



Research Paper

PLANTS USED IN ETHNO-VETERINARY MEDICINES BY TRIBAL PEOPLES IN BETUL DISTRICT, MADHYA PRADESH, INDIA

U.S. Patil and O.S. Deshmukh¹

Department of Botany,
Bhartiya Mahavidyalaya, Amravati M.S.

¹Department of Botany,
Mahatma Fule Arts, Commerce and S.C. Science Mahavidyalaya,
Warud Dist. Amravati M.S. 444906.

Abstract

The paper highlights some commonly used ethnoveterinary medicines for domestic animals to treat ailment. The data was gathered from ethnic people specially Gond and Korku in the tribal pockets of Betul district. A total 25 species belonging to 25 genera, representing to 19 families as employed for 14 types of animal diseases. The species, family and vernacular name, plant part(s), drug preparation, mode of administration are studied.

Key words: Folk Ethnoveterinary medicines, Traditional knowledge, 25 plants, Betul District, Madhya Pradesh, India.

INTRODUCTION

The ethno veterinary practices all over the world within the ethnic groups and cultural societies are an integral component of livestock healthcare and management practices. It is possible that the same traditional healers prescribe medicines for both human beings and animals but some specialized men treat animals only (Dwivedi 1998). Many medicinal plants grow in India , in plains and hills are most commonly used ingredients in the preparation of ethno veterinary medicines. It is developed by farmers in field and barns rather than in scientific laboratories and it is also less systematic, less formalized and usually transferred by word of mouth rather than writing.

In most rural areas people prefer to treat their animals with indigenous drugs. At present over 35,000 plants are known to have healing properties (Jain 1991). All parts of the plants, including leaves , bark, fruits, flowers, seeds are used in medicinal preparation(McCorkle,1996). Ethno veterinary practices are often cheap, safe, time tested and based on local resources and strengths. These can provide useful alternatives to conventional animal health care (Katewa,S.S.and et al. 2000). Ethno veterinary medicine is in danger of extinction because of advancement of the modern veterinary medicine.

The importance of the traditional knowledge on ethno veterinary practices by specialists and local healers who are knowledgeable and experienced in traditional systems of treatment, but their knowledge is not documented, and is dwindling fast(Jain,2000). As the local healers did not document their knowledge and experience, and did not pass it on to others readily, there was danger of extinction of knowledge (Mathais and Anjaria, 1998). Both conventional and participatory methods have been used to document local knowledge in

general and ethno veterinary medicine in particular. Both approaches have their place and their results can be complementary and possibly cross-valid at each other (Anjaria Jayvir, 1996).

METHODOLOGY

The district Betul lies between 21° 55' and 21° 52' North latitudes and 77° 54' and 77° 9' East longitudes in Madhya Pradesh and includes rich in biodiversity and tribal population. It extends to an area of about 4056.397 sq. km.

Several field visits were conducted to tribal villages and rural areas in Betul district where Gond and Korku dominates the population to collect information on ethno veterinary medicines practiced by them. The plant species were identified taxonomically by consulting the Flora . The voucher specimens were deposited in the herbarium of Department of Botany, Bhartiya Mahavidyalaya, Amravati. The table in the appendix gives an overview of ethno veterinary practices of the study area.

RESULTS AND DISCUSSION

The traditional knowledge of tribal communities in Betul district has high ethno botanical importance. They utilize numerous plants and their various parts viz., roots, leaves, stems and rhizome for various ethno veterinary practices. During the field survey , ethno veterinary data of 25 species of plants belonging to 19 families have been collected (Table1). Both internal and external applications were involved in the treatment of ailments.

While analyzing the information on the plants used by tribals for treating the ailments of animals, it has been noted that leaf is the most commonly used plant part, followed by stem bark, fruit, rhizome , root & seed. It is interesting to note that major ethnoveterinary medicine used for the treatments of diarrhoea and fractures, dysentery, foot and mouth disease, wound, yoke sores, galactagogue and lactation.

