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Research Article

Ethnomedicinal Practices in Different Communities of Telangana for Treatment of Wounds

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ABSTRACT

India is well known for its great biological heritage and the present study is carried out in the Telangana State of India. The heavy greenery forests are home to several ethnic communities. The study was undertaken for the documentation of the traditional knowledge of ethnic people and to investigate plant distribution, abundance and biological activity of medicinal plants in the treatment of wounds. Field trips were made in Telangana districts to collect ethnomedicinal information from traditional healers. The collection of information was through interviews and during interviews plant details, part of the plant used, the method of preparation and dosage were recorded. The present study resulted in recording 99 medicinal plant species belonging to 54 families to treat different types of wounds by ethnic people in Telangana. The highest number of species belonging to Asteraceae (8 Species). Ethnomedicinal practices in the Telangana state of India revealed uses of 99 medicinal plants in the treatment of various types of wounds.

Keywords: Ethnomedicine, Wounds, Traditional healers, Telangana state.

1. INTRODUCTION

Even today in this modern age people are using different parts of plants in treatment or prevention of many diseases (Ankam Sandhyarani et.al, 2017, Chah et.al, 2006, Pranavi Sreeramoju et.al, 2016,). The world health organization estimated that 80% of the world population is still using ethnomedicines because of their ease of procurement, cheap cost and with little or no side effects when compared to allopathic medicines (Sandhya et, al, 2011).

Today's common problem in mundane activities is occurrence of wounds due to physical, chemical, microbial and immunological injury to the tissue. According to the Wound Healing Society, wounds are "physical injuries that result in an opening or break of the skin causing disturbance in the normal skin anatomy and function" (Strodtbeck, 2001). The wound healing is a cascade process which includes cellular interaction with biochemical reactions for the normalization of tissue structure and function. Countries like India and China rich in traditional medicinal knowledge on wound healing and burns will help a lot in the research on them (Kumar , et. al. 2007, Pradeep Bhat, et.al. 2012, Jana S, et.al. 2013). Present study is to document and analyze the plants used in traditional therapies for various wounds and related injuries in humans and cattle by different communities in Telangana State of India.

2. MATERIALS AND METHODS

2.1 Ethnomedicinal Survey:

The ethnomedicinal plant information was collected from various places of Telangana (Adilabad, Nizamabad, Karimnagar, Sangareddy, Warangal, Hyderabad, Mahbubnagar, Nalgonda and Khammam) (Figure-1, 2) through repeated interviews of traditional healers during the period of August, 2016 to March, 2017. The collected data includes medicinal plant species with vernacular name, part of the plant used, the method of preparation and dosage for healing wounds.

2.2 Methodology:

Interviews, questionnaires and discussions with aged ethnic people, local herbal healers, tribal headmen, shepherds and owners of cattle having immense practical knowledge of medicinal plants in various districts (Adilabad, Nizamabad, Karimnagar, Sangareddy, Warangal, Hyderabad, Mahbubnagar, Nalgonda and Khammam) of Telangana was done. Personally they were requested to collect the specimens of medicinal plants in order to identify and cross check the particular species. The collected data was further verified by experts in that field. The stored information on ethnomedicinal knowledge of tribal inhabitants was tabulated.

