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PLANTS USED IN ETHNO-VETERINARY MEDICINE BY ORAON TRIBALS OF NORTH - EAST CHHATTISGARH, INDIA

Dr. Amia Ekka*

School of Life Sciences, Pt. Ravishankar Shukla University, Raipur (Chhattisgarh) 492010. India.

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***Correspondence**
For Author
Dr. Amia Ekka
School of Life Sciences,
Pt. Ravishankar Shukla
University, Raipur
(Chhattisgarh) 492010.
India.

ABSTRACT

A survey for documentation of ethnoveterinary medicinal plants used by the Oraon traditional healers in north-east Chhattisgarh, has been conducted during July 2013 to December 2014. Ethnoveterinary information was gathered through individual interviews and observations among the Oraon tribals. A total of 37 species of ethnoveterinary medicinal plants belongs to 30 families and 35 genera were recorded in the study with the help of 20 ethnoveterinary traditional healers. Among the plant parts used by the Oraon tribals for their domestic animals, leaves are most commonly used for the preparation of medicine. Of the plants recorded *Abrus precatorius, Andrographis paniculata, Cassia fistula, Curcuma angustifolia, Gymnema sylvestre, Hemidesmus indicus, and Holarrhena antidysenterica* are recognized as very commonly used ethnoveterinary medicinal plants. My study suggested that, documenting the medicinal plants and associated indigenous knowledge can be used for conservation and sustainable use of medicinal plants in the area and for validation of these plant preparations for veterinary treatment.

KEYWORDS : Ethnoveterinary medicine, North-East Chhattisgarh , Oraon tribals

INTRODUCTION

Health is a major constraint to livestock production and development in rural and pre-urban communities, where a half of these communities live in marginal areas affected with endemic pathogens,vectors and diseases. These areas are not easily accessible to modern veterinary services. Many traditional medicines have been abandoned following the discovery of the modern chemotherapy. But for more than a decade now ethnoveterinary medicine has

experienced a revival and several reports have been published. This growing interest in traditional practices had been encouraged by the recognition of some efficacious ethnoveterinary medicinal products. Ethnoveterinary medicine often provides cheaper options than comparable western drugs, and the products are locally available and more easily accessible.

Chhattisgarh is situated in central eastern part of the country. The north and south parts of the state are hilly, while the central part is a fertile plain. Forests cover roughly forty-four percent of the state. There is two districts have covered first- Jashpur and Second Surguja district. Jashpur District lies in the north-eastern corner of the state of Chhattisgarh.The north-south length of this district is about 150 km, and its east-west breadth is about 85 km. Its total area is 6,205 km². It is between 22° 17′ and 23° 15′ North latitude and 83° 30′ and 84° 24′ East longitude. According to the 2011 census Jashpur district has a population of 852,043. Surguja District is a district in the northern part of the state of Chhattisgarh. It lies between 23°37'25" to 24°6'17" north latitude and 81°34'40" to 84°4'40" east longitude. According to the 2011 census Surguja district has a population of 2,361,329, Major population comprises tribal population.

Oraon tribal is well-known that this district is the Tribal district. *Oraon* caste are spread whole over this district. *Oraons* are mainly agricultural labourers. They are dependent on secondary forest produce for their living, which is why the incidents of snakebite are frequent among them (Ekka *et.al* 2013). As they are widely depends on the forest they have rich heritage of traditional knowledge about health practices. The rich forest flora and vast tribal population in the district have attracted a number of workers for ethno botanical studies in the past **(**Nigam *et.al*.2010, Jain *et.al*. 1999 and Meena K.L.2014**)** but no works were reported exclusively on *Oraon* tribe and on ethnoveterinary necessitating the present investigation.

MATERIALS AND METHODS

Study area

The present study was conducted at 02 district of Chhattisgarh which are situated at north-east part of this state and covered with forest. The people of the study area are basically agriculturists and most of them are having domestic animals such as cow, goat, sheep, buffalo and pigs. But the area has not been supported with the veterinary colleges, hospitals and any such dispensaries. The villagers in the block are rarely goes to the nearby blocks of the

district to treat their animals. Mostly the ethnoveterinary healers of the study area offer some necessary indigenous treatments with medicinal plants.

