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Ethno Medicinal Plants Used In Veterinary Practices Of Konda Reddies In Papi Hills, West Godavari Dist, Andhra Pradesh: India

*Corresponding Author: P.Prasanna Kumari
P. Prasanna Kumari[1], Dr.K. Usha rani[2], Dr.B.Padmaja[3],
Department of Botany, DNR College, Bhimavaram, A.P. India

Abstract:
The present study enumerated a total of 21 Ethnoveterinary Medicinal plant species used by Konda reddies of papi hills, Polvaram Mandal, West Godavari district in Andhra Pradesh, India. This study gains prominance by the fact that such studies were not reported earlier from Polavaram Mandalam. 10 Kondreddy settlements constitute the present study area and information was gathered from Konda Reddy Vejjus (medicinal practioners) animal rarers and elderly people in the age group of 60-70 years. These 21 plant species belong to 17 families and are used for the remedy of 19 livestock diseases. The findings of present study tally with the previous published reports in that same plant species were used in the treatment of other veterinary ailments of livestock. The medicinal use of these 21 plant species were used in convecture with their similar utility reported earlier led to believe that the Phytochemical screening of these plants would be result in valuable active compounds of great veterinary significance.

Keywords: Ethnobotanics, Ethanoveterinary medicinal plants, Konda reddies.

Background

The use of plants as source of medicine has been developed into a tradition and being practical since ancient times. The plant has been used for the prevention and treatment of several health ailments of man and his domestic animals. Still today the tribal communities practice the traditional medicine because they believe that the ancient medicinal system is safe with less side effects. For the health wellbeing nearly 80% of people along with developing countries

depend on herbal medicine. In India bufellowes, oxes etc animals help in agriculture and support Indias economy.Livestock in India contribute main farm power source, transport in villages, organic manure, milk, meat and fuel (Verma 2011).

The animals form source of income to villagers and they need to be protected from various diseases.The ancient people knowledge about the diseases of livestock is the best among the developing countries. So this knowledge of tribal vejjus must be utilized to address various diseases of livestock. India being one of the mega biodiversity centres among 12 centres of the world it provide great potential studies in the field of veterinary because of its richness in flora. In this study information collected from practitioners of Konda reddies in Polavaram mandal, west Godavari District, Andhra Pradesh, India about ethnoveterinary plants.

Study Area

The aim of the present study is to collect ethnobotanical information from Konda reddi tribe residing in West Godavari district, A.P(India).The present study has been confined to ten out of 21 tribal villages/ hamlets (thandas) in Polavaram mandal viz., Chegondapalle, singanapalle, Kondrukota, Thutugunta, Sivagiri, Tekuru, Sirivaka, Koruturu, Cheduru and Gaddapalle of West Godavari district in AP state. West Godavari district is one of the 13 districts of Andhra Pradesh with an area of 7780 Sq.kms and 3.8 million population. The district is located between northern latitude of $16^{o}15^{1}$and$170^{o}30^{1}$and between the eastern longitudes of $80^{0}50^{1}$and $81^{0}55^{1}$. It is bound by Khammam district on the north, Krishna district and Bay of Bengal on the south, river Godavari on the east and Krishna district on the west (Fig.1). The Government of India based on the criteria such as area of ethnic population with distinct culture, geographical isolation and shyness of contact with the community at large and social and economic back wardness declared the agency area. The agency area is alsocalled as Scheduled area. Out of the 46 mandals of West Godavari district, Polavaram is one with 23 villages, located in Scheduled area and also marked as ST (Scheduled Tribe) electoral constituency. The ethno medicinal information has been collected from 10 out of 21 inhabited villages of the Polavaram mandal.These villages are mainly inhabited by Konda reddis and Koyas only.

Methodology

A Survey was carried in the study area during August 2016 to January 2017 to enlist the utilization of local medicinal plants for the diseases of domestic animals. The informants are experienced and aged tribals in the age group of 60-70 years from the tribal medical practitioners with the knowledge of ethnoveterinary medicines. Frequent group discussions and interactions with the locals were made easy and to have their co- operation in eliciting the valuable information on plants of their areas. The information is about the local name of the plant, plant parts used for curing livestock diseases, preparation of medicine and mode of administration etc. The pictures of the plants were taken with a camera. The field plant specimens with the ethnoveterinary importance were collected and herbariums prepared, kept in the department of Botany; DNR College, Bhimavaram. The botanical names of the medicinal plants collected were authentically identified along with their family name with the help of key provided in the different floras including Bentham and Hooker. The final test of ethnoveterinary plants along with their vernacular name, plant part used for the treatment of disease are provided in a tabular form in TABLE-1, plant parts used and their percentages are provided in Table-2 and represented in Pi-diagram.