Table 1 List of Ethno veterinary plants used by tribes in the study

Sr.No.	Botanical Name	Vernacular Name	Family	Parts Used	ethno veterinary practices
1.	<i>Clematis triloba</i> Heyne ex Roth	Ran-mogra(K)	Ranunculaceae	Leaves	Leaves are crushed and the paste is applied on the throat swelling.
2.	<i>Tinospora cordifolia</i> (Willd)	Gulvel(G)	Menispermaceae	Leaves	Fresh leaves are fed to cattle, cow and goat as a galactagogue agent to increase flow of milk.
3.	<i>Capparis zeylanica</i> L.	Waghata(M)	Capparaceae	Leaves	Leaves crushed with water, mixed with 250 ml edible oil and applied to cattle in bone fracture.
4.	<i>Cleome viscosa</i> L.	Pivli Tilwan (B)	Cleomaceae	Leaves, Seeds	Decoction of leaves applied on sores for killing maggots in sores. Seed powder mixed with 500ml water given to cure epilepsy in animals.

5.	<i>Abutilon indicum</i> L.	Petari(M)	Malvaceae	Leaves	Decoction of leaves mixed with whey is given orally two or three times a day to cure dysentery and diarrhoea.
6.	<i>Bombax ceiba</i> L.	Katsawar(B)	Bombacaceae	Stem Bark	250 gm inner bark of stem crushed, mixed with 750 ml water and given twice or thrice a day in dysentery.
7.	<i>Ailanthus excelsa</i> Roxb.	Maharukh(M)	Simaroubaceae	Leaves	Leaf decoction is applied on the wound to remove the maggots from the wound.
8.	<i>Cissus quandrangularis</i> L.	Hadjod(M)	Vitaceae	Stem	Stem paste is applied on bone fracture in cattle.
9.	<i>Cayratia trifolia</i> L.	Tifankand(B)	Vitaceae	Tubers	Tuber paste after warming is applied on yoke sores of bullocks.
10.	<i>Leea macrophylla</i> Roxb.	Antharun Kand(B)	Leeaceae	Root	Root paste is applied over carbuncles of animals for early cure.
11.	<i>Buchanania lanzan</i> Spreng.	Charoli(M)	Anacardiaceae	Leaves, Stem bark	Gum resin is used against bone fracture where plaster cannot be tied.
12.	<i>Semecarpus anacardium</i> L.	Bibba(G)	Anacardiaceae	Fruits	Fruits sandwiched in jawar bread are fed to animals in mouth disease as preventive measure in epidemic of mouth disease.
13.	<i>Abrus precatorius</i> L.	Gunchi (K)	Fabaceae	Seeds, Root	Crushed roots are used to cure cough, cold and pneumonia. Seeds are used against constipation.
14.	<i>Butea monosperma</i> (Lamk.)	Palas (K)	Fabaceae	Stem bark, Root	The decoction is given for three days in Haematuria.

15.	<i>Clitoria ternatea</i> L.	Gokarni (P)	Fabaceae	Roots, Seeds	The root powder is applied locally to scorpion stings.
16.	<i>Mucuna prurita</i> Hook.	Khajkurari(M)	Fabaceae	Leaf	Tender leaf is fed daily in Pig against lactation.
17..	<i>Cassia fistula</i> L.	Amaltas(M)	Caesalpiaceae	Flowers	Decoction of flowers were orally given twice a day for five days against cough and cold in cattle and goat.
18.	<i>Terminalia arjuna</i> (Roxb. Ex DC.)	Arjun Sadada(G)	Combrataceae	Stem Bark	Stem bark crushed in water and the paste is applied over bone fracture.
19.	<i>Diplocyclos palmatus</i> (L.)	Shivlingi(B)	Curcubitaceae	Fruits, Leaves	Leaves or fruits crushed in butter milk and given to cure ephemeral fever.
20.	<i>Opuntia elatior</i> Mill.	Nagphani(K)	Cactaceae	Stem branches	Making two parts of stem(Phylloclade) and after heating it on the fire, the stem is applied on the swelling part of the animals.
21.	<i>Embelia ribes</i> N. Burman.	Wawding(M)	Myrsinaceae	Leaves, Seeds	Decoction of leaves mixed in whey and given to cure dysentery. Boiled fruits mixed with water given orally to cure dysentery.
22.	<i>Madhuca indica</i> Ham. Ex Gmel.	Moha(G)	Sapotaceae	Seeds, leaves, bark	Leaves decoction is given to goat in fever and bloody diarrhoea. Fruits are crushed with water and given to animals against diphtheria.
23.	<i>Curcuma pseudomontana</i> L.	Ran Halad(T)	Zingiberaceae	Leaves	Decoction of leaves mixed with salt is given to animals with the help of drenching tubes in tympany.