Data Collection

Field trips ranging from 4 days to a week were made in the study area in every month of the year of study (July 2013 to December 2014) among the Oraon tribal people in Jashpur & Surguja districts. The major livelihood of these Oraon tribals are cattle farming,agriculture, collection of fuel-wood and forest resources such as herbal medicines, Tendu Patta collection, honey , some edible fruits and tubers from the nearby forests. Ethnoveterinary data were collected from 20 resource persons (16 belonged to the male group & 04 belonged to the female group with average age of 65 years) of the study area who have much knowledge on medicinal plants with semi structured interviews. The interviews were conducted in the local language, i.e., *Oraon/Kudukh.*. Ethnoveterinary information included with the local name of the particular plant, parts utilized, medicinal uses and methods of preparation and administration. The collected ethnoveterinary information was recorded on field note books and plants were identified using the Flora of Madhya Pradesh (Mudgal *et. al.* 1997)

Table 1. List of ethnoveterinary medicinal plants used by Oraon tribals inNorth-east Chhattisgarh, India

S.No.	Botanical name	Family	Local name	Animals treated	Uses and mode of preparation
1.	*Abrus precatorius* L.	Fabaceae	Gunj	Cow, goat	Leaf paste is applied on affected part to treat swellings
2.	*Abutilon indicum* (L.) Thuththi	Malvaceae	Kanghi	Cow, goat	Leaves ground with butter milk and the extract given to cure dysentery.
3.	*Acalypha indica* L	Euphorbiaceae	Dudhiya	Cow, goat	Leaf paste is mixed with common salt and applied externally to heal wounds.
4.	*Achyranthes aspera* L	Amaranthaceae	Chirchitha	Cow, goat	Leaf is ground with saffron the filtered juice is used to pour in eyes to get relief from watering in eyes.
5.	*Adhatoda vasica* Nees	Acanthaceae	Adusa	Cow, goat	Decoction of leaf and stem are given to treat fever.
6.	*Aloe vera* (L.) Burm.f.	Liliaceae	Ghritkumari	Cow	The leaf pulp is made into a paste and given to cattle for unconscious condition (drooping head).

7.	*Andrographis paniculata* Nees	Acanthaceae	Bhuinneem	Cow, goat	Decoction of whole plant is used to treat fever and cough.
8.	*Aristolochia bracteolata* Lam.	Aristolochiaceae	Acchho	Cow, goat	Leaves are heated with *Til* oil and applied on affected places to cure skin infections and wounds.
9.	*Aristolochia indica* L.	Aristolochiaceae	Acchho	Cow, goat	Leaf is made into a paste along with pepper and given to cure insect bite.
10.	*Azadirachta indica* A. Juss.	Meliaceae	Neem	Cow, goat	Seed oil is applied over wounds to heal soon.
11.	*Calotropis gigantea* (L.) W.T.	Asclepiadaceae	Madar	Cow, goat	Root is ground with pepper and garlic and the mixture is given to cure fever.
12.	*Careya arborea Roxb.*	Barringtoniaceae	Kumbhi	Goat	Ripe fruits are given with fodder to cure dysentery.
13.	*Cassia fistula* L.	Caesalpiniaceae	Bandarlouri	Cow, goat	Root paste is apply in snake bitten area to cure.
14.	*Cassia tora* L.	Caesalpiniaceae	Chakoda	Cow, goat	Seed is mixed with water and ground into paste and applied on affected part to cure skin diseases.
15.	*Cissus quadrangularis* L.	Vitaceae	Harjor	Goat	Leaves are ground with pepper and garlic and made into a decoction. The decoction is given to cure fever.
16.	*Citrullus colocynthis* L.	Cucurbitaceae	Dimbo	Cow, goat	Root is ground with water and the decoction obtained is given to cure cough.
17.	*Coccinia grandis* (L.) Voigt.	Cucurbitaceae	Jangle Kundri	Cow, goat	Leaf is ground with ghee and the extract obtained is poured into affected parts to cure wounds.
18.	*Coriandrum sativum* L.	Apiaceae	Dhania	Cow	Fruits are powdered and given after immediate pregnancy for 3 -4 times to facilitate conception.
19.	*Curcuma angustifolia* Dalz & Gibs.	Zingiberaceae	Sapaini	Cow, goat	Rhizome is ground with ghee and the extract obtained is poured into nostrils to cure running nose.
20.	*Dalbergia latifolia* Roxb.	Fabaceae	Shisham	Cow, goat	Stem bark is ground with garlic and pepper and the mixture is given for the animals which are lazy in grazing.
21.	*Datura metel* L.	Solanaceae	Dhatura	Cow, goat	Roasted fruits are given once a day till the dysentery and cough

