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Ethnomedicinal Study of Jajpur District, Odisha

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Abstract

The district Jajpur is one of the major district of Odisha. Once upon a time it was the capital of Odisha from 736 AD to 1110 AD during the rule of Bhauma and Somavamsi "Keshari" dynasty rulers. But it has a separate identify from ancient days in the temple culture of Odisha. The district is rich in plant resources, most of the tribal people dependent on forest and their product for livelihood. Ethnomedicinal study of some village of the Jajpur district, Odisha resulted in the documentation of therapeutic uses of locally available medicinal plant resources. The present study deals with the ethno botanical perception of 45 plant species belonging to 30 families of medicinal plants used by the tribal people in the rural area of Jajpur district (mostly Kolha, Munda, Bonda and Santal) for their primary health care facility is not accessible to the interior part of the district people still depend on the medicinal plants and traditional health care system for their health care. This paper illustrates some of the medicinal plants used by the tribals of the locality for their health care, ethno medicinal practices of Jajpur district has been documented with special reference to Jaundice, Gastrointestinal problems, cough and cold, Fever etc.

Keywords: Ethnomedicine, Medicinal plants, Jajpur district.

Introduction

Most of the world population depends on the traditional medicinal system and about 64% of the total global population depends upon it (Farnsworth, 1994). Approximately 8000 plants all over the world have been recognized for their ethno medicinal importance (Anonymous, 1994). In India about 2,500 plant species are used for medicinal purpose by the traditional healers (Chandel et al, 1996). And about 85% of the rural population depends on wild plants for their primary health care needs (Jain, 1994). The traditional knowledge on the herbal medicine has been orally transmitted from one generation to another generation and this oral transmission leads to erosion of this knowledge.

The present paper is an effort undertaken for the documentation of this traditional knowledge for future application and pharmacological investigation.

Jajpur is situated towards the Northeastern region of the state. Once upon a time it was the capital of Odisha from 736 AD to 1110 AD during the rule of Bhauma and Somavamsi "Keshari" dynasty rulers. But it has a separate identify from ancient days in the temple culture of Odisha. Jajpur is an interior district of Orissa, covering an area 2,899 sq km, lies between 20° 33' to 21° 10' N latitude and 85° 40' to 86° 44' E longitudes (Fig 1). About 95.5% populations live in villages. The district is rich in plant resources, so most of the tribal people of villages are dependent on forest and their product for livelihood.

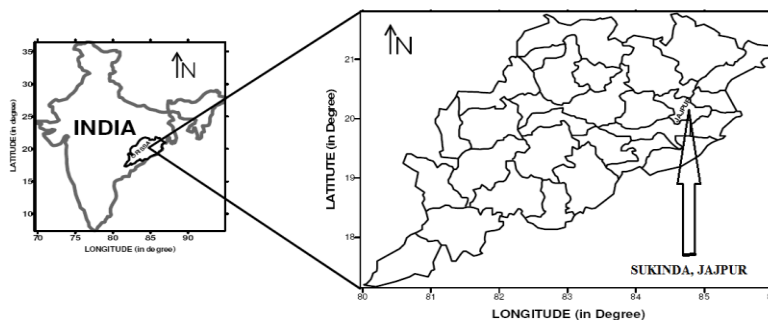


Fig 1: Index map of study area**Aim of the study**

The present paper is designed to collect information on ethnomedicinal plants and their uses by the local healers of Jajpur district, Odisha for which less literature is available.

Literature available

The cultural and biological biodiversity of Odisha is the centre of attraction for several ethnobotanical explorations (Jain, 1970; Saxena and Dutta, 1975). Ethnoveterinary practices of Jajpur district was reported by Satapathy (2009). However, medicinal plants used for health care have not been yet explored, thus it needs documentation and preservation of the traditional knowledge of local people.

Material & Methodology

Exclusively the ethnomedicinal survey was conducted during June, 2013 to December, 2013 to collect information about the use of locally available plants. The data are based on the first hand information gathered from local people and 13 tribal healers including 2 Vedyas who had agreed to expose their knowledge. The data were cross checked with different informants. The species are documented with their local name, method of administration. Plant specimens were identified and housed herbarium of the PG department of Botany, Berhampur University, Berhampur. (Table 1).

Results

The result of the survey was described in Table 01.

