

Ethnobotanics Used In Veterinary Practices By Konda Reddies Of Polavaram Mandal, West Godavari Dist, Andhra Pradesh : : India.

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Abstract : The present study enumerated a total of 21 Ethnoveterinary Medicinal plant species used by Konda reddyies of Polavaram Mandal, West Godavari district in Andhra Pradesh, India. This study gains prominence by the fact that such studies were not reported earlier from Polavaram Mandal. 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 reddyies.

Date of Submission: 07-05-2018

Date of acceptance: 22-05-2018

I. Background

The use of plants as source of medicine has been developed into a tradition and being practical since ancient times. The plants has been used for the prevention and treatment of several health ailments of man and his domestic animals. Still today the tribal communities practices 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 reddyies in Polavaram mandal, West Godavari District, Andhra Pradesh, India about ethnoveterinary plants.

II. Study Area

The aim of the present study is to collect ethnobotanical information from Konda reddy 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° 15' and 17° 30' and between the eastern longitudes of 80° 50' and 81° 55'. 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 backwardness declared the agency area. The agency area is also called 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 ethnomedicinal information has been collected from 10 out of 21 inhabited villages of the Polavaram mandal. These villages are mainly inhabited by Konda reddyis and Koyas only.

III. 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.

IV. Result And 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 Sudarshanam (1987) and Sudarshanam et al (1995) reported ethnoveterinary 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 Vizianagaram district; Eastern Ghats; Srikakulam district and East Godavari were also reported by different research investigators (Misra and Anil Kumar 2004; Lakshmi and Lakshmi Narayana 2005; Lakshmi Narayana and Narasimha Rao 2013, Murthy and Narasimha Rao 2012; Suneetha et al 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 by 2 species, followed by Acanthaceae, Meliaceae, Vitaceae, Caesalpiniaceae, Moraceae, Asclepiadaceae, Aristolochiaceae, Apocyanaceae, Musaceae, Plumbaginaceae, Malvaceae, Smilacaceae 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, Vaginal 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 *Azadirachta 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* is also an important plant cure ringworm. *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 possess active principle (or) active compounds, responsible for therapy.

In the present study and previous research reports *Annona reticulata* treat wounds *Strychnos nuxvomica* to cure black quarter disease and dysentery; *Tinospora Cardifolia* to treat foot and mouth diseases (Table – 2).

V. 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 crosschecked with the present study proved ethnoveterinary 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.

TABLE – 1 Table showing ethnoveterinary plants and practices of Konda reddy tribe.

Botanical Name, Local Name & Family Name	Part used	Uses
1. Andrographis Paniculata (Burn.f.) Wall, Nelavemu, Acanthaceae	Whole plant	Cure mouth diseases and kill the worms in stomach, clean stomach after child birth.
2. Azadiracta indica A.Juss Vepa Chettu Meliaceae	Leaf; Fruit	Cure foot swelling; control body heat and kill worms
3. Acalypha indica Murkonda Euphorbiaceae	Leaf	Cure skin disease
4. Annona reticulata. L. Ramaphalam chettu Annonaceae	Leaf	Cure skin diseases
5. Aristolochia indica.l, Eswari Aristolochiaceae	Leaf	Diarrhea; snake bite
6. Cissus quadrangularis L Nalleru Vitaceae	Whole Plant	Cure wounds, bone fractures
7. Cocculus hirsutus Cheepuru Teega Menispermaceae	Leaf	Cure skin diseases
8. Cassia fistula L.Syn Rela Chettu Caesalpiniaceae	Leaf	Cure fever and indigestion
9. Ficus religiosa L Ravi Chettu Moraceae	Bark, leaf	Cure foot and mouth diseases
10. Holarhena – anti dysentrica (Roth) wall, Kolamukhi Apocyanaceae	Seeds, leaf	Relieve menstruation
11. Musa paradistica. L Arati Musaceae	Whole plant	Diarrhea
12. Phyllantus niruri L. Nela Usiri Euphorbiaceae	Whole plant	Cure dysentery, promote digestion
13. Pergularia daemia (Forssk) Juttupaku Asclepiadaceae	Latex	Cure cuts
14. Plumago zeylanica Chitramulam Plumbaginaceae	Root	Epilepsy; Ring worm
15. Polyathia longifolia Naramamidi Annonaceae	Stem bark	Bone fracture
16. Solanum surattains Peda Poyyadakki Solanaceae	Fruit	Cure eye diseases
17. Solanum Verbascifolium Pitta Chettu Solanaceae	Stem; bark	Constipation
18. Smilax zeylanica Kumari Teega Smilaxaceae	Leaf	Wounds
19. Strychnos nuxvomica Mushini Loganiaceae	Leaf	Black quarters disease; Dysentery
20. Thespesia populnea Ganga Ravi Malavaceae	Timber	Wounds
22. Tinospora cordifolia Tippateega Menispermaceae	Leaf	Foot & mouth diseases

TABLE-2 List of ethnoveterinary plants reported to have been used by other areas

Botanical Name of plant	Ethnoveterinary uses	Ethnoveterinary use of the plant reported by previous studies
1. Acalypha indica	Leaf paste is applied to control skin diseases.	1) Selvaraju et al (2011) Leaf paste and salt is used in the treatment of wounds.

