

Traditional medicinal plants used by tribal people of Jyothi reserve forest, YSR District, Andhra Pradesh, India



Botany

KEYWORDS : Ethnomedicine, Jyothi reserve forest, Yanadis, YSR District

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ABSTRACT

The present investigation was carried out in Jyothi reserve forest, YSR District, Andhra Pradesh, India to document the use of medicinal plant species for various curative purposes. About 32 plant species belonging to 29 genera and 20 families were documented. Altogether 32 types of ailments have been taken care of by using these plant species. Leaves were the most useful part as compared to other plant parts for the treatment of various ailments. Informants were randomly selected irrespective of their sex and age. All the plants need to be evaluated through phytochemical investigations to discover their potentiality as drugs.

Introduction

Plants have played a great role in the growth and development of human race. First and the most important necessity for human life is the oxygen which is provided by the plants. Besides this, for day to day life, plants have offered food, fodder, fuel wood, timber, dyes, latex, gums, fibres, shelter, fruits etc. Additionally there are many plant species which have continuously been used by the natives for traditional medicines. Indian sub-continent is being inhabited by 500 tribal communities belonging to 27 ethnic groups (Sajem and Gosai, 2006). Since time immemorial tribal people use plants to cure various ailments and diseases. Applications of medicinal plants constitute one important way of maintaining good health. Traditional knowledge is a record of human achievement in comprehending the complexities of life and survival of human society. The information about medicinal properties of plants came traditionally through generation by word of mouth. About 85% of rural people in India depend on wild medicinal plants for the treatment of various ailments. Folklore and traditional knowledge is in the process of extinction due to disruption of forest covers and uprooting of tribal population due to industrialization. Ethnomedicinal studies are often significant in revealing locally important plant species for discovering of crude drugs. The information about medicinal plants is available in many Indian literatures (Nadakarani, 1954). Charakasamhitha and Sursuthasamhitha written by Charaka and Sursutha respectively have information regarding traditional medicinal plants and their therapeutic values (Meera, 1958). Though, different workers have explored and documented the ethnobotanical information from different parts of Andhra Pradesh (Hemadri *et al* 1987a, 1987b, Jeeva Ram and Raju, 2011, Muralidhar Rao and Pullaiah, 1989, Sudhakar Reddy *et al*, 2009). But ethnobotanical information regarding Jyothi reserve forest, YSR District, Andhra Pradesh, India is not available, therefore the study was undertaken.

Topography of the study area

Jyothi reserve forest is present between the border of YSR and Kurnool Districts. The forest range is located northern upper hilly areas of YSR District. The forest possesses diverse plant species. Endemic plants like *Pterocarpus santalinus* and *Boswellia ovalifoliata* etc are found in this forest. The type of forest is dry mixed deciduous (Champion and Seth, 1968). Within the reserve forest is the temple of Sri Avadhutha Kasinayana and many streams and canals pass through these forest ghats. Tribals are those who are confined to a particular geographic area, ethnic groups, speak common language, cultural homogenous and from a unifying social organization. The tribal people live in hilly tracts, forest and naturally isolated areas. They are generally referred to as Adivasis, Adima jati, Aboriginal, Girijan, Vanya jati, Vanavasi and Anuschitjanjati (Krishnamurthy, 1958). The tribal inhabitants of the study area mainly consist of Yanadis. These tribal people depend on wild medicinal plants for the treatment of different diseases and ailments. They also collect minor forest products from the forest and sell them in adjacent

villages. Some people practice cultivation in plain areas of Jyothi reserve forest. The forest provides ample scope and socio-cultural activities of the tribes that live in adjacent areas.

Methodology

The ethnobotanical data was collected through interviews, discussions and own observations (Jain, 1977, 1981). Many remote areas were visited to interact with the tribal people and gathered information during 2011-13. Actual information about the medicinal plants was collected in the field with the help of reliable tribals and local informants. In this way, total of 84 persons were contacted for present study. Several specimens of plants were collected either with flower or fruit or with both. Each plant or its individual parts have their own significance in traditional remedies. The information was compared with the published literature (Madhusudhana Rao, 1989). The collected specimens were identified with the help of Floras (Gamble and Fischer, 1935, Ellis, 1987, Pullaiah *et al*, 1993). The voucher specimens are deposited in Yogi Vemana University herbarium, Kadapa. The plant species are arranged alphabetically with their botanical names, followed by vernacular names, family and mode of administration.

Results and discussions

The investigation revealed the medicinal properties of 32 species belonging to 29 genera under 20 families. The dominant families of ethnobotanical interest are Asclepiadaceae (3 spp), Caesalpiniaceae (2 spp), Solanaceae (2 spp), Sterculiaceae (2 spp), Apocynaceae (2 spp), Menispermaceae (2 spp), Liliaceae (2 spp) and remaining families contributed one species. Among all these plant species only one is a plant parasite. All these plant species are used by tribal people to treat 32 diseases which include skin infections, abdominal disorders, jaundice, deworming, wounds, mouth ulcer, fractures, bites, fever, cold, cough, dandruff, pains, paralysis, sprains, diabetes, piles, leucorrhoea etc. Significant findings of this study are that most of the plants collected in Jyothi reserve forest are being reported for the first time. Majority of remedies were taken orally followed by external application. The remedies are prepared in the form of extract, decoction, paste, powder etc. Despite their high medicinal importance, the use of traditional medicinal plants is declining day by day which may be because of the availability of the fast relieving medicines in the market. Most of the reported preparations in the study area are drawn from single plant and rarely mixers. The results are presented in table-1.

