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Eanguwar Srinivas Reddy
Balirampatil Arts, Commerce
and Science Collage, Department
of Botany, Kinwat, Nanded,
Maharashtra, India

Velkala Madhu
Government Degree College,
Department of Botany,
Tiruvuru, Krishna, Andhra
Pradesh, India

Survey on ethno botanical plants used for the treatment of Liver disorders by traditional healers in Mahur Taluka of District Nanded, Maharashtra, India

Eanguwar Srinivas Reddy and Velkala Madhu

Abstract

Information on 41 plant species used especially for the treatment of liver disorders by tribal healers of Mahur Taluka of Nanded district, Maharashtra is given in this paper. It reveals utilization of flowering plants belonging to 39 genera comprising of 26 families, out of these 26 families are of dicotyledons, 2 of monocotyledons. The present survey provides information on the therapeutic properties of 41 crude drugs. The study was undertaken during the period from January 2014- December 2017; data was obtained based on personal observations and interviews with traditional healers. These drugs were used as decoction or infusion of whole plants, leaf, bark, flower, fruit and seeds are used internally. During the present study it has also been observed that most of the plants are common except few vulnerable species like, *Abrus precatorius* L., *Aegle marmelos*, *Hemidesmus indicus* (L.) R.Br and *Vitex negundo* L., etc. within the study area. As these crude drugs were not reported earlier from the study area. As the traditional herbal remedies are based on ancestral knowledge and empiric experiences, this type of ethno-medicinal survey is useful in determination of bio prospecting potential of medicinal plants.

Keywords: Ethno botanical plants, liver disorders, Mahur Taluka of Nanded district, Maharashtra

1. Introduction

Traditional medicine is currently the fastest growing medical field with herbal therapies becoming increasingly popular. Traditional medicine is considered more holistic, acceptable, accessible and low cost and proven to be safe & that is why preferred by local people^[1, 2]. The tribal's live and rely on plants and plant products and using traditional medicine system for centuries. The traditional medicinal practices are an important part of the primary health care system in developing world^[3]. Liver disorders amount to as high as all occupational diseases. Keeping this in mind we explored the knowledge available with native people/ traditional healers from Mahur Taluka, Dist. Nanded India, to cure different liver disorders.

Mahur Taluka is located in northern part of Nanded district. It is bounded North by Yavatmal district, South by Kinwattaluka of Nanded district, East part by Adilabad district of Telangana and West by Pusad Taluka of Yavatmal district of Vidarbha region. Mahur Taluka is a thick forested area of Nanded District. The main river is Penganga which flows from the South to North direction. Geographically the Mahur Taluka is situated between 19°49' to 19°83' North latitude and 77° 91' to 77°55' East longitude. The main river is Penganga which flows from the South to North direction. The total geographical area of taluka is 52160 hectares of which 14397.39 hectares i.e. 28% area covered with forest and 37762.61 hectares are non-forested area. As per the tribal research and training institute of Maharashtra, Census dated 29-04-2008, the total villages in Mahur Taluka are 93, total population of the taluka is 86, 782, Tribal population is 13,455 and percentage of tribal population is 16% which is inhabited by tribal population of aborigines like Andh, Kolam, Gond, Naikede and Pradhan.

2. Methodology

For documentation of ethno-botanical information and collection of plant material, several tours were undertaken during the period from January 2014-August 2015. Data presented here is based on personal observations and interviews with traditional healers (*viz.* medicine men, hakims and old aged people with knowledge of folklore medicines) and methodology used is based on the methods available in literature^[4, 5]. Gathered ethnobotanical information on liver disorders was documented in data sheets prepared which is summarised in Table No.1. For collection of plant materials local informers accompanied with author. Plant identification was carried out by using local flora and flora of adjoining districts. Plants used in Liver disorders were compared with published literature^[6-22] and voucher specimens are deposited at

Correspondence

Eanguwar Srinivas Reddy
Balirampatil Arts, Commerce
and Science Collage, Department
of Botany, Kinwat, Nanded,
Maharashtra, India

Department of Botany, Balirampatil Arts, Commerce and Science Collage, Kinwat, District, Nanded, Maharashtra, India.

3. Results

Information on 41 plant species used especially for the treatment of liver disease by rural and tribal communities of Mahurtaluka of Nanded district, Maharashtra, it reveals utilization of flowering plants belonging to 39 genera comprising of 26 families, out of these 26 families are of dicotyledons, 2 of monocotyledons. These crude drugs were

used as decoction or infusion of whole plants, leaf, bark, flower, fruit and seeds are used internally, as the traditional herbal remedies are based on ancestral knowledge and empiric experiences. They had been cross checked by literature previously reported for skin disease [6-22]. Further extensive Ethnobotanical and Ethno-pharmacological study may lead to the exploitation of plants and compounds for Liver disorders. The correct botanical name of the plant, local name, family, part used and the plants species are depicted in Table No. 1.

Table 1: List of Medicinal Plants used for liver disorders.

