

Ethno veterinary medicine among Malayali tribes in Bodamalai hills Southern Eastern Ghats of Namakkal District, Tamil Nadu, India

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ABSTRACT

The present studies describe the ethno veterinary medicines used by the Malayali tribes in Bodamalai hills, Namakkal District Tamil Nadu. The information was collected from the Malayali traditional healers through the interviews and observations during field visit (October 2013 – February 2014). In this paper 25 plants species belonging to 23 genera and 20 families are used by tribal peoples in the treatment of Allergic dermatitis, Anorexia, Deworming Diarrhoea, Dysentery, Cut injury, Ephemeral fever, Eczema, Fever, Haemarogic, Imapptie, Inflammatory, Liquefaction of Cor-vital mucus, Maggot wound, Mastitis and Semi nation.

Key words: Ethno veterinary, Medicinal plants, Malayali tribal's, Bodamalai hills, Southern Eastern Ghats.

INTRODUCTION

According to the World health organization, at least 80% of people in developing countries depend largely on indigenous practices for the control and treatment of various affecting both human beings and various diseases affecting both human beings and their animals.

Plants have developed a large number of secondary metabolites, which provide a chemical defense mechanism to with stand biotic and a biotic stress. The same chemicals, in animals are utilized in curing diseases or preventing from diseases. The term ethno medicine (when implied to human treatment) and ethno veterinary medicine (in the context of animal treatment). The term "Ethno veterinary" was coined by Mc Corkle in 1986. in India, ethnoveterinary practices were in vogue. Since time immemorial, more than 80 percent of total population residing in rural area depends for their healthcare needs on plants. (Lakshmi Narayana and Narasimha Rao, 2013).

Ethno veterinary medicine was practiced as early as 1800 B.C at the time of King Hamurabi of Babylon who formulated laws on veterinary fees and charge for treating cattle and donkeys. (Selvaraju *et al.*, 2001).

Ethno veterinary medicine (EVM) is a system that is based on Folk beliefs, traditional knowledge, skills, methods and practices used for curing diseases and maintaining health of animals. Traditional veterinary medicine knowledge like all other traditional knowledge system is handed down orally from generation to generation and it may disappear because of rapid socioeconomic, environment, technological changes and as a result of cultural heritage under the guise of civilization. (Yadav Manoj *et al.*, 2012). In the present investigation an attempt has been made together the data as methodology adoptate by the tribal people to control, the primary healthcare of domestic animal.

MATERIALS AND METHODS

Study area

Bodamalai hills is situated in Southern Eastern Ghats comes under Rasipuram taluk, Namakkal district. Bodamalai is a 1,200 meters (3,937.0 ft) mountain in the Eastern Ghats of South India. It lies between 11°14'46" - 12°53'30" North latitude and between 77°32'52" - 78°53'05" East longitude and it has an elevation of 1,200 meters above sea level. Bodamalai an area with a humid subtropical climate. Only Malayali tribal's are living in Bodamalai hills.

Data collection

The ethno veterinary survey was conducted in the Malayali tribal area of Bodamalai hills, Namakkal (District) Tamil Nadu during October 2013 to January 2014. Meetings with the traditional practitioners and tribal farmers were conducted at the onset to explain the purpose of the research. Oral interviews were conducted with tribes. 6 traditional healers between the age of 35-83 interviewed were conducted individually. The discussion were detailed information on plants used for ethno veterinary practices and was recorded including local name, indications, preparation, administration and dosage (Jain, 1989). The plant specimens were collected and identified by referring to standard Flora of the Presidency of Madras (Gamble, 1935) and The Flora of Tamil Nadu, Carnatic (Mathew, 1983) Tiruchirappalli, India. The voucher species were deposited in the Department of Botany, Vivekanaktha College of Arts and Science for Women (Autonomous) Elayampalayam, Tiruchengode.

