



Research Article

www.ijrap.net



ETHNO-VETERINARY HERBAL CLAIMS COLLECTED FROM TRIBAL AND RURAL PEOPLE OF RAPUR MANDAL OF NELLORE DISTRICT, ANDHRA PRADESH

G. Sudarsanam¹, Goli Penchala Pratap^{2*}, C. Ramesh³, Mohd Kashif Husain², Munawwar Hussain Kazmi², G. P. Prasad⁴

¹Department of Botany Sri Venkateswara University, Tirupati, Andhra Pradesh, India

²Survey of Medicinal Plants Unit, Central Research Institute of Unani Medicine (CRIUM), Under CCRUM, A.G. Colony Road, Erragadda, Hyderabad, India

³Department of Botany Sri Venkateswara Arts College, Tirupati, Andhra Pradesh, India

⁴Regional Ayurveda Research Institute for Skin Disorders, New Rajiv Nagar, Payakapuram Vijayawada, India

Received on: 14/06/17 Accepted on: 10/07/17

*Corresponding author

E-mail: penchalapratap.goli@gmail.com

DOI: 10.7897/2277-4343.083202

ABSTRACT

The present investigation is conveyed to focus light on the traditional ethno-veterinary information available with tribal and rural people of Rapur mandal of Nellore district. The study discloses a total thirty-two (32) contemporary folk-claims comprising thirty-two (32) taxa belonging to twenty-six (26) families of angiosperm. The rural people of the area have been employing all these plant materials in the form of pastes, juice and powder for the treatment of different ailments of cattle like; dysentery, paralysis, epilepsy, thelazia, hepatic diseases, mastitis, poisonous bites, intestinal problems, cold, lungworms infection, intestinal worms, watering of eye, gummy rheum formation, infertility, skin diseases and bone fracture. The botanical name, family, part(s), the name of the diseases against which the plants are used and mode of administration with dosage for most of the claims is discussed in detail. The provided data could be utilized to discover new veterinary drugs of natural origin by the systematic studies.

Keywords: Ethno-veterinary medicine, Rapur Mandal, Folk claims

INTRODUCTION

Ethno-veterinary medicine is the knowledge developed by local from rural areas from their day-to-day experience and transfer of knowledge from their ancestors. Animal husbandry is observed to be the present wellspring of wage in rustic and semi-urban territories of India. The provincial and tribal individuals are not effectively open to current veterinary medicine for their domesticated animals; in this way, they rely on their conventional knowledge for treating animals. At present, over 35,000 plants are known to have healing properties^{2,3}. All parts of the plants, including leaves, bark, fruits, flowers and seeds are used in medicinal preparation. Ethno-veterinary medicines are often low-priced, intact, tested and proved based on local resources and strengths. These can give helpful contrasting options to conventional animal health care⁴. Ethno-veterinary medicine has advanced through perceptions, trials and errors, and goes from one era to the following through verbal correspondence. In this manner, these practices are not really recorded and tragically to a great extent lost, weakened and contorted. With a specific end goal to comprehend its logical avocation, rationale and to grow new ideas, it is the most extreme need to report the practices. Rehearse of the

conventional knowledge regarding animal healthcare service requires extraordinary consideration for the pharmaceutical investigation to prospect new medications in the concerned field. With the above view, the present study was conducted in Rapur mandal of Nellore district.

METHODOLOGY

Several field visits had been undertaken to tribal villages and rural areas predominated by Yanadhi and Chenchu tribes to collect information on ethno-veterinary claims in the areas like; Adurupalle, Akilavalasa, Gilakapadu, Gonupalle, Gundavolu, Khambalapalle, Penubarthi, Rapur, Sanayanapalem and Tegacharla in Rapur mandal of Nellore district. The information was collected through questionnaires, interviews and discussions. The questionnaire allowed responses on the plant, medicinal uses of its part, the method of preparation (i.e., decoction, paste, powder and juice), mode of the administration, dosage, form of usage (either fresh or dried) and whether the plants used either singly or in the combination of other plants. All the plants were taxonomically identified with the help of flora, "The Flora of Presidency of Madras" by Gamble (1936) and other accessible related works⁵⁻⁹.



India Map



Andhra Pradesh Map



Nellore District Map



Rapur mandal Map with Surveyed Areas

RESULTS

The present investigation disclosed thirty-two (32) contemporary folk claims involving thirty-two (32) taxa belonging to twenty-six (26) families of angiosperms. Tribal people of the area have been employing all these plant materials in the form of pastes, juice and powder for the treatment of

different ailments in the cattle like, dysentery, paralysis, epilepsy, thelazia, hepatic diseases, mastitis, poisonous bites, intestinal problems, cold, lungworms infection, intestinal worms, watering of eye and gummy rheum formation, infertility, skin diseases and bone fracture.

The details of the claim recorded are mentioned in Table 1.