**Fig 2: Identification and Discussion with Local Vedyas****Fig 3: Group Discussion with Local People****Table 1: Plants Used by the Tribal People of Jajpur District, Odisha.**

SL No.	Scientific name of the Plant/ Family	Local name	Medicinal Uses
1	<i>Abutilon indicum</i> (L.)Sweet Malvaceae	Pedipedika	Prepare a paste of 3-4 nos. of leaves and 7 nos. of <i>P. nigrum</i> is taken with cold water against Jaundice. The Decoction of seeds is very effective to cure piles. 3-5 ml of the leaf juice is taken daily to cure malfunctioning of liver.
2	<i>Achyranthus aspera</i> L. Amaranthaceae	Apamaranga	Mixture of leaves and inflorescence decoction is taken 2 times per a day to cure fever. Stem juice is applied on the root of the teeth to stop bleeding.
3	<i>Acorus calamus</i> L. Acoraceae	Vacha	½ teaspoon of powder prepared from dried rhizome is taken 2 times per a day to cure asthma. ½ teaspoon of rhizome powder is taken in empty stomach in morning for appetite. Freshly crushed rhizome is chewed for the treatment of dysentery.
4	<i>Aegle marmelos</i> Lorr Rutaceae	Bela	2 -3 nos. of fresh leaves are chewed daily in empty stomach to cure severe gastritis and to reduce blood sugar level. Leaf paste is applied on the affected part of the burning injuries.
5	<i>Ageratum conyzoid</i> L. Asteraceae	Pokasungha	The decoction of the fresh plant is used as a hair wash, fragrant and dandruff free. Decoction of inflorescence and mixes with

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			<i>Ocimum tenuifolium</i> is taken to treat coughs and colds.
6	<i>Aloe vera (L.)Burm.</i> Liliaceae	Ghee kuanri	Fresh leaf mucilage applied on forehead to cure headache. Massage the decoction of fresh leaf juice 2-3 times per day to control high B.P. 20-30 ml of leaf juice mixed with 5-10 drops of adrak juice (<i>Zingiber officinale</i>) is taken 2 times per day for 15 days to cure amenorrhoea as well as leucorrhoea.
7	<i>Amomum aromaticum Roxb.</i> Zingibaraceae	Aleicha	Root extract is obtained by chewing and is given for curing mumps. 1.5gms of the cardamom seeds is taken per a day for good health.
8	<i>Anacyclus officinarum Hayne</i> Asteraceae	Akarakara	The decoction of the root is used as a gargle in dental caries and tonsillitis. Take same amount of mixture of <i>A. officinarum</i> and <i>T. arjuna</i> powder and mix with luke warm cow milk, is given to control the rate of heart beat and pain relief.
9	<i>Ananas sativus Schult.F</i> Bromeliaceae	sapuri	100 ml of Fresh leaf juice is taken everyday in morning for treatment of cough and constipation. Small pieces of fruit with salt and chilies is taken orally against diarrhoea and stomach problems.
10	<i>Azadirachta indica A.Juss</i> Meliaceae	Nimba	Massage 10-15 drops Neem oil daily on patient's chest to get recovery from T.B. 24gms of Neem barks is grinded with cold water and is taken for 15 days against Skin disease.
11	<i>Bacopa monnieri (L.)Penn</i> Scrophulariaceae.	Braahmi	5-7 nos. of Braahmi leaves is given daily at morning for improving memory power. A mixture of 10 ml of Braahmi juice and 5ml of honey is given for treatment of chicken pox
12	<i>Barleria prionitis L.</i> Acanthaceae	Daaskerenta	The leaf juice is applied on scalp to stop premature hair graying. Infusion of roots and leaves used for coughs.
13	<i>Cannabis sativa Linn.</i> Canabinaceae	Ganjei	Leaf Decoction is used against Stomach-ache.
14	<i>Cassia fistula L.</i> Caesalpiniaceae	Sunari	3 gm of Fruit pulp is mixed with 5 ml of Amla juice to cure jaundices.
15	<i>Cinamomum tamala T.Ness.</i> Lauraceae	Tejapatra	A mixture of leaf and bark decoction is given to cure cough and colds. Leaf paste is given twice per a day against piles. Daily for to cure long time diabetes.
16	<i>Citrous lemon (L.)Burm.F</i> Rutaceae	Lembu	Lemon is used for the common cold and flu and also used to aid digestion and reduce pain.
17	<i>Cissus quadrangular L.</i> Vitaceae	Hadavanga	The mixture of the stem juice and the juice of <i>cissus quadrangular L.</i> and small amount of black pepper powder is given for bone joints. 10 ml of stem juice is given daily for dysmenorrhoea.
18	<i>Coleus amboinicus Lour.</i> Lamiaceae	Rukuna hata pochha	The dose of leaf juice 12 ml, following 6 ml in each 1 hour is given for curing diarrhea. Leaf juice with sugar is given for pediatric colic pain.

