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Indigenous Knowledge on Medicinal Plants Prevalent in Cure Chronic Disorders in Chityal Nalgonda District Telangana India

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Abstract: ***Objective: Plants need to be evaluated through Phyto and Pharmaco chemical investigation to discover their potentiality and may help in developing effective drugs for human health care. There is a need for current traditional, medicinal practiced data on human being health illness region level for future conservation, sustainable maintenance of the valuable, rare, medicinal plants and discover new drugs. Chityal is a repository of large number of medicinal plants valuable for the local people, these plants holds a great importance in traditional health care systems there by providing clues to new areas of research in human being and biodiversity conservation. Methods: The present study documented indigenous knowledge of local traditional healers and the native plants used for medicinal purposes were collected through questionnaire and interviews during several field trips. Regarding their life style, tradition, culture and medicinal uses of the plant spices, plant samples were collected along with local names of the plant species. Most of the drugs were prepared in combination with readily available homemade ingredients. Roots, leaves, fruits, seeds or whole plant were used to prepare the crude drug in the form of pills, decoction water extract or combination of goat, cow milk and honey etc. Results: Out of 31 different formulations recorded, two formulations are of veterinary importance. Totally 31 plant species are used belonging to 18 different families. Conclusion: It will be helpful for the future generations to conserve the medicinal plants.***

Keywords: Indigenous Knowledge; Chronic Disorders; Chityal; Nalgonda.

1. Introduction

Medicinal plants continue to be an important therapeutic aid for alleviating ailments of humankind. The first generation of plant drugs were usually simple botanicals employed in more or less their crude form. According to the World Health Organization, over 80% of the worlds populations rely upon such traditional plant based systems of medicine to provide them with primary health care “Save plants to save lives” was given by WHO to Stress the Role of Medicinal Plants in Achieving the Goal of Health for All. With a sharp rise in national and global demand of herbal medicines the pace of their exploitation has increased enormously[1, 2]. India is endowed with a rich wealth of medicinal plants with great contribution to the development of ancient Indian Material Medica. India, with its diverse agro-climatic conditions and regional topography, has been considered as the treasure house or botanical garden of plant genetic resources. Hence, India is recognized as one of world’s top 12 mega diversity countries. Ancient Indian literature incorporates a remarkably broad definition of medicinal plants and considers “all’ plants as potential sources of medicinal substances. The contributions made during the past hundred years have meticulously brought into focus the information on a large number of medicinal plants. Out of the 17000 flowering plants occur in India, over 5000 plants are recognized for their medicinal use. Based on the different publications, it has been estimated that there are about 2000 medicinal plants in India, and more than 6780 industries are engaged in the production of medicines employed in different systems of practice such as, Allopathy, Ayurveda, Unani and Homeopathy. It is worthwhile to note that, about 80% of the human populations in India , are still dependent on nature for remedies and this can be well understood from the fact that almost all systems of medicine are largely based on drugs of plant origin[3] . People living in the developing countries rely quite effectively on traditional medicine for primary health care[4]. In recent years traditional drugs are receiving great attention all over the world, therefore, a great emphasis has been laid to revive the heritable knowledge on the medicinal plants, and government of India has formulated diverse schemes on ethno- medico botanical studies[5].India has rich diversity of medicinal plants. The supply base of 90% herbal raw drugs used in the manufacture of Ayurveda, Siddha, Unani & Homoeopathy systems of medicine is largely from the wild. This source is speedily shrinking day-by day. Therefore, there is a need for conservation and sustainable use of medicinal plants. It is hoped that, in the future, ethno botany may play an increasingly important role in sustainable development and biodiversity conservation[6].

2. Study Area

Nalgonda district in the Indian state of Telangana. Its name is derived from two Telugu words: *nalla* ("black") and *konda* ("hill")[7]. The district was situated between 78° 40' and 80° 05'E, of the eastern longitudes and 16° 25' and 17° 60'N, of northern latitudes. The Boundaries of Nalgonda district are Krishna and Khammam districts in the East,

Mahaboobnagar and Hyderabad districts in the West, Mahaboobnagar and Guntur districts in the South and Medak and Warangal districts in the north directions. Best rain season is July to march with normal rainfall 751.0 mm and average rainfall of 670.2 mm. Forest areas includes 85830 hcts. Minerals in the district contain limestone, black and color granites. Nearly 500 villages in this district are affected by the high fluorine content in water. It is estimated that nearly 1 million people are affected by fluorosis in this district.

