



TRADITIONAL HEALTH CARE SYSTEM OF ODISHA TO CURE CHOLERA.

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ABSTRACT

Odisha state is rich in ethnomedicinal plants. This paper deals with ethnomedicinal uses and anti-cholerae properties of medicinal plants used by the rural tribal people of Odisha, India. The information about plants was collected by interviewing the local rural traditional practitioners. In the present study 26 plant species consisting of total no. of 26 genera belonging to 22 botanical families which are currently used in folk medicines for treatment of cholera in Odisha are documented. The present study reported 6 new ethnopharmacological plant species which are used and easily available but not documented by researchers of Odisha to cure cholera. The present investigation will help the researchers to document the traditional knowledge on the treatment of cholera. More attempts should be made to authenticate and evaluate the efficacy of these plants and products used by the tribal communities of Odisha.

KEYWORDS: Ethnomedicinal plants, folk medicines, cholera, Odisha.



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INTRODUCTION

Phytomedicines (medicines from plant and their derived products) have been an integral part of traditional health care system in most parts of the world for thousands of years. According to World Health Organisation, more than 80% of world population depends on traditional medicine for their primary healthcare needs ^[1, 2]. In rural India, 70% of the population is dependent on the traditional system of medicine ^[3]. Orissa is regarded as the Homeland of the Tribals having a total tribal population of about 7 million, which is 22.21 per cent of the State's total population according to Census. The State has the third highest tribal population in the entire country, which accounts for roughly 11 per cent of the total tribal population of India ^[4]. In the state of Odisha, there is only one hospital in every 3300 sq. km and one doctor for 2720 people. The doctor patient ratio is 0.6 per 1000 ^[5]. As the health care facilities are not easily accessible to the interior part of the state, tribal people still depend on the medicinal plants which are less expensive, readily available and reliable, and they are considered to have fewer side effects than modern medicines ^[6, 7]. In tribal areas of Odisha, the diarrheal/ dysentery diseases including cholera occur throughout the year attaining peak during the rainy season (from June to October) ^[8]. Cholera is a communicable diarrhoeal disease which is a major public health problem in the state of Odisha and is said to be endemic in many regions which is the leading cause of a high degree of morbidity and mortality in children less than 5 yrs of age ^[9]. Bacterial resistance, Lack of surveillance data and proper microbiological facilities are major problems regarding diagnosis of cholera ^[10]. The objective of this study was to assess the diversity of ethanomedicinal plant species

used by rural tribals of Odisha and to document the traditional medical practices in the treatment of cholera which will help both the researcher and the rural, tribal, and economically backward people of Odisha for future application and scientific investigation.

SIGNIFICANCE OF ETHNOMEDICINAL PLANTS

Ethnomedicine and their traditional knowledge is a good illustration of poor communities living in the remote areas, fighting even incurable diseases through the traditional methods and even for their livestock through these traditional herbal medicines. Medicinal plants are natural resources for new drugs. Plants parts are directly used as medicines by a majority of community in all over world and have no side effect like allopathic medicines. Most of the modern medicines are produced indirectly from medicinal plants.

ETHNOMEDICINAL DOCUMENTATION

In the state of Odisha, phytotherapy (treatment with medicines from plant and their derived products) forms an integral part of the local culture, and the information about plants and their uses are passed from generation to generation through oral folk-lore, primarily amongst the elderly; the natural retainers of traditional knowledge in their respective communities. Thus, the documentation of ethnomedicinal plants to cure cholera is highly essential for future which will help both researchers and common people.

ETHNO-MEDICINAL OBSERVATIONS

The plants are enumerated in alphabetical order. The botanical name of each plant is followed by, family, vernacular name, part used to cure cholera. [Table 1].

TABLE 1

List of the plants used in the treatment of cholera by the tribal community of Odisha.

Sl. No	Botanical Name	Family	Vernacular Name	Parts Used	Reference
1	<i>Achyranthes aspera</i> L.	Amaranthaceae	Apamaranga, Ginisar	Root paste	[11]
2	<i>Aegle marmelos</i> (L.) Corr.	Rutaceae	Bael, Sripthal	Leaf, Fruit, Bark	[5, 12]
3	<i>Aerva lanata</i> (L.) Juss	Amaranthaceae	Paunsia Bhadra, Dev, saga, Yama	Whole Plant, Root	[5, 13, 14]
4	<i>Allium cepa</i> Linn.	Liliaceae	Pyaj	Bulb	New Report
5	<i>Alstonia scholaris</i> (L.) R. Br	Apocynaceae	Saptaparna, Chatuan, Chaitwan, lazarongpang, Satian,	Leaf, Barks, Latex, Flower	[5]
6	<i>Andrographis paniculata</i> Nees.	Acanthaceae	Kalmegha, Bhuinneema, Chiraita, Kariyatu	Whole Leaf, Plant,	[5, 15]
7	<i>Azadirachta indica</i> A. Juss	Meliaceae	Neem, Neemba	Bark, Young Seed, Gum, Root, fruit, Leaf,	[5]
8	<i>Blumea lacera</i> DC.	Astraceae	Pokasungha, Kukoor sunga	Leaf	[5, 16]
9	<i>Centella asiatica</i> (L.) Urban	Apiaceae	Thalkuri	Leaf	[5]
10	<i>Cocculus hirsutus</i> (L.)	Menispermaceae	Dahdahia, Usaltang	Leaf	[5, 16]
11	<i>Erycibe paniculata</i> Roxb.	Convolvulaceae	Chain katho, Jhorai Koli	Bark	[5, 17]
12	<i>Ferula asafoetida</i>	Apiaceae	Heeng	Gum resin from root	New Report
13	<i>Hybanthus enneaspermus</i> Linn.	Violaceae	Ratanpurus	Whole Plant	[18]
14	<i>Justicia Adhatoda</i> L.	Acanthaceae	Bashok	Leaf	New Report
15	<i>Lygodium flexuosum</i> (L.) Sw.	Lygodiaceae	Rudrajata	Rhizome, Root	[19]
16	<i>Moringa oleifera</i> Lam	Moringaceae	Sajana, Muniga	leaf	[5]
17	<i>Psidium guajava</i> L.	Myrtaceae	Pijuli, Amrud, Guava,	Leaf	New Report
18	<i>Punica granatum</i> L.	Lythraceae	Annar	Leaf	New Report
19	<i>Seidenfia rheedii</i> (Sw.) Szlach.	Orchidaceae	Simil	Root	[20]
20	<i>Shorea robusta</i> Garten.	Dipterocarpaceae	Sala, Rengali, Sakhu, Jargi,	Bark, Resin, Leaf	[5, 6]
21	<i>Strychnos</i>	Loganiaceae	Kochila, Nanjin	Wood, Seed,	[5, 21]

