with one spoon honey to cure high blood pressure Two spoon juice of its leaves take with one spoon candy to treat urine problem
Convolvulus microphyllus (Sankhpushpi)	Convolvulaceae	Whole plant	Diabetes and Blood pressure	6 gm powder of whole plant take with cow butter to beneficial diabetes 10-20 ml juice of its plant take in morning and evening to beneficial in high blood pressure
Datura metal(Datura)	Solanaceae	Seeds and leaves	Headache, Scorpion sting and Scortoum swelling	Its 2-3 seeds should be daily to cure headache Pulp of its leaves used for a scorpion sting Crushed leaves of Datura take the Sheelajeet to treat in bones and scortoum swelling
Hemidesmus indicus (Annantmul)	Asclepiadaceae	Roots	Arthritis	5 gm its root powder take with honey three times in a day to relief arthritis
Lepidagethis trivernis (Siyar-Baithna*)*	Acanthaceae	Stem barks, Flowers, Gums	Cough and Tuberculosis	Stem Bark Decoction mixed with honey given orally to treat

				cough Whole plant Juice taken orally to treat Tuberculosis
Melia azedarach (Bakayan)	Meliaceae	Leaves and seeds	Irregular Menstruation and Arthritis	5 ml juice of its leaves used to remove barrier of menstruation Its seeds crushed with mustard seed and applied on joints to relief arthritis
Oroxylum indicum (Shyonak)	Bignoniaceae	Roots , Gums	Cough and mouth sore	2 gm powder of gum take with milk to relief in cough Gargle with decoction of its root to relief for mouth sore
Sida cordifolia (Blla)	Malvaceae	Roots	Leucorrhea and Arthritis	3 gm its root powder with candy in cow milk take three times in a day to treat Leucorrhoea The decoction of its 5-10 gm roots take three times in a day to relief in arthritis
*Tribulus terrestris (*Gokhru*)*	Zygophyllaceae	Fruits and seeds	Female sterility, Asthma and Skin diseases	15-20 gm powder of its fruits dosage to treat female sterility Its seeds crushed with water and used to treat for skin diseases 3 gm powder of its fruit with 15-20 gm dry Fig take three times in a day to treat asthma

Figure-2: Some important Ethnomedicinal Plants

Adhatoda zeylamica

Argemone maxicana

Convolvulus microphyllus

Butea monosperma

Hemidesmus indicus

CONCLUSION

Since time immemorial, conservation of natural resources has been the integral part of many indigenous communities all over the word, especially in India. The survey indicates that the flora of Jhalawar district is rich in medicinal plants. The area is an important area of plant wealth for healthcare in Rajasthan. Medicinal plants are value added for the content and chemical composition of their active principles. Therefore, the demand on plant based therapeutics has increased many fold in both developing and developed nations due to growing recognition that they are natural products being non-narcotic, having no side effect and easily available at affordable prices.

The present study reveals that the plants of ethnomedicinal value need to be investigated for pharmacological activity on the basis of ethno therapeutics being practiced by ethnic groups for their safe use after having clinical trials. This will be certainly very much helpful in evolving new sources of herbal drugs for pharmaceutical industries. Such an effort will provide employment in the area for economic upliftment. Folk medicines today play a key role in the developing countries due to a lack of or limited modern health service. From ancient times, plants have been a rich source of effective and safe medicines. Due to their safe, effective and inexpensive nature, indigenous remedies are popular among the people of both urban and rural areas in India.

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