Chityal is a village and mandal in Nalgonda District of Telangana state, India. Located at 17.2333°N 79.1333°E[8] . It is located 29 KM North from District head quarters. It is consist of 30 Villages and 16 Panchayats. It is too hot in summer highest day temperature is in between 28 ° C to 46° C. Average temperatures of January is 25 ° C , February is 26 ° C , March is 30 ° C , April is 32 ° C , May is 35 °.

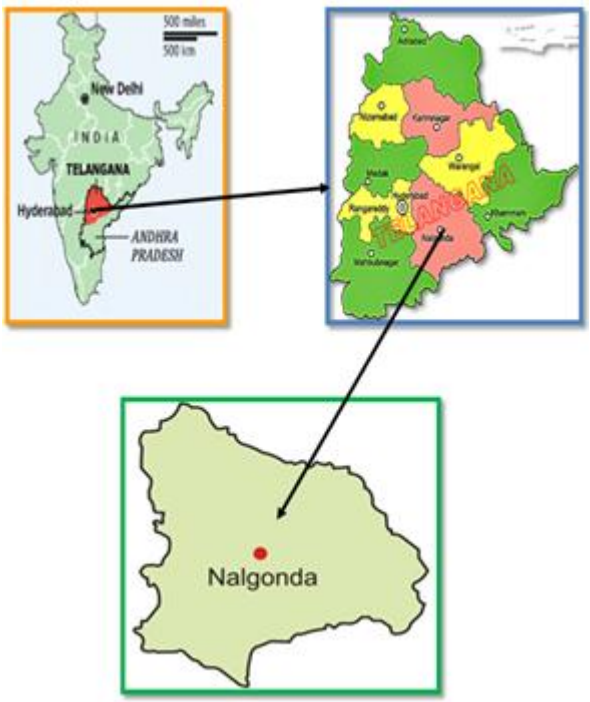

Figure 1: Study area

3. Methodology

The information on plants used for treating different chronic diseases and disorders of indigenous knowledge on medicinal plants of Chityal, Nalgonda District, of Telangana conducted in 2013- 2014, covering all seasons several field trips for this purpose, local men and elderly people whose empirical knowledge was respected by 20 informants, 14 were men and 6 were women, whose age ranged from 55-90 years. The information recorded is standard questionnaire which includes local name of the plant, parts used, preparation method, mode of administration, probable dosage and duration of treatment has been documented. At the end of each interview, plants' specimen were collected and indentified with the help of regional and local floras in the area interviewed. All interviews were performed in the local language telugu. The plant species were then scientifically identified with their botanical names and author index. The information on medicinal uses of plants were compared with some important literature of Indian medicinal plants and local floras [9-18] .The dictionary of Indian folk medicines[19] Indian Material Medica[20] was also consulted to find out the medicinal uses of these plants earlier reported by different traditional healers from Nalgonda district. Efforts have been made to collect the plants in flowering and fruiting condition. All gathered information was cross – checked with people of other villages and individuals practicing in or near the locality where the plant material was collected. The voucher specimens in duplicate were deposited in herbarium Hyderabadense, Dept of Botany, Osmania University Hyderabad.

