



Ethnoveterinary knowledge and practices prevalent among the tribals of central India

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Abstract

Objective: An ethno botanical study was conducted among the various tribal communities of central Indian states (Madhya Pradesh and Chhattisgarh) to document their ethno veterinary knowledge and practices prevalent among them since times immemorial. **Material and methods:** First hand information on ethno veterinary uses of plants was recorded through interviewing of old and experienced local veterinary doctors of different tribal groups. **Result and discussion:** During the study it was observed that they utilize about 35 plant species belonging to 22 families for treatment of various ailments and diseases of their domestic animals. The recorded uses were compared with published literature and found that uses of 15 plants are new and uses of other plants are found similar but they are used by different tribal groups of different states.

Key words: Ethno veterinary, tribal communities, central India.

1. Introduction

Ethnoveterinary medicine consists of local peoples knowledge pertaining to animal health and production. Livestock raisers and healers throughout the world use traditional veterinary practices to prevent and treat common animal ailments and diseases.

The central Indian region consists mainly with Madhya Pradesh and Chhattisgarh states of India and occupied the core zone of the country. The area is very rich in cultural as well

as biological diversity. The total area of central India (Madhya Pradesh and Chhattisgarh states) is about 4,43,446 sq km. Out of which about 36% area is covered by the forests. The various tribal communities comprise about 24% population of these both states. The dominant tribes are Abujhmaria, Baiga, Bhil, Gond, Kol, Korku, Korwa, Oraon, Sahariya etc. They inhabit in and around the forest areas and mainly dependant on forest resources for fulfillment of their routine requirements such

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as food, medicine, fodder, fibre, hunting and fishing, household and agricultural equipments etc.

Although they mainly depend upon forest resources for their livelihood but they also raise domestic animals such as cows, buffaloes, oxen, goats, sheeps, hen, dogs, pigs etc for milk, agriculture and commercial purposes.

As the modern medicine is either not available or not affordable for the poor tribals therefore, they use traditional veterinary practices to prevent and treat common animal ailments and diseases with the help of locally available plants.

The ethnoveterinary medicine is easily available, cheap and effective, cures many diseases and causes no side effects. Besides, no complicated technology is required for its preparation. The tribal people have been using this traditional system for a very long time. They have acquired this valuable knowledge from experience and trial and error methods. This knowledge has passed down from one generation to next generation by word of mouth.

But it has been observed that the younger generation of the tribal communities neither had the knowledge nor the experience to practices of ethno veterinary medicine effectively. Therefore, it is necessary that before this valuable traditional knowledge is lost forever it must be properly documented from old and experienced tribal medicine men.

2. Material and method

The various districts of central Indian states have been surveyed ethno botanically and firsthand information on ethnoveterinary uses was gathered through interviewing local veterinary doctors. The voucher specimens were also collected for authentication of folk claims. The collected information was further verified by cross checking with other knowledgeable

person. The voucher specimens were preserved in the herbarium of National Botanical Research Institute (LWG), Lucknow.

A scrutiny of literature reveals that dozens of papers have been published on ethno veterinary medicines from different parts of India [1 - 31]. The aforesaid literature reveals that except [28] no attention has been paid on this aspect from central India. Jain [32] compiled the aforesaid papers and published a book entitled *Dictionary of Ethnoveterinary plants of India*. The information provided in this paper is compared with above-mentioned book and new uses are marked with asterisks.

3. Results

The plants used in veterinary medicine are enumerated alphabetically by botanical names, followed by family (in parenthesis), local names of different districts (district name written in parenthesis) and name of tribes are given. At the end of ethnoveterinary uses voucher specimen numbers are mentioned.

1. *Ageratum conyzoides* L. (Asteraceae)

L.n. Kubbi, Khar (Bilaspur), Gangarigera (Baster), Tribes: Baiga, Abujhmarhia, Gond. The whole plant paste is applied on animal shoulder for healing of wounds, two times a day till cure (2143, 3270).

2. *Amorphophallus paeoniifolius* (Dennst.) Nicolson (Araceae)

L.n.: Bhabdi (Jhabua), Jangli Suran, Bhabna Kand (Chhindwara), Tribe: Bhil, Bharia.

*The corn decoction and paste is given when animals become lame and also in severe body pain, two times a day morning and evening for seven days (1968, 5020).

3. *Ampelocissus latifolia* (Roxb.) Planch. (Vitaceae)

L.n: Emlosa, Eamlaua (Tikamgarh, Panna), Tribe: Sahariya, Savar, Gond.

*The root paste is given to cattle as a tonic, half litre daily for 15 days (6305, 6315).