Table-1

S.No	Botanical Name	Local Name	Family	Mode of use
1	<i>Abutilon indicum</i> (L.) Sweet	Adavibenda	Malvaceae	Root paste control abdominal disorders
2	<i>Aloe vera</i> (L.) Corr	Kalabanda	Liliaceae	Leaf mucilage used for skin infections
3	<i>Andrographis paniculata</i> (Burm.f.) Nees	Nelavemu	Acanthaceae	Decoction of leaves cure jaundice
4	<i>Anisomeles malabarica</i> (L.) Sims	Adavibeera	Lamiaceae	Leaf powder kills the worms in infants
5	<i>Aristolochia indica</i> L.	Nalleswara	Aristolochiaceae	Decoction of leaves used for indigestion
6	<i>Asparagus racemosus</i> Willd	Adaviteega	Liliaceae	Tubers used as appetizers
7	<i>Boswellia ovalifoliata</i> Balakr and Henry	Konda sambrani	Burseraceae	Gums and resins used for cough in children
8	<i>Caesalpinia bonduc</i> L	Gacha	Caesalpinaceae	Leaf extract gives relief from vomitings
9	<i>Capparis zeylanica</i> L	Uchi	Capparaceae	Stem bark used for ear cleaning
10	<i>Cascabela thevetia</i> (L.) Lipp.	Peddaganneru	Apocynaceae	Latex used for sprains
11	<i>Coculus hirsutus</i> (L.) Diers	Dusara teega	Menispermaceae	Decoction of leaves along with sugar control leucorrhoea
12	<i>Dendrophthoe falcate</i> (L.f.) Ett var. falcata	Badanika	Loranthaceae	Flower extract used for small pox
13	<i>Desmodium pulchellum</i> (L.) Benth	Deyyapu mokka	Fabaceae	Root extract used for epilepsy
14	<i>Euphorbia hirta</i> L.	Reddivari mokka	Euphorbiaceae	The plant extract used for septic wounds
15	<i>Gloriosa superb</i> L.	Naabhi	Liliaceae	Decoction of leaves used for dandruff
16	<i>Helictres isora</i> L.	Thada chettu	Sterculiaceae	Decoction of stem bark used in diabetes
17	<i>Hemidesmus indicus</i> (L.) R.Br	Palateega	Asclepiadaceae	Root paste gives relief from bronchitis
18	<i>Holoptelea integrifolia</i> (Roxb.) Planch	Peddamanu	Ulmaceae	Stem bark extract remove piles
19	<i>Jasminum trilobatum</i> L.	Adavamalle	Oleaceae	Leaf extract used for tooth pain
20	<i>Maytenus emarginata</i> (Willd.) Ding Hou.	Danthichettu	Celastraceae	Leaf extract used for wounds
21	<i>Plumbago zeylanica</i> L.	Chitramulam	Plumbaginaceae	Decoction of leaves used in menstrual disorders
22	<i>Sarcostemma acidum</i> (Roxb.) Voigt	Palachettu	Asclepiadaceae	Plant extract gives relief from fever and body pains
23	<i>Senna occidentalis</i> (L.) Link	Adavi cheniga	Caesalpinaceae	Leaf extract used for bone fractures
24	<i>Sida rhombifolia</i> L.	Attibala chettu	Malvaceae	Leaf extract used for mouth ulcer
25	<i>Solanum surattense</i> Burm.f.	Mulaka	Solanaceae	Fruit extract used for partial paralysis
26	<i>Solanum trilobatum</i> L.	Uchi	Solanaceae	Decoction of leaves used for deworming
27	<i>Sterculia urens</i> Roxb.	Konda cheniga	Sterculiaceae	Stem bark used for dysentery
28	<i>Terminalia chebula</i> Retz.	Karaka	Combretaceae	Bark extract used for snake and scorpion bites
29	<i>Tinospora cordifolia</i> (Willd.) Hook.f.&Thamas.	Tippateega	Menispermaceae	Leaf extract used for fertility in humans
30	<i>Tridax procumbens</i> L.	Bellapaku	Asteraceae	Leaf extract gives relief from head ache
31	<i>Tylophora indica</i> (Burm.f.) Merr.	Podapachettu	Asclepiadaceae	Leaf with pepper gives relief from respiratory problems
32	<i>Wrightia tinctoria</i> R.Br	Palavareni	Apocynaceae	Leaf paste with castor oil used for hair falling

Conclusions

The popular use of herbal remedies among the tribal people in Jyothi reserve forest reflects the revival of interest in traditional medicine. The scientific validation of these remedies may help in discovery of new drugs from plant species. The people of this study area possessing sound knowledge of herbal drugs. Our young generations are not much in favour of these practices because of non-availability of some important medicinal plants, unspecified doses and unknown side effects. Therefore, it is the need of the hour to conserve this indigenous and precious

knowledge about the uses of medicinal plant remedies and also to pass on this to our present and future generations effectively. The medicinal plants continue to play an important role in the primary healthcare system of tribals.

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