Results &Discussions

The ethnoveterinary practices reported from India were reviewed by Jain (2016). There are a few research studies on tribal ethnoveterinary practices from different district of Andhra Pradesh. Similarly such studies were also reported from some districts of Telangana state that were prior to June 2014 in erstwhile A.P. State (Reddy et al 1998, Sudhakar Reddy and Raju 2000, Murthy et al 2007).

Raja Reddy and Sudar Shanam (1987) and Sudarshanam et al (1995) reported ethanoveterinary practice from Chittoor and Rayalaseema area of Andhra Pradesh. Goud and Pullaiah (1996); Reddy et al (1997) and Reddy and Raju (1999) from Kurnool; Cuddapa and Anantapur districts of A.P. State respectively were reported.

The ethnoveterinary practices in Viziayanagaram district; Eastern Ghats; Srikakulam district and East Godavari were also reported

by different research investigators (Misra and Anil Kumar 2004; Lakshmi and Lakshmi Narayana2005;Lakshmi Narayana andNarasimhaRao2013,Murthhy and NarasimhaRao2012;Suneetha etal 2012).

The study revealed the use of 21 plant species by Kondareddies tribe to treat more than 19 ailments of livestock. The details of different ailments of livestock and plant species useful in the treatment are provided in the Table-

1. The 21 plant species belong to 17 families. The families such as Euphorbiaceae, Annonaceae, Menispermaceae and Solanaceae were represented by2 species, followed by Acanthaceae,Meliaceae,Vitaceae, Caesalpinaceae, Moraceae, Asclepiadaceae, Aristolochiaceae, Apocyanaceae, Musaceae, Plumbaginaceae, Malvaceae, Smilxaceae and Loganiaceae families were represented by one species each.

Based on the nature of plant parts used in the treatment leaves were used predominantly 48.09%; followed by whole plant 14.28% and bark 11.28%, fruit 4.85%. The other plant parts such as Latex, roots and seeds were found 4.76% usage in the veterinary treatments. The plant photographs of a few medicinal plants of present study along with some tribal informants were presented.

The plants of present study were observed to be used to treat foot and mouth diseases, skin diseases, cure cuts and wounds, sores etc. Bone fractures, Epilepsy, Eye infections, Veginal infections etc.,

Table-2 presents an additional Ethnoveterinary importance of the same plant Species reported by earlier researchers from other districts of A.P., India. According to present study and previous studies Azadiracta Indica is very useful in the treatment of Ectoparasites, worms in the stomach, cuts and wounds. Cassia fistula another plant useful to cure ethnoveterinary problems such as fevers, indigestion, snake bite, cold and eye infections. Plumbago zeylanica isalsoan important plant curering worm. Aristolochia indica is an important plant useful in expelling worms and snake bite.

Both in the present study and previous studies show similarity in curing the veterinary diseases. This shows that these ethnoveterinary plants posses active principle (or) active compounds, responsible for

therapy. In the resent study and previous research reports Annona reticulata the treat wounds Strychnos nuxvomica to cure black quarter disease and dysentry; Tinospora Cardifolia to treat foot and mouth diseases (Table – 3&4) utility percentage of the plant parts plotted in Histogram.

Conclusion

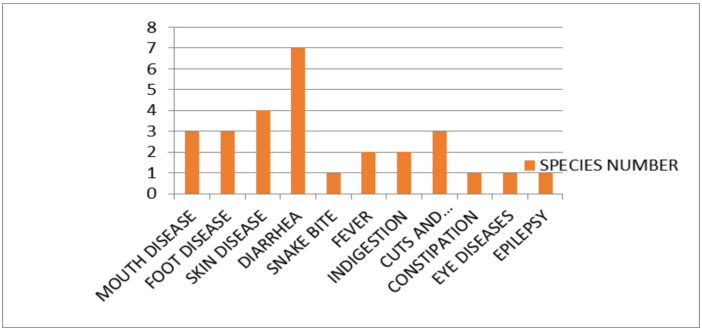
The traditional medicinal system is cheap; without or few side effects. They were accepted through many generations. Hence this knowledge is a potential source to discover new drugs and compounds useful in the treatment of various veterinary diseases. The results of the present study were also reported from other districts of Andhra Pradesh which were verified and cross checked with the present study proved ethno veterinary property of the plant species. The ethnoveterinary practices of different tribes and in different districts of A.P. and India conform to the above statement. The screening of these medicinal herbs for new bioactive compounds and a study of their efficacy through pre clinical and chemical tests however becomes a very useful ethnomedical research.