RESULTS AND DISCUSSION

The present paper documents the total of 25 ethno veterinary medicinal plant species of different habit herbs (14 species), trees (5 species), climber (5 species) and shrubs (1 species). The information regarding these plants were obtained and successful in identifying plant species belong to 20 families which plants belonging to Liliaceae (3), Brassicaceae (2), Cucurbitaceae (2), Piperaceae (2), Solanaceae (2), Acanthaceae (1), Apiaceae (1), Aristolochiaceae (1), Caesalpiniaceae (1), Fabaceae (1), Lamiaceae (1), Meliaceae (1), Mimosaceae (1), Myrtaceae (1), Moraceae (1), Musaceae (1), Myrtaceae (1), Rutaceae (1), Pedaliaceae (1), Zizgiberaceae (1). The whole plant or different plant parts such as leaves, rhizome, tuber, roots, stem, bulb, latex, flower, fruits and seeds in treatment by different ailments by traditional healers and agriculture farmers. The herbal preparations are in the form of juice, decoction, pasts and pills are tabulated (Table-1). The common diseases treated among domestic animals, were Allergic dermatitis & Eczema, Anorexia, Deworming, Diarrhea, Dysentery, Cut injury, Ephemeral fever, Fever, Haemorrhagic and Mastitis, Immaptie, Inflammatory, Liquefaction of Cervical mucus, Maggot wound, Semination.

It was also found that all the elderly persons both man and women in the village had traditional knowledge and deep understanding about the Ethno veterinary medicinal plants as they often used them for curing their common domestic animals.

List of Ethno veterinary plants used by Malayali tribes in Bodamalai Hills

S.No	Ailments	Binomial name and Family	Local name (Tamil)	Part uses	Mode of preparation administration and dosage
1	Allergic dermatitis	<i>Thespesia populnea</i> , (Linn.) Sc. ex correa. Malvaceae	Puvarasu	Flowers	The flower crushed and made into extract is apply directly, to the goat and cattle, on the external surface 1 time in a day for 2 days.
	Allergic dermatitis and Eczema	<i>Aristolochia indica</i> , Linn., Aristolochiaceae	Perumarundhu kudi	leaves	Leaves is crush and apply on the infected position, 2 times in a day till up to cure.
		<i>Corallocarpus epigaeus</i> Benth ex. Hook. f. Cucurbitaceae	Aakaasagarudm	Rhizomes	Rhizome is cut into pice and given orally in the empty stomach
2	Anorexia	<i>Capsicum annuum</i> , L. Solanaceae	Pachai milagai	Fruits	<i>Tamarindus indica</i> fruit, <i>Capsicum annuum</i> are grind and made into pills, which is tied with green straw of the <i>Panicum sumatrense</i> is given to the cattle to increase the intake of food ie Anorexia. 2 time in a day for 2 days.
		<i>Tamarindus indica</i> , Linn. Caesalpiniaceae	Puli	seeds	
3	Deworming	<i>Allium sativum</i> , Linn. Liliaceae	Vellaipodu	Bulb	100 gm of <i>Leuca aspera</i> leaves, 100gm of <i>Musa paradisiaceae</i> leaves, 50 gm of <i>Momordica charantia</i> fruit, are grind along with 5 gm of <i>Cuminum</i> seed, 10 gm of <i>Brassica</i> seed, 5 gm of <i>Piper nigrum</i> seeds, 5 gm of <i>Tamarindus indica</i> fruit, 5 gm of bulb are made into paste with the help of 50 ml of neem oil and palm
		<i>Azadirachta indica</i> , A. Juss. Meliaceae	Veppamaram	seeds	
		<i>Brassica juncea</i> , Hook. f. & Mustard	Mustard	seeds	