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Figure-1. Map of India

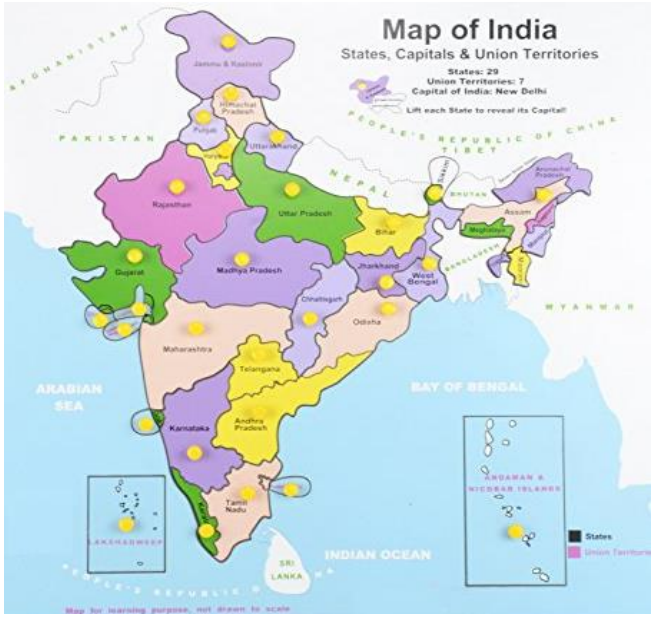


Figure-2. Location Map of Telangana State in India

2.3 Methods of Preparation:

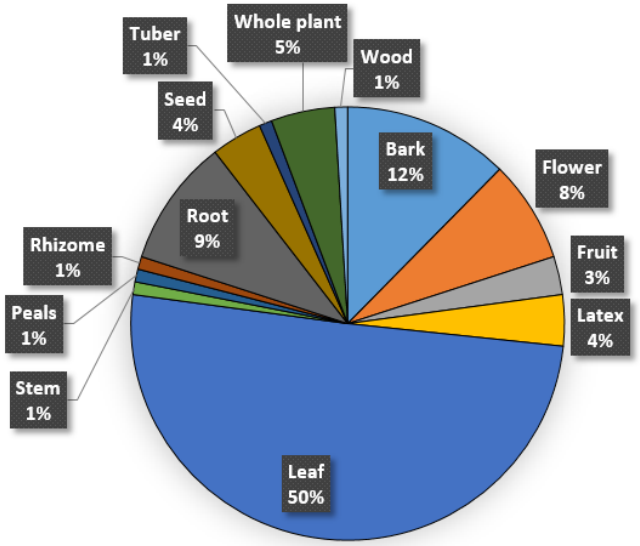
Ethnomedicines for treatment of different types of wounds are either used internally or externally sometimes as both depending on the type of disease. The drug formulations are normally paste, juice, decoction and powder made from fresh or dried plant parts.

3. RESULTS AND DISCUSSION

Present study resulted in recording 99 medicinal plant species belonging to 54 families to treat different types of wounds by ethnic people in Telangana. The collected ethnomedicinal information was documented in table-1. The highest number of species belonging to Asteraceae (8 species), Malvaceae (6 species), Euphorbiaceae (5 species), Caesalpinliaceae, Boraginaceae, Acanthaceae, Moraceae and Mimosaceae (4 species each).

From figure-3 it is cleared leaves (50%) are the most frequently used followed by bark (12%). Most of the surveys confirm that leaves are the major portion of the plant part used for the treatment of diseases (Ayyanar et.al, 2009).

Figure-3: Different plant parts are used by traditional healers of Telangana state



4. CONCLUSION:

As the rural community lives are intertwined and indispensable with the forest and natural vegetation they were able to develop different treatment procedures for many diseases and especially wounds which occur in their daily routine life. This information is invaluable and has immense commercial scope and should not be limited to few people and perish with them. This precious information can change the lives of many who are suffering from various ailments. These ethnic plant's significance can save them from mass extinction through their conservation by identification, cultivation and propagation by local people apart from the rural population. The present study evaluates 99 plants used in medicinal practices to treat different types of wounds by traditional healers of Telangana State. The ethnic drug formulations need good biological evaluation to prove their efficacy and develop new drug formulations for effective treatment.

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Competing interests:

The authors have declared that no competing interests exist.

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Table-1: List of medicinal plants used by ethnic people in Telangana.

