Ethnomedicinal plants used by Kotia tribes, Pedabayalu Mandalam, Alluri Sitarama Raju District, Andhra Pradesh, India

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Abstract
An ethnomedicinal survey was carried out in Pedabayalu Mandalam, Alluri Sitarama Raju District, Andhra Pradesh, India. The information was collected on the basis of personal interviews with traditional healers, tribal doctors and old women of the society. The investigation revealed that 69 plant species belonging to 40 families and 60 genera were commonly used in the treatment of 37 ailments.

Keywords: Ethnomedicinal plants; Kotia tribes; Pedabayalu Mandalam; Alluri Sitarama Raju District

1. Introduction
Ethnobotanical investigations have led to the documentation of a large number of wild plants used by tribals for meeting their multifarious requirements [1]. The flora of India is very diverse on one hand and rich in endemic taxa on the other. These factors are of significance for the richness of ethnomedicine and also for its uniqueness [2]. From 1960, Jain started intensive field studies among tribal areas of central India [3-9]. India in inhabited by over 80 million tribals belonging to about 550 tribal communities. Hemadri [10] studied the medicinal wealth of Chittoor district. Rama Rao et al. [11] reported 7 unknown or less known medicinal plants which are exclusively used for various ailments by the aboriginals. Rama Rao and Henry [12] reported the ethnomedicinal practices of Jatapu and Savara tribal communities of Srikakulam district. Prakasa Rao and Harasreeramulu [13] presented authentic data on 52 selected medicinal plants along with their ethnobotanical uses and distribution in Srikakulam district. It is estimated that about 17,500 angiosperm species alone are occurring in India [14]. Singh et al. (15) published 29 medicinal plants which were commonly used by local tribes of Mannanur forest and also studied their biological activity Padal et al. [16] reported ethnomedicinal plants used by tribal people of Paderu division, Visakhapatnam district.

2. Material and methods

2.1. Study area
In Pedabayalu Mandalam the tribals Konda Dora, Kotias, Kondus were lived in group of houses called huts. Generally, the houses are constructed with Bamboo (Bambusa arundinancea), Palmyra culms and other timber yielding plants. Palmyra culms are used for thatching the roofs of the houses. The walls are constructed with mud mixed with ash of burn grass and are smeared with cow dung. The main occupation of tribal people in Pedabayalu Mandalam is agriculture. Podu cultivation is one of the old methods of cultivation particularly in mountain tracts and hill slopes.

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2.2. Methodology

The approaches and methodologies for ethnomedicinal work, suggested by Jones [17], Schultes [18], Jain [19] were followed. Emphasis was given mainly on intensive field work in selected tribal habitations. The ethnobotanical information was collected through interviews, discussions and own observations [20-21]. The ethnomedicinal data presented here are the outcome of a series of intensive field studies conducted over a period of one and a half years in 34 interior tribal pockets with good forest cover in the study area.

3. Results and discussion

During exploration trips, medicinally useful information have been recorded on 69 plant species belonging to 60 genera and 40 families were recorded which are exploited by the tribals for their day to day living. Among the 40 families, the dominant ones are Mimosaceae represented by 6 species followed by Rutaceae, Rubiaceae, Fabaceae and Combretaceae each with 5 species, Zingiberaceae, Rhamnaceae, Menispermaceae, Loganiaceae, Asclepiadaceae, Apocyanaceae, Amaranthaceae and Aizoaceae with 2 species rest of the families each with single species. From the present study it is clearly evident that the local people use trees (39.13%) followed by herbs (23.18%), shrubs and climbers (17.39%), liana and parasites (1.44%). Depending upon the plant part used for medicinal purposes leaf constitutes the highest percentage (26.08%) followed by root (20.28%), stem bark (15.94%), fruit (10.14%), seed (7.24%), stem and rhizome (5.79%), whole plant and root bark (4.34%). Out of 69 plants, for Fever (6 species) followed by Dysentery (5 species), Diabetes and Abortion (4 species), Scabies, Jaundice and Cough (3 species), Skin diseases, Menorrhagia, Intermittent fever, Diarrhea, Cuts and wounds, Cooling effect, Bone fracture, Boils and blisters, Asthma and Aphrodisiac each with (2 species), for curing rest of the diseases each with single species were used by kotia tribes. For instance, bark of *Achyranthes aspera* is used by the people of Gujarat for skin diseases (itching) [22]; root paste of *Cassia fistula* and whole plant extract of *Eclipta prostrata* is used for skin disease by Tribals of Bankura Districts, West Bengal [23]; *Cissampelos pareira* root paste is used by the people of Villupuram district of Tamil Nadu for wound healing and skin disorders [24].

Table 1 Ethnomedicinal plants used by Kotia tribes, Pedabayalu Mandalam, Alluri Sitarama Raju District

<table>
<thead>
<tr>
<th>S. No</th>
<th>Botanical Name</th>
<th>Family</th>
<th>Habit</th>
<th>Ailment</th>
<th>Parts</th>
<th>Use type</th>
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<td>Paste</td>
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<td>Stem bark</td>
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World Journal of Biology Pharmacy and Health Sciences, 2023, 13(02), 193-197
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<tr>
<th>Page</th>
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<th>Use</th>
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4. Conclusion

The popular use of herbal remedies among the tribal people of Alluri Sitaramaraju district reflects the revival of interest in traditional medicine. The scientific validation of these remedies may help in discovering new drugs from the plant species. The information on therapeutic uses of plants may provide a great potential for discovering of new drugs and promoting awareness among the people to use them as remedy in health care system.

Compliance with ethical standards

Acknowledgments

The authors are very much thankful to the Tribal people of Pedabayalu Mandalam, Alluri Sitaramaraju district for sharing their valuable knowledge and help during field work.

Disclosure of conflict of interest

The authors declare that they hold no competing interests.

References


