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SOME COMMONLY USED WILD ETHNOVETERINARY MEDICINAL PLANTS BY MIGRATORY SHEPHERDS IN CHURDHAR WILDLIFE SANCTUARY OF DISTRICT SIRMAUR IN HIMACHAL PRADESH, INDIA

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Abstract

This study deals with the ethnoveterinary medicines used by tribal migratory shepherds in Churdhar Wildlife Sanctuary of district Sirmaur in Himachal Pradesh, India. The migratory shepherds are very close to nature as they spend most of their time in forests with their livestock. Healing and curing from different diseases depends on traditional healthcare practices based on local medicinal plants. The current study was aimed to explore the ethnoveterinary medicines used by migratory shepherds in Churdhar Wildlife Sanctuary of district Sirmaur in Himachal Pradesh, India. The information on various ethnoveterinary medicines used by migratory shepherds was collected through personal field visits, interview methods and by using a pretested questionnaire. It was observed that in study area 26 plants were commonly used as ethnoveterinary medicines by migratory shepherds. The results of this study show that shepherds in tribal areas are highly dependent on ethnoveterinary medicines, which evolved over generations of experience and practices for animal healthcare. There is urgent need to document this vast traditional knowledge and experience of migratory shepherds concerning the use of ethnobotanical remedies for animal' shealth.

Kew words: Ethnoveterinary medicines, Sanctuary and Shepherds.

Introduction

The different culture of India is rich sources of traditional remedies, a lot of which are plant origin. Traditional knowledge is a treasure of India, shows a significant role in rural Inhabitants (Sharma and Rana, 2016; Radha *et al*., 2019a). Traditional remedies are used by our ancestors and transmitted orally from one generation to another (Kumar and Sharma, 2014; Radha and Puri, 2019b). It provides systematic knowledge about culture, tradition and other parts in social life expectancy (Singh and Rawat, 2011; Radha and Puri, 2019c). Western Himalaya is a reservoir of several natural wealth, of which flora aspect is chief. Today about 65% of Indian population depend on the traditional system of medicine (Randhava, 2013; Radha and Puri, 2019d).

Ethnoveterinary remedy is often used for pick up the check animal as well as human illnesses by different societies around the world. According to the WHO, at least 80% of people depend on indigenous practices for the treatment of a number of diseases affecting both animals and human beings (WHO, 2002). Ethnoveterinary remedy makes available valuable alternatives to and complements western-style veterinary treatment. Ethnoveterinary medicines are easy to get and easy to get ready and manage, at little or no cost to the agriculturalist (Jabbar *et al.,* 2005). In several poor rural parts, ethnoveterinary treatment can show a significant role in animal production and livelihood improvement (Tamboura *et al.,* 2000; Pandey *et al.,* 2016; Radha and Puri, 2019e).

In recent years, attention in ethnoveterinary medicines has greater than before considerably as these are believed to be less toxic than the synthetics drugs and easy to obtainable without any cost from surroundings. Therefore, the present study is an attempt to document the commonly used ethnoveterinary medicines by tribal migratory shepherds in Churdhar Wildlife Sanctuary of district Sirmaur, in Himachal Pradesh, India. The ethnoveterinary information of this study area is expected to provide new dimensions forever expanding pharmaceutical industry.

Material and Methods

Study area

The present study was carried out in Churdhar Wildlife Sanctuary of district Sirmaur in Himachal Pradesh, India. The Churdhar Wildlife Sanctuary supports huge numbers of wild edibles, medicinal, rare and endangered, native and endemic species provides an ultimate habitat to wild animals. The local people of the study area are generally dependent on the rich biodiversity of the Sanctuary.