	Botanical Name of plant	Ethno medicinal uses	Ethno medicinal uses of the plants reported by Previous studies
1.	Acalypha indica	Leaf paste is applied to Control skin diseases.	1) Selvaraju eta l (2011) Leaf paste and salt is used in the treatment of wounds.
2.	Andrographis Paniculata (Burm.f.)Wall.	Whole plant is used in the treatment of foot and mouth disease and also to kill warms in stomach	1) Reddy and Sudarsanam (1987): Whole plant crushed and mixed with salt is given for the treatment of foot and mouth disease. 2) Selva raju etal(2011) 2) Whole plant decoction control fevers.
3.	Annona reticulate L.	Leaf is used to treat wounds.	1) Murthy and Narasimhama Rao(2012): 1) Leaf paste with mustard oil is given to cure wounds.
4.	Azadirachta indica A. Juss	Leaves and seed used to treat foot swelling and to control warms in stomach.	1) Reddy and Sudarsanam (1987): Stem bark decoction with Aloevera and leaves of pergularia daemia cures fever. Leaf paste is used to control ectoparasites. 2) Selvaraju etal(2011): Seed oil is useful to cure wounds. 3) Murthy and Narasimha Rao(2012): Leaf powder is used to control Trypanosomiasis. 4) RajkumarVerma(2014): Bark of Azadirachta indica and Acacia nilotica is ground and applied to treat cuts and wounds.
5.	Cassia fistula L.Syn	Leaves paste cures fever and indigestion	1) Reddy and Sudarsanam (1987): Leaf juice and curd is used to control dysentery.Powder made with seeds of the plant along with cumin seed and Aristolochia indica root is used as antidote for snake bite. 2) Selvaraju etal(2011): Stem bark with garlic and pepper is given to treat fevers. 3) Murthy and Narasimha Rao

6.	Cocculus hirsutus	Leaf paste cures skin diseases	1) Reddy and Sudarsanam(1987): Leaf paste with poppy seeds and methi cures urinary disorders. 2) Murthy etal(2007): 1) Leaf paste +sugar controls blood motions.
7.	Cissus quadrangularis	Whole plant is used to treat external wounds	1) Murthy etal(2007): Asthama is treated with stem paste mixed with chilli powder. 2) Selvaraju etal(2011): Decoction of leaves + pepper + garlic is used to treate phemeral fevers. 3) Reddy and Sudarsanam(1987): 1) Paste made with fresh stem + coconut oil + Mimosapudica leaves is effective in promoting fertility.
8.	Ficus religiosa L.	Leaf is used to cure foot and mouth disease	1) Reddy and Sudarsanam(1987): Stem bark decoction controls cough. 2) Murthy and Narasimha Rao(2012): 1) Paste made with bark and wheat flour is useful to treat small-pox.
.	Ficus religiosa L.	Leaf is used to cure foot and mouth disease	3) Reddy and Sudarsanam (1987): Stem bark decoction controls cough. 4) Murthy and Narasimha Rao(2012): Paste made with bark and wheat flour is useful to treat small-pox.
9.	Phyllanthus nirurii L.	Whole plant is used in the	**I.** urthy and Narasimha Rao(2012):

Table-4 Plant Species Used To Treat Different Animal Diseases

S.NO.	DISEASE/ USE	SPECIES NUMBER
1	MOUTH DISEASE	03
2	FOOT DISEASE	03
3	SKIN DISEASE	04
4	DIARRHEA	07
5	SNAKE BITE	01
6	FEVER	02
7	INDIGESTION	02
8	CUTS AND WOUNDS	03
9	CONSTIPATION	01
10	EYE DISEASES	01
11	EPILEPSY	01



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