2.	<i>Andrographis paniculata</i> (Burm.f.) Wall.	Whole plant is used in the treatment of foot and mouth disease and also to kill worms 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) Selvaraju et al (2011) Whole plant decoction control fevers.
3.	<i>Annona reticulata</i> L.	Leaf is used to treat wounds.	1)Murthy and Narasimhama Rao (2012) : Leaf paste with mustard oil is given to cure wounds.
4.	<i>Azadirachta indica</i> A. Juss	Leaves and seed used to treat foot swelling and to control worms in stomach.	1)Reddy and Sudarsanam (1987) : Stem bark decoction with Aloe vera and leaves of <i>pergularia daemia</i> cures fever. Leaf paste is used to control ectoparasites. 2) Selvaraju et al (2011) : Seed oil is useful to cure wounds. 3) Murthy and Narasimha Rao (2012) : Leaf powder is used to control Trypanosomiasis. 4) Rajkumar Verma (2014) : Bark of <i>Azadirachta indica</i> and <i>Acacia nilotica</i> is ground and applied to treat cuts and wounds.
5.	<i>Cassia fistula</i> L. Syn	Leaves paste cures fever and indigestion	1) Reddy and Sudarsanam (1987): Leaf juice and cured is used to control dysentery. Powder made with seeds of the plant along with cumin seed and <i>Aristolochia indica</i> root is used as antidote for snake bite. 2) Selvaraju et al (2011) : Stem bark with garlic and pepper is given to treat fevers. 3) Murthy and Narasimha Rao (2012): Gree fruits paste control cold. 4) Lakshminarayana and Narasimha Rao (2013) : Stem bark + pepper + leaf paste of <i>Ocimum tenuifolium</i> cure eye infections.
6.	<i>Cocculus hirsutus</i>	Leaf paste cures skin diseases	1)Reddy and Sudarsanam (1987) : Leaf past with poppy seeds and methi cures urinary disorders. 2) Murthy et al (2007) : Leaf paste + sugar controls blood motions.
7.	<i>Cissus quadrangularis</i>	Whole plant is used to treat external wounds	1)Murthy et al (2007) : Asthama is treated with stem paste mixed with chilli powder. 2) Selvaraju et al (2011) : Decoction of leaves + pepper + garlic is used to treat ephemeral fevers. 3) Reddy and Sudarsanam (1987): Paste made with fresh stem + coconut oil + <i>Mimosa pudica</i> leaves is effective in promoting fertility.
8.	<i>Ficus religiosa</i> 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) : Paste made with bark and wheat flour is useful to treat small-pox.
9.	<i>Phyllanthus niruri</i> L.	Whole plant is used in the treatment of desentery	1)Murthy and Narasimha Rao (2012): In the treatment of indigestion and wounds, leaf juice and root powder are used.
10.	<i>Pergularia daemia</i> (Forssk.)	Latex used in cuts and wounds.	1)Reddy and sudarsanam (1987) : Leaf juice with pepper and garlic are used to treat fevers and rheumatic arthritis. 2) Selvaraju et al (2011) : Lead decoction controls fevers.
11.	<i>Tinospora cordifolia</i> (Wild)	Vaginal infections, cuts, wounds and fevers are treated with the leaf paste and decoction.	1)Murthy and Narasimha Rao (2012) : Decoction of leaf and stem are useful to improve immunity and to control fevers. 2) Lakshminarayana and Narasimha Rao (2013) : Plant is useful in the treatment of foot and mouth disease.
12.	<i>Solanum surattense</i> Burn .f.	Fruit is used to treat eye infections of cattle.	Babu et al (2010) : The fruit extract is infested in the infected eyes.
13.	<i>Strychnos nux vomica</i> L.	Leaves are used to treat dysentery.	Prakasa Rao & Hara Sreeramulu (1985) : Leaf along with the <i>Sida cordata</i> and <i>Glycyrrheza glabra</i> are taken roughly 5 : 3 : 2 proportions and ground thoroughly to from an extract and it is administered twice a day to cure dysentery.
14.	<i>Plumgabo zeylanica</i> L.	Root is used to treat Ring	Subbaiah and Sivitramma (2012) :

		Worm	Root along with stem bark of <i>Calotropis gigantia</i> , a pinch of salt and butter milk are made into fine paste is applied externally over the affected area.
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Habitation of Konda reddi



Author with medicine man.



Author Interaction with Healer



Solanum verbascifolium



Plumbago zeylanica L.



Musa paradisiaca L.



Holarrhena antidysentrica (Roth.)Wall

P. Prasanna Kumari, " Ethonobotanics Used In Veterinary Practices By Konda Reddies Of Polavaram Mandal, West Godavari Dist, Andhra Pradesh : : India. "International Journal of Engineering Science Invention (IJESI), vol. 07, no. 05, 2018, pp 41-46