Table 1

S.No.	Botanical Name/ Family	Local Name	Useful Part	Ethno-veterinary Claims
1.	<i>Abrus precatorius</i> L. (Fabaceae)	Guruvinda	Leaves (Figure1)	Young leaves are fed to grazing animals for 3-5 days to heal the mouth ulcers attained due to consuming of very rugged leaves.
2.	<i>Alangium salvifolium</i> (L.f.) Wangerin (Alangiaceae)	Ooduga	Seed and root bark	Seeds and root bark are assembled in 4:1 proportion ground into the glue. Oral administration of this glue around 20 gm per day for a month is useful as the best antidote for the mad dog bite.
3.	<i>Aloe vera</i> (L.) Burm.f. (Liliaceae)	Kalabandha	Leaves	Leaf glue is applied externally on wounds produced by mites for healing of affected area (Preparation applicable for cattle and flock).

4.	<i>Andrographis paniculata</i> (Burm.F.) Wallich ex Nees. (Acanthaceae)	Nelavemu	Whole plant (Figure 2)	Whole plant of <i>A. paniculata</i> and <i>Sorghum vulgare</i> grains are taken in equal quantities to ground into a paste. About 20 gm of the paste is given orally daily once for a month to treat animal paralysis and epilepsy (Preparation applicable for cattle).
5.	<i>Anisomeles malabarica</i> (L.) R.Br. ex Sims (Lamiaceae)	Magabeeraku	Leaves (Figure 3)	Shade dried leaves are burnt as incense in the animals house to repel the flies.
6.	<i>Annona muricata</i> L. (Annonaceae)	Lakshmanphal	Leaves and Fruit (Figure 4)	Leaves and fruits are taken in 4:1 proportion to ground and squeezed into a juice. The juice is applied on the body of the animal and is kept for one hour and washed with water. This treatment annihilates the lice and acts as an antifeedant sedate for the blood parasites present on the skin.
7.	<i>Aristolochia bracteolata</i> Lam. (Aristolochiaceae)	Gadidhagadapa	Leaves (Figure 5)	Oral administration (about 20 gm) of leaves works as anthelmintic (Particularly in goats).
8.	<i>Asparagus racemosus</i> Willd. (Liliaceae)	Pilli teegalu	Tuberous roots (Figure 6)	Tuberous roots are fed to animals to increase the lactation (Applicable for cattle).
9.	<i>Azadirachta indica</i> A. Juss. (Meliaceae)	Vepa chettu	Bark	The bark powder is mixed with water to make into a paste. The external application of the paste is applied on inflamed udder to get relief from mastitis (Applicable for cattle).
10.	<i>Bambusa arundinacea</i> Willd. (Bambusaceae)	Bonguveduru	Leaves	Leaves are fed to expel the placenta (Applicable for cattle and flock).
11.	<i>Boswellia serrata</i> Roxb. ex Colebr. (Burseraceae)	Anduga	Gum (Figure 7)	Gum is utilized as incense in animals house. This incense is asserted to have ability to repulse the pathogens and reduce the air borne infections.
12.	<i>Butea monosperma</i> (Lam.) Taub. (Fabaceae)	Modhuga	Bark	Oral administration of the bark powder works as an anthelmintic drug (Applicable for cattle and flock).
13.	<i>Cassia fistula</i> L. (Caesalpinaceae)	Rela	Flowers (Figure 8)	Flowers are made into paste and administered orally to get relief from cold and fever (Applicable for cattle).
14.	<i>Cocculus hirsutus</i> (L.) Diels. (Menispermaceae)	Dussara teega	Leaves (Figure 9)	Leaf juice is applied externally on eyes to get relief from pus formation and redness of eyes (Applicable for cattle and flock).
15.	<i>Commiphora caudata</i> (Wight & Arn.) Engl. (Burseraceae)	Kondamaamidi	Fruits (Figure 10)	Fruits are ground into glue and blended with rhizome powder of <i>Curcuma amada</i> in 1:2 proportions and applied externally on the region where the skin eruptions are created because of vermin. This treatment is given for seven days to relieve from the skin eruptions (Applicable for cattle and flock).
16.	<i>Corallocarpus epigaeus</i> Benth. (Cucurbitaceae)	Aksagrauda gadda	Tuberous root (Figure 11)	<i>C. epigaeus</i> root powder and <i>A. paniculata</i> leaf powder is mixed in equal quantities and oral administration of 20 gm powder 4-7 times works as the best antidote for poisonous bites (Applicable for cattle and flock).
17.	<i>Curcuma amada</i> Roxb. (Zingiberaceae)	Mamidi pasupu	Rhizome	External application of rhizome paste on wounds caused due to the animal attack, used for the quick healing (Applicable for cattle and flock).
18.	<i>Datura metel</i> L. (Solanaceae)	Nalla Ummatta	Leaves and fruits (Figure 12)	Leaves and fruits are completely burnt and the produced ash is applied on wounds to heal them quickly (Applicable for cattle and flock).
19.	<i>Enicostemma axillare</i> (Lam.) Raynal. (Gentianaceae)	Nela gurugudu	Whole plant (Figure 13)	Whole plant of <i>E. axillare</i> and <i>Piper longum</i> roots are ground into paste. Oral administration of about 15-20 gm of paste works as good anthelmintic and also increases the appetite (Applicable for cattle and flock).
20.	<i>Euphorbia indica</i> Lam. (Euphorbiaceae)	Reddivari Nanabrolu	Whole plant (Figure 14)	Whole plant is squeezed to produce juice and use as eye drops to relieve from the pus formation on the eyes (Applicable for cattle).
21.	<i>Holarrhena antidysenterica</i> (Roth.) A.DC. (Apocynaceae)	Chedukodisha	Bark (Figure 15)	The latex applied externally on eyes works as the better drug to treat thelazia.
22.	<i>Lannea coromandelica</i> (Houtt.) Merr. (Anacardiaceae)	Goompana	Bark	Bark is pounded and applied externally on wounds to heal quickly (Applicable for cattle and flock).
23.	<i>Lantana camara</i> L. (Verbenaceae)	Pulikampa chettu	Leaves	Leaves are shade dried and pounded into powder. About 15-20 gm of the powder is administered orally to kill the lungworms (Applicable for cattle).