		Thomas. Brassicaceae			sugar are given to the cattle in the for of pills, 1 time in a days at empty stomach for 2 days.
		<i>Cuminum cyminum</i> , Linn. Apiaceae	Seagam	seeds	
		<i>Leucas aspera</i> , Spreng. Lamiaceae	Thumbai	leaves	
		<i>Musa paradisiaceae</i> , Linn. Musaceae	valaimaram	leaves	
		<i>Momordica charantia</i> , Descourt. Cucurbitaceae	Pavaikai	fruits	
		<i>Piper nigrum</i> , Linn. Piperaceae	Melagu	Fruits	
		<i>Tamarindus indica</i> , Linn. Caesalpiniaceae	Puli	Fruits	
4	Diarrhoea	<i>Datura metel</i> , Linn. Solanaceae	oomatha	Leaves	5-15 number of leaves is grind with water is made into pills is given to goat for diarrhea. 2 times in a days for 2 days
5	Dysentery	<i>Psidium guajava</i> , Linn. Myrtaceae	Koyya	Young leaves	Fresh young leaves of the <i>Psidium guajava</i> is given to cow for the Dysentery, 2 times in a day for 2 days.
6	Ephemeral fever & Viral fever	<i>Raphanus sativus</i> , (L.) Brassicaceae	Mullangi	roots	The flesh tuberous root and country chicken egg are grind and made into pills given to the cow and buffalo for Ephemeral fever and viral fever. 2 times in a days for 3 days.
7	Fever	<i>Andrographis paniculata</i> , Nees. Acanthaceae	Nelaveambu	leaves	10 number of <i>Andrographis paniculata</i> . Leaves are grind with the 10 gm seeds of <i>Cuminum cyminum</i> , 5 gm seeds of <i>Piper nigrum</i> , 5 number of bulbs, 5 leaves of <i>Piper betel</i> , are made into paste and it is apply on the tongue of cow & goat for fever, 2 time in a day for 2 days.
		<i>Allium cepa</i> , Linn. Liliaceae	Vengayam	bulbs	
		<i>Cuminum cyminum</i> , Linn. Apiaceae	Seagam	Seeds	
		<i>Piper betel</i> , Linn. Piperaceae	Vettilai	Leaves	
		<i>Piper nigrum</i> , Linn. Piperaceae	Melagu	Seeds	
8	Haemorrhagic and Mastitis	<i>Mimosa pudica</i> , Linn. Mimosaceae	Tottalcurunki	leaves	One hand full of fresh leaves of <i>Mimosa pudica</i> is given orally to cow and buffalo for haemorrhagic and mastitis
		<i>Aloe vera</i> , (L.) Burm.f. Liliaceae <i>Curcuma longa</i> , Linn. Zingiberaceae	Kathalai Manjal	pulps rhizomes	50 gm of <i>Aloe vera</i> pulp and 100 gm of <i>Curcuma longa</i> rhizome are grind with the help of lime juice made into pills given to the goat and cow for mastitis 1 time in a day for 2 days.
9	Imapptie	<i>Sesamum indicum</i> , Linn. Pedaliaceae	Ellu	leaves	fresh young leaves is given to the goat 1 time in a day for 3 days.
		<i>Abrus precatorius</i> , Linn. Fabaceae	Kuntumami	leaves	10 number of leaves are grind with help of few drops of water, made into pills given to the cow for 2 times in a day.
10	Inflammatory	<i>Aloe vera</i> , (L.) Burm.f. Liliaceae	Kathalai	pulps	50gm of pulp is grind with 1 table spoon of turmeric powder along with a pinch of calcium carbonate made into paste is apply externally to the inflammatory condition 2 times in a day for 2 days.
11	Liquification of cor-vital mucus	<i>Mimosa pudica</i> , Linn. Mimosaceae	Tottalcurunki	leaves	Leaves is made into paste and it apply as paste on the vaginae area mostly in buffalo than cow, 1 time in a day for more than 3 days.
12	Maggot wound.	<i>Azadirachta indica</i> , A.Juss. Meliaceae	Veppamaram	Seeds	<i>Azadirachta indica</i> oil is apply externally to the cow and goat in foot heal for Maggot wound ie. Wound, in some case worm is produce. 1 time in a day at the empty stomach for 2 days.
13	Semi nation	<i>Azadirachta indica</i> , A.Juss. Meliaceae	Veppamaram	Seeds	100ml of neem oil is given orally to the cow infertility for the natural Semination after crossing. 1 time in a day for 2 days.
14	Cut injure	<i>Ficus glomerata</i> , Roxb. Moraceae	Athimaram	latex	5 to 10 drops of latex, in white cloth and it is tied to the goat where it has the cut injure 1 time in a day

CONCLUSION

Documentation of this knowledge is valuable for the communities and their future generational knowledge in treating domestic animals. Locally available and easily accessible ethno veterinary medicinal plants provide a cheaper treatment as compared to western drugs. The only limitation is the seasonal availability of certain plants, for which tribal's have acquired different ways to preserve them for off-season uses. The low cost and almost no side effects of these traditional preparations with medicinal plants make them adaptable by the local community.

The present communication deals with 25 plants from 20 families having 14 different ethno-veterinary uses. These records indicate the ethno-veterinary wealth of Bodamalai hills.

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