A Study on Indegenous Medicinal Plants from Gondia District, Maharashtra, India

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Abstract:

To conduct an ethno-botanical survey and to collect information from tribal peoples of Gondia district about the use of traditional medicinal plants to cure various ailments. Gondia district were surveyed through interviewing randomly selected some local medicinens (vaidyai, hakims) using semi-structured questionnaire and regular field visits. The investigation revealed about 30 traditional plant species and their local names with parts used for treating various ailment. It was observed that some of species were efficiently used by tribes to treat diabeties disease which in present day has no cure. The survey was led to document the knowledge of ethno-medicinal plants that are being used by the tribal people of Gondia district to treat various ailments.

Keywords:
Tribal. Ethno-medicinal, Medicinal plants, Gondia district.

Introduction:

According to the World Health Organization about 80% of the world's population in developing countries depends essentially on plants for their primary health care (Sharma et al, 2010). Inspite of the advent of the modern medicines, tribal populations are still practicing the folk-lore medicines to cure various diseases. The knowledge and the use of medicinal plants and their properties are transmitted through mouth to mouth amongst generations (Subodh, 2010). But this knowledge is under threat because of older and younger generation is not always assured (Anyinam, 1995). Older Indian Medicine systems like sidhaandunani entirely a partially depends either on plant materials or their derivatives for treating human diseases (Joseph et al, 2011). About 1100 species serves as a source of raw materials for Ayurvedic and unani formulations and about 25% of drugs in modern pharmacopoeia were derived from plants (phytomedicines) and many others were synthetic analogues built on prototype compounds isolated from plants (info.blogspot.Com 2011). Right from its beginning, the documentation of traditional knowledge especially the use of medicinal plants has provided important information for modern drugs (Yirga, 2010) and even today this area holds much more hidden thesaurus. The present study was led to document the medicinal plant wealth used by the tribal people of Gondia districts to treat various diseases.

Material and methods:

Following methods were adopted during the course of investigations.

The ethno-botanical data was collected from the tribal peoples belonging to different sites. The ethno-botanical data was collected using questionnaries, interviews and discussions in among local tribal people during July 2013 to July 2014. Data regarding herbal remedies were collected and vaucheri specimen were also collected from different sites and are preserved as per method suggested (Agrawal, 1983). Confirmation of the specimen was made with the help of local flora of our region (Ugemuge, 1986 and Rendle, 1986).

About Study Area

Gondia district is situated in extreme eastern side of Maharashtra state, covering an area of about 5,431km square lying between North latitude of 20.39 and 21.38 and east longitudes of 89.27 to 82.42. Gondia district is a region to the south of Godavari river and the region is inhibited by arborigines. Right from the beginning the tribes used to collect raw materials from forest for their lively hood as well as medications. Almost half of the district has good forest cover with mountainous terrain, different grades of soil extreme climatic condition on one side and many rivers and rich biodiversity on the other side. The district has 8 talukas with temperature variations of very hot summers (48^{o}C) and cold winters (10^{o}C) with relative humidity of 62%, annual rainfall of about1200 mm/year.

Result and discussion:

The study focuses mainly on plants species reported by the local people in and around the study area for their medicinal uses. Present data is the general result of ethno-botanical survey conducted from July 2013 to July 2014. The present investigation reveals about 34 medicinal plants used to treat various diseases (Table no 1). It was observed that some of the species like *Andrographis paniculata, Azadirachta indica, Butea monosperma, Syzygium cumini, Momordica charantia, Trigonella foenum-graecum, Aegel marmelos* were commonly used to treat deadly disease diabetes. Rest of the plants species were effectively used to treat various other diseases.

Ethno-botany is multidisciplinary science defined as the interaction between plants and people (Chaudhary, 2008) which record the history and current state of human kind even while foretelling the future (Balakrishnan, 2009). The World Health Organization has already recognised the contributions of traditional health care in tribal communities. In the present work about 34 plant species were collected from different study sites which

were used to cure various diseases. The survey data shows that various plant parts like leaves, fruits, roots/rhizomes, buds, flowers, seeds, gum and latex were used in different preparation to treat diseases.

Table. 1: List of Ethno-medicinal plants with their indigenous uses.