4. Results and Discussions

Traditional and indigenous systems of medicine persist all over the world. The present study includes high value medicinal plant species. During the survey, local name, scientific name, family, plant parts used, ailments and mode of administration were followed[21]. Tribal Cultural Research and Training Institute, Hyderabad (table: 1) there is very little documentation of the ethno- medico-botanical knowledge of Nalgonda district[22-26]. The study revealed the medicinal properties of 31 plant spices belonging to 31 genera under 18 families. Apocynaceae and Fabaceae are the dominant families with 5 species each, followed by Amaranthaceae and Cucurbitaceae (3 species each). The other 14 families contributed two/one species each. Among all total species, herbs are found to be more with 13 different plant species followed by shrubs (7 species), trees (6 species), climbers, (3 species) and creepers (2 sp). These medicinal plants are known to cure 32 types of ailments. Two plant spices are veterinary importance. The main ailments in the study area were Lung disorders, diabetes, kidney stones, Menstrual Disorders, Abortion Urinary Problems, fever , tooth ache , skin rash, cough, , body pains, Eye disease, knee pains, Ear - ache, motions, Constipation, Weight Reduce, Headache and Loss of Hair. Etc. Most of the remedies for the above ailments are taken orally followed by external application. To improve the acceptability of certain oral remedies, additives are frequently used. Some of the herbal formulations for the chronic ailments are found to be new and first of their kind in terms of plant, part used preparation or administration out of 31 types of the drugs recorded, 19 preparations are solo drugs and 12 of them are mixed herbal formulations. Implication of dosage and the formulation also varied with the severity of the disease. However the formulations were finalized based on their expertise and successful cases. According to the healers, more than one drug is available against each therapeutic indication and the efficacy of the drug depends on the age, sex and also severity of the problem. Formulations involving more than one plant are common, which is comparable with findings of [19]. Most of the population attends its health care needs through the traditional medicine, which is essentially based on the use of easily accessible low- cost medicinal plants[27]. Moreover plant constituents are also greatly influenced due to climatic factors, edaphic and other ecological conditions, parasitic attacks, time and season of collection, specific stage of growth and development, geographical location of collection and cultivation etc. The herbs and their

properties described long ago must have undergone changes in phytochemical profile in normal evolutionary process and due to changed environmental and agronomic conditions[28] "Save plants to save lives "was given by WHO to stress the role of medicinal plants in achieving the goal of health for all. With a sharp rise in national and global demand of herbal medicines the pace of their exploitation has increased enormously. During the survey it was also observed that young generation does not show much interest to learn their traditional therapy from elders because of gradual urbanization and modernization. The traditional knowledge of medicinal virtues of plants is depleting rapidly due to modern culture of fast life and diminishing interest of younger generation. There is thus urgent need to document this precious asset for posterity[29].

Table 1: Indigenous Knowledge of medicinal plants used against chronic disorders and formulations used by Chityal, Nalgonda district