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19	<i>Cymbopogon flexuosus</i> (Nees ex steud.) wats in Atkin. Poaceae	Dhanawantari ghasa	5 ml of leaf Decoction is used for fever and clear headache.
20	<i>Cyperus rotundus</i> (L.) Pers. Poaceae	Mutha	The decoction of tuber is used to control irregular and painful menstruation, cough and diarrhea.
21	<i>Dillenia indica</i> L. Dilleniaceae	ouu	Fruit Decoction is used to curing dandruff and reduce hair fall. Fruit juice mixed with sugar and water serves as cooling beverages in fever and as a cough syrup.
22	<i>Erythrina variegata</i> L. Fabaceae	Paaladhua	12 gms of leaf juice is taken twice per a day for 15 days to cure discontinuous menstruation.
23	<i>Globba bulbifera</i> Roxb. Zingiberaceae	Krushna kedar	Decoction of Bulbils are used to stimulate the appetite (Hunger).
24	<i>Glycosmis pentaphylla</i> (Retz.)DC Rutaceae	chauladhua	A pest is prepared from the leaves and zinger is used for the treatment of eczema and other skin infections. 5-10 ml of leaf juice is used for treatment of fever and liver problem.
25	<i>Hemidesmus indicus</i> .R.Br Asclepiadaceae	Anantamula	10 gm of root paste is taken with coconut water in empty stomach for 7 days to cure jaundice. 10 ml of leaf juice is taken 3 times per a day to cure fever.
26	<i>Hygrophila auriculata</i> (schum) Heine Acanthaceae	Koilkhia	10-15 ml of leaf juice is taken every day in morning for 1 month to curing Blood pressure. Prepare 50 ml of a paste of whole plant and is given against gout (one type of a joint paralysis). Prepare 50 ml of Decoction with whole plant is given against insomnia.
27	<i>Leucas aspera</i> spreng Lamiaceae	Goesa	The Whole plant parts is taken and inhaled to get recovery from nasal congestion, cough, cold, headache and fever. The leaves (10 g) are fried in mustard oil and is taken daily against gastric problem.
28	<i>Momordica charantia</i> L Cucurbitaceae.	kalara	Fruit Decoction is used for the treatment of diabetes. Fresh leaf juice is given against piles.
29	<i>Murraya koenigi</i> (L.) Spreng. Rutaceae	Merisinga (patra)	10-15 nos. of fresh leaves is given for 3 months for curing diabetes. Leaf Decoction is used for curing fever. 5ml of root paste is taken for relieve kidney pains.
30	<i>Nycanthes arbor-tristis</i> L. Oleaceae	Gangasiuli	The leaf juice along with sugar is given once per a day for 7 days against Gastritis. Prepare a mixture of 100 ml of leaf juice along with 250 ml of mustard oil is used against Earache. 5 spoon of leaf juice along with honey half spoon is taken in empty stomach in morning for 4-5 days for curing worm disease. Prepare a paste of 1:1 ratio of leaf juice and salt and is given for 3 days against indigestion.
31	<i>Ocimum sanctum</i> L. Lamiaceae	Tulsi	10 ml of leaves juice is taken along with 50 ml of reddish juice and with Jagery (guda) is given against jaundice. 5 gm of root paste is eaten with betel is