S. No.	Name of the plant	Local name	Family	Part Use
1	<i>Abrus precatorius</i> L.	Gunj	Fabaceae	Root
2	<i>Abutilon indicum</i> (L.) Sweet.	Kanghi	Malvaceae	Leaf
3	<i>Achyranthes aspera</i> L.	Aghada	Asteraceae	Whole Plant
4	<i>Aegle marmelos</i> (L.) Corr.	Bel	Rutaceae	Leaf
5	<i>Andrographis paniculata</i> (Burm. f.) Wall ex Nees.	Bhui-neem	Acanthaceae	Leaf
6	<i>Azadirachta indica</i> Juss.	Neem	Meliaceae	Leaf
7	<i>Argemone mexicana</i> L.	Pivala-Dhotara	Papaveraceae	Leaf
8	<i>Asparagus racemosus</i> (Kunth.) Baker.	Shatavari	Liliaceae	Whole Plant
9	<i>Bauhinia racemosa</i> Lamk.	Apta	Caesalpinaceae	Bark
10	<i>Boerhavia diffusa</i> L.	Punarnarva	Nyctaginaceae	Whole Plant
11	<i>Blepharis repens</i> (Vahl.) Roth.	Hadsan	Acanthaceae	Root
12	<i>Butea monosperma</i> Lamk. Taub.	Palas	Fabaceae	Bark
13	<i>Calotropis gigantea</i> (L.) R.Br.	Ruchaki	Asclepiadaceae	Leaf
14	<i>Curculigo orchioides</i> Gaertn.	Kali-musali	Hypoxycaceae	Root
15	<i>Cuscuta reflexa</i> Roxb.	Amarvel	Cuscutaceae	Whole Plant
16	<i>Daucu scarota</i> L.	Ganjar	Brassicaceae	Root
17	<i>Eclipta prostrata</i> (L.) L.	Maka	Asteraceae	Leaf
18	<i>Euphorbia hirta</i> L.	Dudhanali	Euphorbiaceae	Whole Plant
19	<i>Evolvulus alsinoides</i> L.	Vishanukranta	Convolvulaceae	Leaf
20	<i>Hemidesmus indicus</i> (L.) R.Br.	Khobarvel	Periplocaceae	Root
21	<i>Jatropha curcus</i> L.	Ratanjoti	Euphorbiaceae	Leaf
22	<i>Lawsonia inermis</i> L.	Mehandi	Lythraceae	Leaf
23	<i>Leucas aspera</i> (Willd.) Spreng.	Kumbha	Lamiaceae	Leaf
24	<i>Mangifera indica</i> L.	Amba	Anacardiaceae	Bark
25	<i>Operculina turpenthum</i> (L.) Manso.	Nishottar	Convolvulaceae	Stem
26	<i>Pergularia daemia</i> (Forssk.) Chiov.	Utaravel	Asclepiadaceae	Leaf
27	<i>Phyllanthus amarus</i> Schumach. & Thonn.	Bhuiawala	Euphorbiaceae	Whole Plant
28	<i>Phyllanthus emblica</i> L.	Awla	Euphorbiaceae	Fruit
29	<i>Phyllanthus urinaria</i>	Yetausri	Euphorbiaceae	Whole Plant
30	<i>Phyllanthus virgatus</i>	Thokausri	Euphorbiaceae	Whole Plant
31	<i>Saccharum officinarum</i>	Yuss	poaceae	Stem
32	<i>Senna fistula</i> L.	Amaltas	Caesalpinaceae	Whole Plant
33	<i>Sida rhombifolia</i> L.	Bala	Malvaceae	Root
34	<i>Solanum nigrum</i> L.	Kamanchi	Solanaceae	Whole Plant
35	<i>Tabernaemontana divaricata</i> (L.) R.Br.	Chandni	Apocynaceae	Root
36	<i>Tamarindus indicus</i> L.	Chinch	Caesalpinaceae	Flower
37	<i>Terminalia chebula</i> Retz.	Chinch	Combretaceae	Fruit
38	<i>Tinospora cordifolia</i> (Willd.) Miers	Gul-vel	Menispermaceae	Root
39	<i>Tribulus terrestris</i> L.	Sarata	Zygophyllaceae	Whole Plant
40	<i>Tridax procumbens</i> L.	Kambarmodi	Asteraceae	Whole Plant
41	<i>Vitex negundo</i> L.	Nirgudi	Verbenaceae	Flower

4. Discussion

During the present study it has been observed that most of the plants are common except few vulnerable species like, *Abrus precatorius* L. *Aegle marmelos*, *Hemidesmus indicus* (L.) R.Br and *Vitex negundo* L, etc. within the study area. Although root, bark, stem, leaves and whole plant is used but leaf is the commonest part used in the treatment. Majority of the preparations are used internally in the form of infusion or decoction. The detailed information regarding the therapeutic application of different plants of 41 plant species were obtained and their role in curing various diseases of liver and

mode of administration by tribal healers, priests and ordinary villagers were compared with available literature in different regions of India and abroad on medicinal plants. It was found that many of the uses listed are not recorded earlier. It provides deeper insight into the indigenous method of applications and effectiveness of the plant derivatives in treating different ailments of the liver disorders. Further pharmacological and clinical studies on these plants may provide effective natural medicines for various liver disorders and it will also be useful to determine in the bio prospecting potential of these plants.

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