S.NO	COMMN NAME , SCIENTIFIC NAME, FAMILY.	PARTS OF PLANT USED	DISEASE	MODE OF ADMINISTRATION
1.	Kundanam *Caralluma adscendens* (Roxb.) R.Br. (Apocynaceae)	Whole plant	Toothache and	The stem is used to brushing teeth.
			Sore Feet.	Shoot Extract mixed with salt, which makes feet normal.
2.	Nalla Usiri *Aristolochia indica* L. (Aristolochiaceae)	Leaves	Cough	The juice extracted from the leaves are taken in apot and then mixed with toddy, and left for 3- 4 days and then given to animals.
3.	Pedda Godapalu *Wrightia tinctoria* (Roxb.) R.Br. (Apocynaceae)	Leaves	External tumors	The latex released from the leaf portions of the Plant is collected during early morning or late evening. It is applied on the sore parts of the body.
4.	Barre Bacchali *Cyphostemma setosum* (Roxb.)Alston (Vitaceae)	Whole plant	Spinal pains	The leaves of this plants are made into a curry and eaten.
5.	Vavili *Vitex nigundo* L. (Verbinaceae)	Leaves	Body pains and itches.	Leaves of the plant are mixed with neem leaves and turmeric powder in water, slightly warmed on low flame, and is used as bath by pregnant women.
6.	Gunta Gala Gara *Eclipta alba* L.(Asteraceae)	Leaves	Headache and loss of hair.	The leaves are made into juice without mixing water, garlic and oil is added to this juice slightly warmed on low flame until only oil is left and this applied to head.
7	Adonda *Capparis zylanica* L. (Capparaceae)	Fruits	motions	The fruits of the plant are boiled, dried and thenmade into regular curry.
8	Bandi Gurija ***Dregea volubilis* (L.f.) Benth. ex Hook.f** (Apocynaceae)	Leaves	Swellings in Body	Juice is extracted from the leaves and mixed with water, which is applied on the swelling parts.
9	Podapatri *Gymnema sylvestris* R. Br. (Apocynaceae)	Leaves	Eye disease	The juice extracted from the leaves of the plant are mixed with water and used as drops in to the eyes of animals which removes white layer formed on the eye ball.
10	Chevi Gonda *Cadaba frooticosa* (L.) Druce (Capparaceae)	Leaves	madness in sheep	The juice extracted from the leaves is collected, Filtered and fed regularly.
11	Tella Mamidi *Anisomeles malabarica* (L.) R.Br. ex Sims (Lamiaceae)	Leaves	Invulnerability for children	The dried leaves of the plant are collected and made into smoke, this smoke is given to young children after bath which makes them stay strong after bath.
12	Nela Thangedu *Senna siamea* (Lam.) Irwinet Barneby. (Fabaceae)	Leaves	Swelling body	The leaf powder is mixed with dried ginger and ajowan This is made into paste. One spoon daily, early in the morning.
			Indigestion	
13	Gunugu *Celosia argentea* L. (Amaranthaceae)	Leaves	Honey bee bite.	The juice extracted from the leaves of the plant is applied on the place where honey bee bites. This cures the swelling. Applied twice or thrice depending on the requirement.
14	Donda *Coccinia grandis* (L.) Voigt. (Cucurbitaceae)	Leaves	Wrinkles in young children	The leaves and egg white are mixed and applied to the babies between 5-9 months, all over their bodies, this makes the babies get rid of skin diseases. Regularly.
15	Vaamu *Trachyspermum ammi* Sprague. (Apiaceae)	Seeds	Joint Pains	Seeds + dried ginger + turmeric is mixed and made into fine powder mixed with cow milk taken daily two times one month.
			Proper digestion	This is taken daily as one spoon early morning that increases the digestion rate regularly.
16.	Vepa, *Azadirachta indica* A. Juss (Meliaceae) Kakara *Momordica charantia* L. (Cucurbitaceae)	Seeds	Diabetes	*Azadiracta indica* and *Momordica charantia* seeds are made into fine powders and mixed with water. This is taken daily early morning on empty stomach, and this cures diabetes.

17	Tati *Borassus flabelliformis* L. (Arecaceae)	Roots	Ear pain	The roots are collected and mixed with garlic, ajowan, cooking oil and slightly warmed on low flame, taken as ear drops.
18	Moolaka *Solanum viarum* Dunal. (Solanaceae)	Roots	Cough	Roots + *Calotropis* leaves and bitter gourd (only fruit without seeds) are mixed with water and taken Early morning that reduces cough.
19	Adavi Amudam *Jatropha gossypifolia* L. (Euphorbiaceae)	Latex	Tooth ache	Latex of the plant is taken and applied on the tooth which is painful.
20.	Ummetta *Datura metel* L. (Solanaceae)	Fruits	Sore feet	The fruits are boiled, cooled, crushed and Applied on the sore feet regularly.
21	Muridonda *Corallocarpus epigaeus* (Rottler) Hook.f. **(Cucurbitaceae)**	Leaves	Constipation	Juice is extracted from leaves, added to curd. It is given to young children, one spoon daily early morning.
22	Murki Thumma *Acacia farnesiana* (L.) Willd. (Fabaceae)	Leaves	Lung disorders	Leaves are ground, made into juice and mixed With curd to give to the animals in a week, daily 10 ml. It cures long disorders
23	Usiri *Phyllanthus emblica* L. (Euphorbiaceae)	Fruits	Skin rash	Fruit powder is made in to pills, and taken daily for one week.
24.	Tella Arija *Paspalum scrobiculatum* L. (Poaceae)	Flowers	Menstrual disorders	Fresh leaves prepared into curry and taken after delivery.
25	Atti Patti *Mimosa pudica* L. (Fabaceae)	Roots	Diabetes	The plant with roots is collected, ground with curd of cow milk (5gm in 100ml) and is given regularly in the morning as an effective medication for the treatment to control diabetes.
		Whole plant	Kidney stones	The decoction of the entire plant is given to melt out the kidney stones.
26	Uttareni *Achyranthes aspera* L. (Amaranthaceae)	Seeds	Weight reduction	Ground the seeds, mix with cow milk, add sugar and boil for few minutes, daily this is taken 10spoons on empty stomach for three months.
27	Tagirise *Senna tora* (L.) Roxb. (Fabaceae)	Seeds	Cough, headache And Fever	The seed powder of 5gm is mixed with tea and used two or three times daily.
28.	Marri *Ficus benghalensis* L. (Moraceae)	Roots	Abortion	Young prop roots powder mixed with cow urine and take early morning on empty stomach for 2-3 months three days. (abortion up to two months)
29	Koravendi *Aerva javanica* (Burm.f.) Juss. exSchult. (Amaranthaceae)	Leaves	Kidney stones	Leaves decoction mixed with honey and daily given two times after meals.
30	Palleeru *Tribulus terrestris* L. (Zygophyllacae)	Whole plant	Urinary problems	The entire plant is made into decoction & given orally early morning.