Data collection

For the documentation of wild ethnoveterinary medicinal plants used by migratory shepherds in Churdhar Wildlife Sanctuary of district Sirmaur Himachal Pradesh, India were surveyed. The information on wild ethnoveterinary medicinal plants used by migratory shepherds of this study areas was

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collected by using pretested questionnaire, interviews, participatory observation and through discussion method. Only those wild ethnoveterinary medicinal plants were documented which were most frequently used by migratory shepherds. The specimens of wild ethnoveterinary medicinal plants being used by the migratory shepherds of this Sanctuary area were collected, dried and mounted on herbarium sheets, with labelled information describing from when and where they were collected. Vouchers of plant specimens were places in the herbarium of Shoolini University, Solan, Himachal Pradesh, India. Plants were identified with the help of experts from Botanical Survey of India, Dehradun, Uttarakhand, India.

Results and Discussion

The present study documents the most commonly used ethnoveterinary medicinal plants by migratory shepherds in Churdhar Wildlife Sanctuary of district Sirmaur in Himachal Pradesh, India. Extensive field visits were carried out to complete this study. Ethnoveterinary medicinal plants used by migratory shepherds were documented during field visits by interacting with the shepherds. Interactions revealed that the shepherdspossess good traditional knowledge about uses of ethnoveterinary medicinal plants and they were in knowing how to use them. It was found that some of these medicinal plant species belongs to same or different families. A total of 26 commonly used ethnoveterinary medicinal plants were studied in Churdhar Wildlife Sanctuary of district Sirmaur in Himachal Pradesh, India. Among these plant species, the maximum plants were used for cough, cold, skin problems, wounds, bone fracture and sprain etc. Plants used by migratory shepherds were tabulated in alphabetical order, botanical name, family, habit, parts used and disease treated (Table 1).

In present study it was found that some commonly used plants were *Adhatoda vasica* used for Food poisoning, Constipation, Cold and Indigestion; *Berberis aristata* is used for Cuts, Wounds, Bone fracture, Cough, Hoof diseases, Sprain; *Berberis vulgaris* is used for Cuts, Wounds, Bone fracture, Cough, Hoof diseases and Sprain; *Bergenia ciliata* is used for Cough, Food poisoning, Dysentery, Diarrhoea, Lactation and Skin diseases; *Cannabis sativa* is used for Body pain; *Cynodon dactylon* is used for Food poisoning, Lactation, Injury, Constipation; *Dioscorea deltoidea* is used for Cough, Cold, Fever, Asthma, Body pain, Indigestion, Wound healing, Skin infection, Foot and Mouth diseases, Insect repellent and Ear diseases; *Epipactis royleana* is used for External parasite; *Eupatorium adenophora* is used for Insect repellent; *Gentiana kurroo* is used for Cough, Cold, Fever, Blood purifier, Strength, Body pain, Skin allergy and Constipation; *Picrorhiza kurrooa* is used for Cough, Cold, Fever, Strength, Body pain, Skin allergy and Constipation. *Urtica dioica* is used for Fertility and Bone fracture*; Vitex negundo* is used for Cough, Skin infection, Sprain, Mouth and Foot diseases and *Zanthoxylum armatum* is used for Mouth infection and Tooth pain. In all 23 commonly used plants were documented for ethnomedicinal purposes belongs to Acanthaceae, Amaranthaceae, Anacardiaceae, Asteraceae, Berberidaceae, Cannabaceae, Commelinaceae, Dioscoreaceae, Fagaceae, Gentianaceae, Hypericaceae, Lamiaceae, Meliaceae, Moraceae, Morchellaceae, Orchidaceae, Plantaginaceae, Poaceae, Rosaceae, Rosaceae, Rutaceae, Saxifragaceae, Solanaceae and Urticaceae families etc.

The medicinal plants are generally collected from wild habitat of Sanctuary area. The documented wild ethnoveterinary medicinal plants were used in the treatment of various ailments of animals such as Cough, Cold, Fever, Strength, Body pain, Skin allergy and Constipation etc. Usage of whole plants, roots, fruits, and seeds causes loss of species from the area. Ethnoveterinary medicinal plant species have been playing a vital role in the development of human culture. Medicinal plants are look upon as rich wealth of traditional medicines and from these plant species a lot of the modern medicines are produced. All over the World secondary metabolites produced by the plants are usually responsible for the biological characteristics of plant species used.