24.	<i>Costus speciosus</i> L.	Nalguj (K)	Zingiberaceae	Root stock	Root stock used against rheumatic pain in cattles.
25.	<i>Asparagus racemosus</i> Willd.	Shatavari (G)	Liliaceae	Tuberous Root	Roots crushed and mixed with water given to milch animals to enhance milk yield.

CONCLUSION

Animals and plants are integral part of tribal culture, religion, magico-religion and traditional pharmacopoeia. Traditional practices still remain prevalent in villages. This is a clear indication of their faith in the folk medicine. But in the process of modernization, this knowledge is vanishing very rapidly. Advanced research on plants of excessive medicinal values may lead to new sources of drugs.

The tribal population still depends on wild resources for their daily needs. Not with standing the emergence of modern means of transport, food production, artificial or synthetic substitute for leather and other animal products, animals continue to play an important role in human life. Hence animal health care will continue to attract attention of man. Conservation and sustainable utilization of potential medicinal plants is essential for the coming generation.

ACKNOWLEDGEMENT

Authors thankful to tribal people of Betul district, Madhya Pradesh and Forest Department for their co-operation during field works.

REFERENCES

1. Anjaria Jayvir, V. 1996. Ethnoveterinary pharmacology in India: past, present and future. *Ethnoveterinary Research and development* : Intermediate technology publication, London, pp. 137-147.
2. Dwivedi, S.K. 1998. Overview of Ethnobotany Practices in India., *Techniques for scientific validation and evolution of Ethnoveterinary practices in India*, Bareilly. pp. 1-5
3. Gamble JS, Fischer CEC. Flora of the Presidency of Madras (Adlard & Sons Ltd., London), 1915-1930; Reprinted edition (Botanical Survey of India, Calcuta), Vols. 1-3; 1957.
4. Jain , S. K. 1991. *Dictionary of Indian folk medicine and Ethnobotany*. Deep publication, New Delhi.
5. Jain, S.K. 2000. Plants in Indian Ethnoveterinary medicine : Status and Prospects. *Ind.J.Vet.Med.*, 20 : 1-11.
6. Katewa, S.S. and B.L. Chaudhary (2000) . Ethno-veterinary survey of plants of Rajsamand district, Rajasthan. *J. Vasundhara* 5:95-98
7. Lakshminarayana V, Narasimharao GM. Ethnoveterinary practices in Northcoastal districts of Andhra Pradesh, India. *J. Natural Remedies* 2013;13(2);109-117.
8. Lakshminarayana V, Narasimharao GM. Traditional veterinary medicinal practices in Srikakulam district of Andhra Pradesh, India. *Asian. J. Exp. Biol. Sci* 2013;4(3);476-479.
9. McCorkle, C.M. 1996. An introduction to Ethnoveterinary research and development. *J.Ethnobiol.*, 6(1) : 129-149.
10. Murthy PP, Narasimha Rao GM. Ethnoveterinary medicinal practices in tribal regions of Andhra Pradesh, India. *Bangladesh J. Plant. Taxon* 2012;19 (1);7-16.
11. Reddy RV, Lakshmi NVN, Venkata Raju RR. Ethnomedicine for ephemeral fever and anthrax in cattle from the hills of Cuddapah district, Andhra Pradesh. *Ethnobotany* 1997;9;94-96.

12. Reddy KN, Venkata Raju RR. Plants in ethnoveterinary practices in Anantapur district, Andhra Pradesh. *J. Econ. Tax. Bot* 1999;23(2);347-357.
13. Reddy CS, Raju VS. Folk biomedicine for common veterinary diseases in Nalanda district, Andhra Pradesh. *Ethnobotany* 2000;12;1 13-117.
14. Reddy KN, Subbaraju GV, Reddy CS, Raju VS. Ethnoveterinary medicine for treating livestock in Eastern ghats of Andhra Pradesh, *Indian J. Tradit. Knowle* 2006;5(3);368-372.
15. Suneetha J, Prasanthi S, Seetharami Reddi TVV. Plants in ethnoveterinary practices in East Godavari district, Andhra Pradesh. *J. Non-Timber Forest Products* 2012;9(1);63-68.
16. Yadav S.R. and M.M Sardesai , *Flora of Kolhapur District, Shivaji University, Kolhapur (India)*. 2002, ; 1- 680.