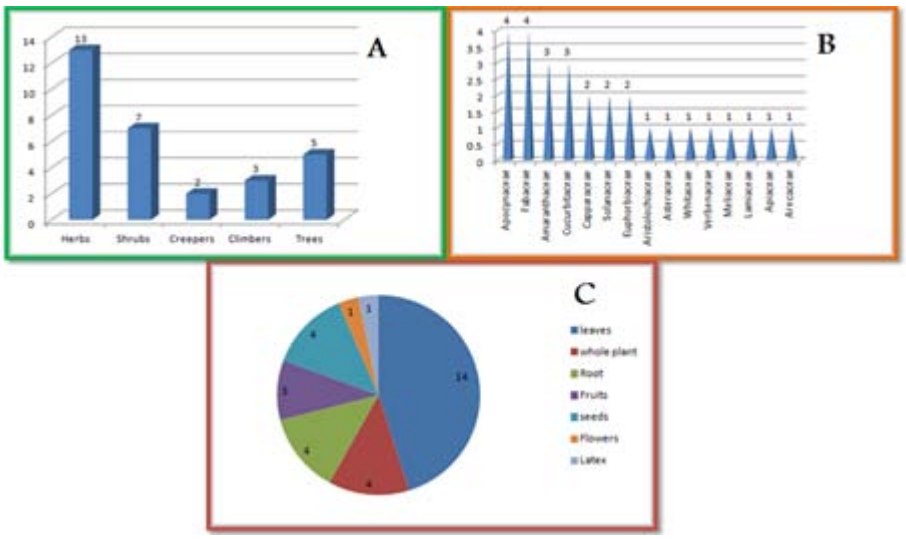

Figure 2

A. Medicine Produced By Indigenous Knowledge from the Different Forms of Plant Species.
B. Total No. of species per family encountered in the study area.
C. Preferential Plant parts being used.

5. Conclusion

This study has highlighted the indigenous knowledge on importance of medicinal plants used by local people and practitioners of Chityal. The data indicate that there is still valid and active knowledge of the therapeutic uses of wild

plant species growing in the region. Herbal remedies provide essential health care, which the village people of this region utilize to immense benefit. Although these remedies do not find esteem compared to modern medicine. Their efficacy is claimed to be high in depth study, mainly experimental with clinical efficacy of these drug preparations is essential in many cases.

There is an urgent need for documentation of this irreplaceable knowledge. It may be lost when traditional cultures collapse with advent of modernization. Appropriate measures should be taken to conserve and propagate the rare and threatened taxa. Scientific investigations through the evaluation of plants for their biological activity and isolation of active principles are responsible for their medicinal properties and investigate their pharmacological effects for the welfare of human beings.

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