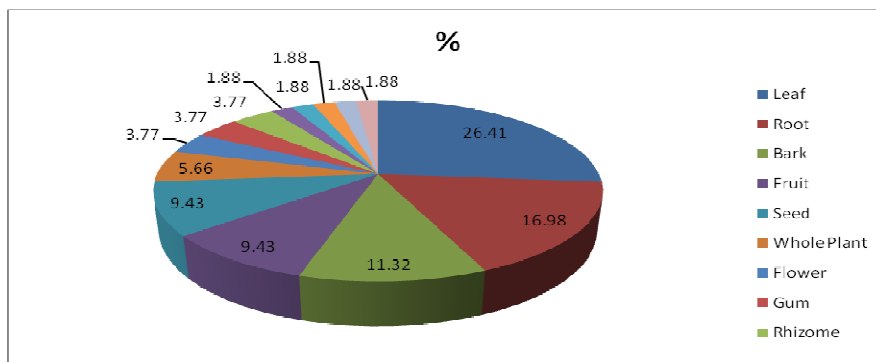
	<i>nux-vomica</i> L.		koradu, Kora	Root Bark		
22	<i>Syzygium cumini</i> L.	Myrtaceae	Jambakoli, Jamu	Fruits, Seed	Leaf,	[5, 6]
23	<i>Trachyspermum ammi</i> (L.)	Umbelliferae	Ajwain, Ajamoda	Fruit		New Report
24	<i>Vitex negundo</i> L.	Verbanaceae	Begunia, Nirugundi	Leaf, Root, Seed	flower, Bark,	[5, 6, 22]
25	<i>Zingiber montanum</i> (Koenig) Dietr	Zingiberaceae	Bano ada	Rhizome		[2, 5]
26	<i>Ziziphus mauritiana</i> Lamk	Rhamnaceae	Barakoli	Fruit, Kernel	Seed,	[5]

DISCUSSION

Traditional and indigenous systems of medicine persist all over the world. The unique traditional system of healthcare that is passed down from generation to generation within a society is still the prevalent system found within the remote rural areas of the country [20]. It is evident that the rural tribes of the state are very knowledgeable about Phytomedicines. The present investigation has also brought to light the therapeutic value of 26 plant species for the treatment of cholera. However, the mode of administration could not be documented for all species due to lack of informants. Further studies are in progress to explore the various medicinal uses of plants, as well as the problems of their threatened ecosystems. This study provides information on 26 plant species under 26 genera from 22 families used in folk medicines for the treatment of cholera in the state of Odisha. This study revealed that plant parts like Leaf used 14 times (26.41%) followed by root 9 times (16.98%), bark 6 times (11.32%) fruit & seed 5 times (9.43%), whole plant 3 times (5.66%), flower, Gum,

Rhizome 2 times each (3.77%) and Bulb, Kernel, Latex, Resin, Wood 1 times each (1.88%) (Fig.1). This study contains 6 newly reported ethnopharmacological plant species which are used and easily available but not documented by researchers of Odisha to cure cholera and present study will be helpful to both the researchers and rural tribal mass of Odisha to document the traditional knowledge on the treatment of cholera. The tribal people of Odisha take this traditional medicine with strong spiritual belief, which should not be ignored. Many readily available plants in Odisha are used as traditional folklore medicine for the treatment of cholera. As per records available very few scientific investigations have been made regarding the chemical identity of the constituents responsible for the pharmacological activity. The present study will be helpful to the researchers for further research of these medicinal plants existing locally with the people of Odisha which could support their use as anticholera remedies in traditional medicine.

Figure.1



Plant parts used to cure cholera

CONCLUSION

Traditional knowledge of plants in many tribal communities is changing because of rapid industrialisation, urbanisation, socioeconomic and cultural changes. This is particularly true in rural tribal communities of Odisha. Documentation of this knowledge is valuable for the communities and their future generations for scientific consideration of wider uses of traditional knowledge. The wealth of this tribal knowledge of medicinal plants points to a great potential for research

and the discovery of new drugs to fight diseases, obtaining good health. So, further scientific assessment of these medicines for phytochemical, biological and clinical studies is however greatly needed.

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