4. *Anisomeles indica* (L.) Kuntze (Lamiaceae)
L.n.: Kuschor (Jhabua), Bonrml (Bilaspur),
Tribe: Bhil, Baiga.
*The leaf decoction is given thrice a day for a week to cattle to reduce body inflammation (3160, 2514).
5. *Annona squamosa* L. (Annonaceae)
L.n.: Sitaphal, Tribe: Gond
The leaf paste is given to animals two times a day to cure cuts (1687).
6. *Arisaema tortuosum* (Wall.) Schott (Araceae)
L.n.: Dhei (Panna), Safed telia kand (Shahdol),
Jhattawan (Betul), Tribe: Sahariya, Gond, Baiga,
Korku.
The tuberous root is crushed along with black pepper and jaggery and given to cattle as tonic, half litre for 3-5 days (3264, 3829, 6327).
7. *Bauhinia racemosa* Lamk. (Caesalpiniaceae)
L.n.: Astu (Sehore, Dewas), Tribe: Gond, Bhil,
Korku, Bhillala
*The root decoction mixed with rice is given to cattle to prevent abortion, two times a day for 3 days (6266, 7128).
8. *Butea monosperma* (Lamk.) Taub. (Fabaceae)
L.n.: Chhiula (Tikamgarh), Chhola (Raigarh,
Seoni), Tesu (Chhindwara).
Tribe: Gond, Sahariya, Korwa, Bharia, Korku,
Oraon, Bhil, Kawar.
* The stem bark decoction is given orally to swellings of cattle, two times a day for 2-3 days (1682, 4713).
9. *Caesalpinia bonduc* (L.) Roxb. (Caesalpiniaceae)
L.n.: Gataran (Bastar), Tribe: Abujmarhia.
*The seed paste is given in evening for two days to kill worms (4599).
10. *Calotropis gigantea* (L.) R. Br. (Asclepiadaceae)
L.n.: Safed Aak (Baster), Tribe: Muria, Halba.
The leaf and root paste are used for healing wounds in morning and evening till cure (2420, 1918).
11. *Careya arborea* Roxb. (Lecythidaceae)
L.n.: Kumbhi, (Jhabua), Kumodi, Kumbhi (Bastar), Tribe: Bhil, Maria, Dorla.
Leaf paste is applied in morning on wounds of cattle (2420, 1918).
12. *Chloroxylon swietenia* DC. (Meliaceae)
L.n.: Bharhi, (Surguja), Tribe: Korwa, Oraon.
* The leaf paste is applied two times a day on leg swellings of animal to reduce (3575).
13. *Cleistanthus collinus* (Roxb.) Benth. ex Hook. f. (Euphorbiaceae)
L.n.: Kama, (Baster), Tribe: Abujmarhia, Gond.
The bark decoction is given for healing wounds in cattle. The paste of the fruits is applied on the vagina of the cattle once a day to cure the wounds (5039, 5053).
14. *Coleus amboinicus* Lour. (Lamiaceae)
L.n.: Konchi, (Mandla), Tribe: Gond, Baiga.
*The root paste is given orally to cattle in acute diarrhoea with bleeding, two times a day till cure (2461, 2337).
15. *Commelina suffruticosa* Blume (Commelinaceae)
L.n.: Nagel gera (Baster), Tribe: Abujmarhia.
The whole plant paste is applied externally in morning and evening to cure wounds in bullocks (2140).
16. *Corchorus capsularis* L. (Tiliaceae)
L.n.: Chaunch Bhaji (Baster), Tribe: Gond.
*The seed paste is mixed with mustard oil and applied on wounds of cattle two times a day for 3 days as wormicide (5035).
17. *Costus speciosus* (Koen.) J. E. Smith (Costaceae)
L.n.: Kandua, (Jhabua), Tribe: Bhil.
The root paste is given orally to cattle once a day for two days to cure fever (1948).