S.No	Plant Botanical Name	Family	Local / Vernacular Name	Parts Used
1	*Abutilon indicum swert*	Malvaceae	Adavi benda	Leaves
2	*Acacia caesia willd*	Mimosaceae	Kastoori thumma	Leaves
3	*Acacia catechu*	Mimosaceae	Khadi ramu	Stem bark
4	*Acacia nilotica*	Mimosaceae	Nalla tumma	Bark
5	*Acalypha indica*	Euphorbiaceae	Kupintaku	Leaves
6	*Achyranthes aspera*	Amaranthaceae	Uttaraene	Latex, Leaf
7	*Actinodaphne madraspatana*	Lauraceae	Kovangutti	Leaves
8	*Adhatoda vasica*	Acanthaceae	Addasaramu	Leaves, stem
9	*Aegle marmelos*	Rutacae	Sandiliyamu	Seeds
10	*Agave amerilane*	Agavaceae	Kalabanda	Leaf
11	*Alstonia scholaris*	Apocynaceae	Edakula Ponna	Latex, Flower
12	*Alternanthera sessilis*	Amaranthaceae	Ponnaganti aaku	Leaves
13	*Anaphalis lawii*	Asteraceae	Neereedu	Leaves
14	*Argemone Mexicana*	Papaveraceae	Brahmadandi	Latex
15	*Arisaema leschenaultii blume*	Aracease	Manduka-parani	Tubers
16	*Aristida setacea*	Poaceae	Cheepuru gaddi	Leaves
17	*Arnebia densiflora*	Boraginaceae	Kondanduga	Roots
18	*Asparagus racemosus willd*	Liliaceae	Abiruvu	Roots
19	*Avera lanta jun*	Amaranthaceae	Pindi kura	Seeds
20	*Barleria prionitis*	Acanthaceae	Mullu gorinta	Leaves
21	*Berberis lycium*	Berberidaceae	Kasthoori pushpa	Roots
22	*Betula alnoides*	Betulaceae	Bhujapatri	Bark
23	*Blepharis maderaspatensis*	Acanthaceae	Antrinta pulu	Leaves
24	*Blumea glomeratu*	Asteraceae	Dvimulangi, Karupogaku	Leaves
25	*Brassica juncea*	Brassicaceae	Mustard	Leaves
26	*Brassica juncea*	Brassicaceae	Avalu	Seeds
27	*Bryophyllum pinnatam*	Crusulaceae	Sima jamudu	Leaves
28	*Calendula officinalis*	Asteraceae	Dumparaashtrakamu	Flower
29	*Canthium dicocum*	Rubaiaceae	Nalla balasu	Bark & fruit
30	*Capparis zeylanica*	Capparidaeaceae	Palaki	Root
31	*Carallia brachiata*	Rhizophoracea	Gijuru chettu	Bark
32	*Careya arborea*	Lecythidaceae	Araya,buddaburija	Bark

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S.No	Plant Botanical Name	Family	Local / Vernacular Name	Parts Used
33	*Carica papaya*	Caricaceae	Boppayi	Roots
34	*Cassia absus*	Fabaceae	Chanubala Vittulu	Flowers
35	*Cassia alata*	Caesalpiniaceae	Mitta tamara	Leaves
36	*Cassia auriculata*	Caesalpiniaceae	Thangedu	Leaves, Bark, Flower
37	*Cassia oceidentalis*	Caesalpiniaceae	Tangedu	Leaves
38	*Cassia tora*	Caesalpinliaceae	Tagirise, Tantepu chettu	Leaves
39	*Centella asiatica*	Apiaceae	Mandukaparni	Leaves
40	*Chenopodium album*	Chenopodiaceae	Pappukura	Leaves
41	*Chromalaena odarat*	Astereceae	Tivra gandha	Leaves
42	*Cleome viscosa*	Cleomaceae	Kukkavaminta	Leaves
43	*Coccinia grandis*	Cucurbitaceae	Donda kaya	Leaves
44	*Coldenia procumbens*	Boraginaceae	Chepputattaku	Whole plant
45	*Crossandra infundibuliformis*	Acanthaceae	Kanakambaram	Flowers
46	*Crotalaria retusa*	Leguminoceae	Pottigilligichacha	Leaves
47	*Crton bonplandianum bail*	Euphorbiaceae	Bhoothalabhair	Leaves
48	*Curcuma langa*	Zingibaraceae	Pasupu	Leaves
49	*Dodonaea viscosa*	Sapindaceae	Bandaru,pullena	Root
50	*Eclipta prostrata*	Asteraceae	Galagar	Leaves
51	*Elephantopus scaber*	Asteraceae	Enugabira	Leaves
52	*Euphorbia hirta*	Euphorbiaceae	Raddivari,nanubalu	Leaves
53	*Euphorbia neriifollia*	Euphorbiacea	Aku-jemudu	Latex
54	*Ficus asperifolia*	Moraceae	Kondaravi	Whole plant
55	*Ficus bengalensis*	Moraceae	Marri	Roots
56	*Ficus comosa*	Moraceae	Konda golugu	Bark
57	*Ficus racemosa*	Moraceae	Paidi	Root
58	*Gentiana lutea*	Gentianaceae	Nelavemu	Rhizome
59	*Gossypium arboreum*	Malvaceae	Pratti Chettu	Whole plant
60	*Gymnema sylvestre*	Asteraceae	Poda pathri	Leaves
61	*Heliotropium indicum*	Boraginaceae	Naga Danti	Whole plant
62	*Holarrhena pubescens*	Apocynaceae	Kodisepala	Wood
63	*Hyptis suaveolens*	Lamiaceae	Sirna tulasi	Leaves
64	*Jatropha curcas*	Euphorbiaceae	Nepalam, Adavi amudam	Flowers
65	*Kalanchoe pinnata*	Crassulaceae	Ranapala	Leaves