Sr. No.	Botanical Name with Family	Local Name	Parts Used	Name of the Disease/Uses
1	*Adhtodavasica* Acanthaceae	Adulsa	Leaves, roots, flowers and stem bark	Cough and cold
2	*Mangiferaindica* Anacardiaceae	Amba	Leaves, barks, fruits and seeds	Diarrhea, Dysentery
3	*Phyllanthusemblica* Phyllanthaceae	Awala	Leaves, fruits and seeds	Vitamin deficiency
4	*Curcuma longa* Zingiberaceae	Haldi	Rhizomes	Anti-bacterial, Wound healing
5	*Aeglemarmelos* Rutaceae	Bel	Leaves, root and fruits	Anti-dysentery,diabetes
6	*Punicagranatum* Punicaceae	Darimb	Fruits and bark	Anti-dysentery,anemia
7	*Madhucaindica* Sapotaceae	Moha	Bark, heart-wood, fruits and seeds	Wounds,diabetes
8	*Tectonagrandis* Verbenaceae	Sagwan	Leaves and barks	Snake bite
9	*Buteamonosperma* Fabaceae	Palas	Barks, leaves, fruits, seeds and gums	Diabetes
10	*Ficusbenghalensis* Moraceae	Vad	Bark, leaves, fruits, seeds and latex	Anti-diabetic, wound
11	*Azadirachtaindica* Meliaceae	Kadunimb	Bark, leaves, flowers and seeds	Antibacterial
12	*Zizyphusjujaba* Rhamnaceae	Bor	Fruits	Vitamine-B
13	*Psidiumguajava* Myrtaceae	Jam	Leaves, fruits and root	Anti-diarrhea
14	*Terminaliaarjuna* Combretaceae	Arjun	Bark	Diuretic, Cardio tonic
15	*Ricinuscommunis* Euphorbiaceae	Yerandi	Leaves and seeds	Anti-swelling
16	*Acacia nilotica* Fabaceae	Babul	Pods, leaves, bark and gums	Dental use
17	*Ficusracemosa* Moraceae	Umbar	Fruits	Anti-helmentic
18	*Pongamiapinnata* Fabaceae	Karanj	Leaves, flowers, seeds and bark	Wound healing
19	*Cynodondactylon.* Poaceae	Harari	Leaves	Astringent
20	*Alstoniascholaris* Apocynaceae	Saptparni	Leaves	Snake bite
21	*Pithecellobiumdulce*	Vilayati	Fruits	Anti-oxidant

	Fabaceae	chinch		
22	*Vitexnegundo* Verbenaceae	Nirgudi	Flowers and roots	Anti-inflammatory, Bone fracture
23	*Tridaxprocumbems* Asteraceae	Kambar modi	Leaves	Kraking foot
24	*Vincarosea* Apocynaceae	Sadafuli	Leaves and flowers	Leukemia
25	*Calotropisprocera* Asclepidaceae	Rui	Whole plant	Cough
26	*Hibiscus cannabinus* Malvaceae	Ambadi	Leaves and fruits	Sunstroke
27	*Allium sativum* Liliaceae	Lasun	Bulbs	Cough
28	*Ocimum sanctum* Lamiaceae	Tulas	Whole plant	Fever
29	*Terminaliabellirica* Combretaceae	Behada	Bark and fruits	Vomiting, skin diseases
30	*Momordicacharantia* Cucurbitaceae	Karella	Fruits and seeds	Diabetes, blood purifier and anti-helminthic
31	*Aloe vera* Liliaceae	Korphad	Leaves	Abortifacient
32	*Andrographispaniculata* Acanthaceae	Kalmegh	Leaves and whole plant	For digestion, Liver function, Whooping cough and Leprosy
33	*Bacopamonnieri* Scrophulariaceae	Brahmi	Root, leaf (whole plant)	Cataract, epilipsia, astringent
34	*Commelinaerecta* Commelinaceae	Kanseera	Leaf	Rheumatic, burn,sweelings, injuries

Conclusion:

The study of the area revealed that the people of the area possessing good knowledge of herbal drugs but as the people are in progressive exposure to modernization their knowledge of traditional use of plants may be lost in due course. So it is important to study and record the uses of plants by the tribes and sub-tribes for future studies. Further such type of studies may provide information to biochemists and pharmacologists in screening and assessing phyto-constituents for the treatment of various diseases.

References:

Agrawal V. S,. (1983). Perspective in botanical Museum with special reference of India, today and tomorrow New Delhi.Pp-295-298.

Anyinam C., (1995). Ecology and ethno medicine Exploring links between correct environmental crisis and indigenous medical practices, social science and Medicine. 4: 321 – 329.

Balakrishnan V. P., Prema, K. C., Ravindran and J. Philip Robinson ,(2009). Ethno-botanical studies among villagers from DharapuramTaluka, Tamil Nadu, India. Global Journal of Pharmacol. 3(1): 8-14.

Chaudhary K., Singh M. and Pillai U., (2008). Ethno-botanical survey of Rajasthan-An update, American- Eurasian. Journal of Botany.1(2): 38-45.

Joseph B. and Justinraj S., (2011). A comparative study on various properties of five medicinally important plant. International Journal of Pharma 7(2):206-211.

Medicinal crops., Available online http:// Medicinal plants info.blogspot. Com 2011.

Rendle, A. B., (1986). Classification of flowering plant, VolIAnd II. Cambridge Uni. Press. London.

Sharma K. A., Kumar R., Mishra A. and Gupta R., (2010). Problems associated wih clinical triats of Ayurvedic Medicines. Rev Bras Farmacogn Braz. J Pharmacogn. 20(2); 276-281.

Subodh S., (2010). Production and productivity of medicinal and aromatic plants in MugalIndia.A study of contemporary texts.Asian Agriculture Hstory.15 (1); 3-12.

UgemugeN.R., (1986). Floral of Nagpur district, Nagpur, India Shree Prakashan, Nagpur.

Yirga G., (2010). Ethno-botanical studies of Medical plants in and around Alamata, SouthemTigray. Northern Ethopia Current Research. Journal of Biological Science. 2 (5) : 338 – 344.