Conclusion

The collected information indicates that these study areas is rich in wild ethnomedicinal plants, and the results contribute to spread their uses. The social importance of the wild ethnomedicinal plants in the community is quite important for the public health, animal health and the conservation of traditional knowledge and good management is required.

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Table: 1 Commonly used ethnoveterinary medicinal plants in study area.

Sr. No.	Botanical name	Family	Habit	Parts used	Diseases treated
1	*Adhatoda vasica*	Acanthaceae	Herb	Leaves	Food poisoning, Constipation, Cold, Indigestion
2	*Berberis aristata*	Berberidaceae	Shrub	Leaves, Roots	Cuts, Wounds, Bone fracture, Cough, Hoof diseases, Sprain
3	*Berberis vulgaris*	Berberidaceae	Shrub	Leaves, Roots	Cuts, Wounds, Bone fracture, Cough, Hoof diseases, Sprain
4	*Bergenia ciliata*	Saxifragaceae	Herb	Whole part	Cough, Food poisoning, Dysentery, Diarrhoea, Lactation, Skin diseases
5	*Cannabis sativa*	Cannabaceae	Herb	Leaves, Seeds	Body pain
6	*Chenopodium album*	Amaranthaceae	Herb	Leaves	Indigestion
7	*Commelina benghalensis*	Commelinaceae	Herb	Whole part	Highly nutritious for health, Tonic
8	*Cynodon dactylon*	Poaceae	Grass	Leaves	Food poisoning, Lactation, Injury, Constipation
9	*Dioscorea deltoidea*	Dioscoreaceae	Climber	Leaves, Tubers	Cough, Cold, Fever, Asthma, Body pain, Indigestion, Wound healing, Skin infection, Foot and Mouth diseases, Insect repellent, Ear diseases
10	*Epipactis royleana*	Orchidaceae	Orchids	Whole part	External parasite
11	*Eupatorium adenophora*	Asteraceae	Herb	Leaves	Insect repellent
12	*Ficus auriculata*	Moraceae	Tree	Fruits, Leaves	Tonic, Indigestion
13	*Ficus palmata*	Moraceae	Tree	Fruits, Leaves	Tonic, Indigestion
14	*Gentiana kurroo*	Gentianaceae	Herb	Whole part	Cough, Cold, Fever, Blood purifier, Strength, Body pain, Skin allergy, Constipation
15	*Hypericum oblongifolium*	Hypericaceae	Herb	Leaves	Tonic, Wound healing, Skin allergy, Horns diseases. Mouth blisters
16	*Morchella esculenta*	Morchellaceae	Fungi	Whole part	Tonic, Strength, Increase fertility
17	*Picrorhiza kurrooa*	Plantaginaceae	Herb	Whole part	Cough, Cold, Fever, Strength, Body pain, Skin allergy, Constipation
18	*Prunus cerasoides*	Rosaceae	Tree	Fruits, Leaves	Tonic, Indigestion
19	*Quercus leucotrichophora*	Fagaceae	Tree	Leaves, Fruits	Highly nutritious, Indigestion
20	*Rhus parviflora*	Anacardiaceae	Shrub	Leaves	Lactation, Internal injury
21	*Rubus ellipticus*	Rosaceae	Shrub	Fruits, Leaves	Tonic, Indigestion
22	*Solanum surratense*	Solanaceae	Shrub	Leaves, Roots	Eye diseases, Burns
23	*Toona ciliata*	Meliaceae	Tree	Leaves	Lactation
24	*Urtica dioica*	Urticaceae	Herb	Leaves	Regulate fertility, Bone fracture
25	*Vitex negundo*	Lamiaceae	Shrub	Leaves, Bark, Flowers	Cough, Skin infection, Sprain, Mouth and Foot diseases
26	*Zanthoxylum armatum*	Rutaceae	Shrub	Leaves, Seeds, Bark	Mouth infection, Tooth pain