					is cured.
22.	*Euphobia hirta* L.	Euphorbiaceae	Dudhi	Cow, goat	Latex is applied externally on wounds to heal soon.
23.	*Elephantopus scaber* L.	Asteraceae	Minjur chundi	Pig, Hen	Whole plant paste is mixed with fodder and given to cure dysentery.
24.	*Gymnema sylvestre* (L.) R.Br.	Asclepiadaceae	Gudmaar	Cow, goat	Leaf is ground with pepper, garlic and pinch of common salt and the mixture is given to cure fever.
25.	*Hemidesmus indicus* (L.) R. Br.	Periplocaceae	Dudhiya Parhi	Buffalo, Cow	Whole plant paste is apply as bandage for healing wounds.
26.	*Holarrhena antidysenterica* Wall. ex.DC.	Apocynaceae	Korya	Pig	Decoction of stem bark is given orally to treat dysentery.
27.	*Mimosa pudica* L.	Mimosaceae	Chuimui	Cow	Leaf is ground with pepper, garlic, onion and saffron and fed to barren cows during fever.
28.	*Pongamia pinnata* (L.) Pierre.	Fabaceae	Koranjo	Cow, goat	Leaf is ground with pepper and given to cure fever. Decoction of stem bark is given orally to treat dysentery.
29.	*Porana paniculata* Roxb.	Convolvulaceae	Masbandhi	Buffalo, Cow	Tuber paste is apply as bandage for bone fracture.
30.	*Scindapsus officinalis* Schott.	Araceae	Gachpipal	Pig, Cow	Whole plant paste is apply as bandage for bone fracture.
31.	*Spondias pinnata* L.	Anacardiaceae	Ambirlo	Goat	Fresh fruit paste is given with fodder to cure dysentery.
32.	*Sterculia urens* Roxb.	Sterculiaceae	Kurlu	Goat, Cow	Stem bark is apply as bandage on cut wounds to heal soon.
33.	*Syzygium cumini* (L.) Skeels.	Myrtaceae	Jamun	Cow, goat	Seed powder is mixed with fodder and given twice daily for three days to cure dysentery.
34.	*Terminalia chebula* Retz.	Combretaceae	Harra	Goat	Stem bark is ground with pepper and garlic and given to cure fever.
35.	*Tridax procumbens* L.	Asteraceae	Latti	Cow	Leaf paste is applied on cut wounds to heal soon.
36.	*Vitex negundo* L.	Verbenaceae	Khonkhod	Buffalo, Cow	Stem bark is mixed with curd and made into a paste and given to cure dysentery.
37.	*Woodfordia floribunda* Salisb	Lythraceae	Dhawai	Buffalo, Cow	Root paste is mixed with egg shell and apply as bandage for bone fracture.

RESULT AND DISCUSSION

In the present study 37 species of ethno veterinary medicinal plants were recorded which belonged 30 families with 35 genera (Table 1). Euphorbiaceae , Acanthaceae,Asclepiadaceae, Caesalpiniaceae, Cucurbitaceae, Fabaceae, and Asteraceae is found to be most often used families in the study with two species. The leaves are the predominant part utilized in the treatment of veterinary diseases and most of the plants are used to treat fever in livestock. Decoction, paste, powder and mixture of plants are the common methods employed for the preparation of medicinal plants. 31 different uses for livestock animals were recorded in the study with the help of Oraon ethnoveterinary traditional healers in north –east Chhattisgarh. . Most of the reported ethnoveterinary medicinal plants are used to treat wounds (8), dysentery (8), fever (7), and Some of the noteworthy ethnoveterinary medicinal plants used by most of the interviewed Oraon tribals are Whole plant paste of *Scindapsus officinalis* Schott.for bone fracture, Tuber paste of *Porana paniculata* Roxb. for also bone fracture and Whole plant paste of *Elephantopus scaber* L. and *Spondias pinnata* for Dysentery these species were new recorded for ethno- veterinary purpose as per literature.

CONCLUSION

Traditional knowledge of plants in many tribal communities is changing because of rapid Socio-economic and cultural changes. This is particularly true in the Oraon tribal people in north-east (Jashpur & Raigarh district) Chhattisgarh. Documentation of this knowledge is valuable for the communities and their future generations and for scientific consideration of wider uses of traditional knowledge in treating domestic animals. The low cost and almost no side effects of these traditional preparations with medicinal plants make them adaptable by the local community. The wealth of this tribal knowledge of medicinal plants points to a great potential for research and the discovery of new drugs to cure the diseases of animals. So, further scientific assessment of these medicines for phytochemical, biological and pre-clinical and clinical studies is, however, greatly needed.

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