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			taken to stop bleeding. The inflorescence powder is taken orally with water as medicine for diabetes.
32	<i>Paederia foetida</i> L. Rubiaceae	Pasaruni	8-10 nos of leaves along with 8-10 no. of <i>Piper nigrum</i> , is given at morning with empty stomach against paralysis. Leaf juice is taken along with honey for 3 times per a day for the treatment of diarrhea and dysentery. Root extract is given to reduce vomiting.
33	<i>Piper betel</i> Linn. Piperaceae	pana	Juice of 2-3 nos. of leaf and ginger is given to cure Asthma. Juice of 3-5 nos. of leaf and ginger is taken against Cold and cough.
34	<i>Piper longum</i> L. Piperaceae	Pippali	20- 50 ml of Fruit decoction is taken for Chronic fever .
35	<i>Piper nigrum</i> L. Piperaceae	Golmaricha	Prepare a paste of 25 nos. of piper nigrum and is taken along with <i>L. aspera</i> plant against rat bite. Prepare a grinded solution of 7 nos. of leaf with 7 no. of <i>Nyctanthus arbor-trisis</i> leaf and is taken for 3 times per a day for 3 days fort back bone pain relief .
36	<i>Pongamia pinnata</i> L.pierre Fabaceae	karanja	Make a paste of 1 gm of seed along with 3 no. of piper nigrum with some water is given at morning in empty stomach for 1 week for Malaria. ½ cup of Bark decoction is taken for 1 week to cure diabetes. Oil extracted from seed and massaged on the body to cure skin disease.
37	<i>Punica granatum</i> Linn. Puniaceae	Dalimba	The decoction of seed is used against syphilis and also juice is used to treat jaundice and diarrhoea. 10mg of root paste is taken with coconut water in empty stomach for 7 days to cure Jaundice. 10 ml of Leaf Juice is taken 3 times per a day to cure fever.
38	<i>Rauvolfia serpentina</i> (L.)Benth.ex Kurz Apocyanaceae	Patala garuda	Prepare a paste of Root bark , is grounded with water and 10mg of this paste is taken with cold water against stomachache. 10ml of root paste is taken along with <i>P.nigrum</i> orally for treatment of snake bite. The root powder is taken along with luke warm water to cure piles.
39	<i>Sansevieria roxburghiana</i> Sch and Schult f. Asparagaceae	kathiagada	Root Decoction is used against cough. Slightly warmed leaf juice is used as a nasal drop, and is taken 3 times per a day and the paste is also applied over the body for viral diseases associated with stringy nasal discharge. Decoction of Roots and rhizome is taken for setting of bone.
40	<i>Sreblus asper</i> lour. Moraceae	sahada	Regular brushing of teeth by fresh tender twigs to cure toothache. Root paste is given to cure dog bite. Leaf paste is applied along with til oil to cure eczema.
41	<i>Terminalia bellirica</i> (Gaertn) Roxb. Combetaceae	bahada	100 ml of fruit decoction is taken at early morning for 7 days for the treatment of piles.

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42	<i>Uraria lagopodioides (L) Desv.Ex.DC</i> Fabaceae	Gorikhia	2 ml of ghee cooked with 2-5 ml of leaf juice for curing cough. 20ml of infusion of leaves is taken orally for 3 times with a gap of 4 days for curing jaundice.
43	<i>Vitex negundo L.</i> Verbanaceae	Begunia	2 ml of ghee cooked with 2-5 ml of leaf juice for curing cough. 20ml of infusion of leaves is taken orally for 3 times with a gap of 4 days for curing jaundice.
44	<i>Vitiveria zizanioides (L.)Nash</i> Poaceae	Bena	10-12 gms of Root paste is taken every day for stomachic. Decoction of roots (10 g) is given early in the morning (at least half an hour before breakfast) for 15 days to check excessive thirst caused due to diabetes.
45	<i>Wedella calendlaceae, Less.</i> Asteraceae	Bhrungaraj	prepare a mixture of 24 gms of leaf juice along with 3ml of ghee and 6ml of honey and is given for 6-7 days against High blood pressure. 1 spoon of leaf juice along with 1 spoon of honey is taken for 3 times per a day for 2-3 days For curing Fever. Take 2-3 ml of leaf juice with salt is given to stop vomiting.

Discussion

The ethnomedicinal uses of plants have been reported since long, most of these plants do not certify the efficacy (Tarafdar, 1986). The plants reported used for various ailments need to be pharmacologically screened, chemically analyzed and tested for various bioactive compounds (Chandler et al, 1979; Fairbairn 1980). The present study provides information of 45 plant species belongs to 30 families. Among the families Rutaceae contributes maximum number of plant species (4 nos.) followed by Asteraceae, Fabaceae, Lamiaceae, Piperaceae (3 species). The plants used for medicinal preparation were bark, flowers, rhizomes, roots, leaves, seeds, latex and whole plants. The most frequently used plant parts are leaves (38%) followed by root (16 %), Fruit (14%), Bark (7 %), seed (7%), whole plant (7 %), stem (3%), flower (4%), rhizome (4%). The paper present a brief account of various medicinal plants and traditional practices used for treatment of various diseases like malaria, skin disease, Diarrhea, diabetes, obesity etc. with special reference to Jaundice, gastro intestinal problem, cough, cold and fever.

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