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S.No	Plant Botanical Name	Family	Local / Vernacular Name	Parts Used
66	*Kigelia pinnata*	Bigoniaceae	Enuga thondamu	Leaves
67	*Lantana camara*	verbenaceae	Pulikampa/vellenthu	Leaves
68	*Leucas hirta*	Lamiateae	Tella Tummi	Leaves
69	*Merremia emerginata*	Convolvulaceae	Yelakajeevaku	Leaves
70	*Michelia champaca*	Magnolianaceae	Sampangi	Flowers
71	*Mimosa pudica*	Mimosaceae	Athipathi	Leaves
72	*Mimusops elengi*	Sapotaceae	Pagada, Vakulamu	Bark
73	*Moringa oleifera*	Moringaceae	Munaga	Leaves
74	*Ocimam sanctum*	Lamiaceae	Thulasi	Leaves
75	*Piper betle*	Piperaceae	Tamalapaku	Leaves
76	*Plumbago zeylanica*	Plumbagoginaceae	Chitramulam	Root
77	*Plumeria acutitolia*	Apocyanaceae	Devaganneru	Leaves
78	*Prosopis juliflora*	Fabaceae	Mulla thumma	Leaves
79	*Psidium guajava*	Myrtaceae	Jaama	Leaves
80	*Pterospermum acerifolium*	Malvaceae	Matsakanda	Flowers
81	*Punica granatum*	Lythraceae.	Dhanimma	Peals
82	*Saussurea lappa*	Asteraceae	Changaluva	Root
83	*Sbutilium indicu*	Malvaceae	Nannari	Leaves
84	*Semecarpus anacardium*	Anacardiaceae	Nallajeedi/chepputattaku	Seeds
85	*Sesbania grandi flora*	Leguminoceae	Ettagise, Sukanasamu	Flowers
86	*Sida spinosa*	Malvaceae	Chinamuttama	Leaves
87	*Tagetes erecta*	Asteraceae	Banti chettu	Leaves
88	*Terminalia bellirica*	Combretaceae	Tanikaya	Fruits
89	*Terminaliia arjuna*	Combretaceae	Yeru maddi/tella maddi	Bark
90	*Thespesia populnea*	Malvaceae	Ganga ravi	Leaves
91	*Tinospora cordifolia*	Menispermaceae	Tippateega	Leaves
92	*Toddalia asiatica*	Rutaceae	Kondakasinda	Stem bark
93	*Trichodesma indicum*	Boraginaceae	Guvvagutti	Whole plant
94	*Tridax procumbens*	Asteraceae	Gaddi chemanthi	Leaves
95	*Urena lobata(sh)*	Malvaceae	Nalla benda	Leaves
96	*Vanda roxburghii*	Orchidaceae	Chittiveduri, Kanapabandanika	Leaves
97	*Vernonia arborea*	Asteraceae	Gariti Kamma	Bark
98	*Vitex negundo.*	Verbenaceae	Indrani, Vavili	Leaves
99	*Ziziphus nummularia*	Rhamnaceae	Pariki	Leaf/fruit/stem bark

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