18. *Crinum latifolium* L. (Amaryllidaceae)
L.n.: Barapungania (Jhabua), Tribe: Bhil.
The juice of bulbous root is given orally to animal to cure fever, two times a day for 3 to 5 days (1951).
19. *Crinum pratense* Herb. (Amaryllidaceae)
L.n.: Jalsatawar (Baster), Tribe: Gond, Dorla.
*The paste of rootstock is applied on wounds, two times a day for 3 days (5070).
20. *Echinops echinatus* Roxb. (Asteraceae)
L.n.: Kalthori, (Shivpuri), Tribe: Sahariya.
The root pastes applied on wounds in cattle, two times a day for 3 days (4941).
21. *Elephantopus scaber* L. (Asteraceae)
L.n.: Kirmar, Jangli bhilwa, (Baster) Chilbil (Raigarh), Tribe: Gond, Panika, Oroan, Korwa.
The root paste applied on wounds as wormicide in cattle, morning for three days (3443, 5037).
22. *Emblica officinalis* Gaertn. (Euphorbiaceae)
L.n.: Amla (Chhindwara, Betul), Aonla (Surguja), Tribe: Bharia, Gond, Korku, Oroan, Korwa.
The bark paste is used in healing of wounds in animals, two times till cure (1596).
23. *Euphorbia fusiformis* Buch.- Ham. ex D. Don (Euphorbiaceae)
Khagoni (Jhabua), Tribe: Bhil.
The root paste is given orally to animals to cure dysentery and fever. Two times a day for 3 to 5 days (1953).
24. *Ficus hispida* L.f. (Moraceae)
L.n.: Ottelawa (Betul), Tribe: Gond, Korku.
*The root paste is given in morning for one week in weakness (1642, 3936).
25. *Glossocardia bosvallea* (Lf.) DC. (Astereceae)
L.n.: Pittpara (Betul), Tribe: Gond, Korku.
*The leaf powder is used in 'kutana' disease when animal become lame, two times for one week (3437).
26. *Hyptis suaveolens* (L.) Poit. (Lamiaceae)
L.n.: Madhuban (Durg), Tribe: Gond, Korku.
The leaf juice is applied in eyes of cattle to cure inflammation, 5-7 drops, in morning for 3 days (331).
27. *Indigofera cassioides* Rottl. ex DC. (Fabaceae)
L.n.: Jhinni Patti (Chhindwara), Tribe: Bharia.
*The leaves are burnt and its fumes are used for animals in body ache (1563).
28. *Moringa oleifera* Lamk. (Moringaceae)
L.n.: Sahajan (Seoni), Tribe: Gond.
The stem bark decoction is given to cattle in influenza, morning for 3-5 days (4825).
29. *Phoenix humilis* Royle (Arecaceae)
L.n.: Chhind (Baster), Tribe: Halba, Maria.
* The leaf decoction is used in wounds healing of cattle, morning for 2-3 days (5101).
30. *Pueraria tuberosa* (Roxb. ex Willd.) DC. (Fabaceae)
L.n.: Gajua (Jhabua), Patalkumbra (Baster), Tribe: Bhil, Dorla.
The tubers are given to animals to increase the secretion of milk, morning for one week (1955, 2473).
31. *Schleichera oleosa* (Lour.) Oken (Sapindaceae)
L.n.: Kusum (Raigarh, Chhindwara, Betul), Tribe: Korwa, Bharia, Gond, Korku.
The seed oil is applied on itching and leg swellings of animals, in morning for 3-5 days (4774, 1577).
32. *Soymida febrifuga* (Roxb.) A. Juss. (Meliaceae)
L.n.: Rohan (Raigarh, Dewar), Tribe: Korwa, Korku.
The bark paste mixed with 'mattha' (whey) is given to cattle to arrest loose motions, two times a day 3-5 days (1932).

33. *Tinospora cordifolia* (Willd) Hook. f. & Thoms (Menispermaceae)

L.n. Gorbel (Tikamgarh), Tribe: Gond, Sahariya

*The whole plant is cut into small pieces and given to cattle suffering from syphilis, morning for 3-5 days (565).

34. *Vitex negundo* L. (Verbenaceae)

L.n.: Nirguri (Ratlam), Nirgur (Betul), Tribe: Sahariya, Korku.

The leaf paste is used two times a day in healing of wounds in animals. (3845, 5042).

35. *Zingiber roseum* (Roxb.) Rosce (Zingiberaceae)

L.n.: Jangli ada (Jhabua, Baster), Tribe: Bhil, Dorla.

*The rhizome paste is applied to cure bone fracture in cattle (1967, 5336).

4. Discussion

In the present paper the uses of 35 plants belonging to 22 families are described. The recorded uses were compared with *Dictionary of Ethnoveterinary plants of India* [32] and other published papers. After the comparison of above-mentioned literature uses of 15 plants were found new reports and marked by asterisks.

Other uses of certain plants are found similar but different tribes of different states, which have no any direct communication and relationships, and vary in language, religion, culture and use them. Such as *Ageratum conyzoides* is used in wound by the folk communities of Kumaun Himalayas [33]; *Annona squamosa* leaf is used in cut by the tribes of Andhra Pradesh [31]; *Embllica officinalis* bark used in wounds by the tribals of eastern India [15]; and *Vitex negundo* leaf is used by the tribes of Assam in wound healing [3] etc. The similar uses of plants provide credibility of folk claims and clues for pharmacological screening.

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