24.	<i>Mangifera indica</i> L. (Anacardiaceae)	Mamidi	Endosperm	The seed coat is removed and the collected endosperm is ground into the glue. About 20 gm of the glue is administered orally to stop the loose bowels.
25.	<i>Oxystelma esculentum</i> R.Br. (Asclepiadaceae)	Pala teega	Whole plant (Figure 16)	Whole plant is fed to increase the lactation (Applicable for cattle).
26.	<i>Psidium guajava</i> L. (Myrtaceae)	Jama	Leaves	One kg of the leaves of this plant and 100 gm rhizome of <i>Zingiber officinale</i> are ground into paste. Oral administration of 50 gm of paste relieves from diarrhea (Applicable for cattle).
27.	<i>Solanum nigrum</i> L. (Solanaceae)	Kamanchi	Fruits (Figure 17)	Fruits are squeezed and applying the juice on affected eye relieves from the watering of eyes and gummy rheum formation (Applicable for cattle).
28.	<i>Solanum virginianum</i> L. (Solanaceae)	Mulla vankaya	Fruits	Fresh fruits are ground into paste About 20 gm of oral administration of paste claimed as best anthelmintic drug.
29.	<i>Sterculia urens</i> Roxb. (Sterculiaceae)	Tapasi	Gum	Gum is dissolved in water and fed to animals to increase their appetite (Applicable for cattle).
30.	<i>Strychnos nux-vomica</i> L. (Loganiaceae)	Mushti	Seeds (Figure 18)	Seeds are blended with bovine excrement and made into circular dried cakes. These cakes are scorched in flame furnaces. The delivered cinder is blended in the bovine pee and applied externally to heal the wounds quickly (Applicable for cattle and flock).
31.	<i>Syzygium alternifolium</i> (Wt.) Wall. (Myrtaceae)	Neredu	Bark	One kg of the bark and 50 gm of seeds are ground into the glue. Oral administration of approximately 50 gm glue relieves from diarrhea (Applicable for cattle and flock).
32.	<i>Tephrosia purpurea</i> Pers. (Fabaceae)	Vempali chettu	Leaves	Mixing of pounded 7 kg of <i>Tephrosia purpurea</i> leaves and 2 kg wood ash of <i>Azadirachta indica</i> (Presoaked in 3 liters of water) to stir thoroughly. After filtering it add 1 liter of cow urine to use as a spray solution on the parasite affected animal. Parasites will die within one day (Applicable for cattle and flock).



Figure 1 *Abrus precatorius*



Figure 2 *Andrographis paniculata*



Figure 3 *Anisomeles mlabarica*



Figure 4 *Annona muricata*



Figure 5 *Aristolochia bracteolata*



Figure 6 *Asparagus racemosus*



Figure 7 *Boswellia serrata*



Figure 8 *Cassia fistula*



Figure 9 *Cocculus hirsutus*



Figure 10 *Commiphora caudata*



Figure 11 *Corallocarpus epigaeus*



Figure 12 *Datura metel*



Figure 13 *Enicostemma axillare*



Figure 14 *Euphorbia indica*



Figure 15 *Holarrhena antidysenterica*



Figure 16 *Oxystelma esculentum*



Figure 17 *Solanum nigrum*



Figure 18 *Strychnos nux-vomica*

DISCUSSION

The potency of ethno-veterinary knowledge becomes as an essential resource for developing new kinds of pharmaceuticals and other medicinally important products. The present study brought to light the age old therapeutic preparations employed by rural people of Rapur mandal.

The present investigation unveiled thirty-two (32) undiscovered ethno-veterinary claims including thirty-two (32) taxa related to twenty-six (26) families of angiosperms. Tribal and rural people of the area have been practicing all these plant materials as traditional veterinary medicine in the form of adhesives, juice and powder for the treatment of various diseases in the cattle like diarrhea, paralysis, epilepsy, thelazia, hepatic diseases, mastitis, poisonous bites, intestinal problems, cold, lungworms infection, intestinal worms, watering of eye and gummy rheum formation, infertility, skin diseases and bone fracture. The ethno-veterinary claims collected from the rural people of Rapur mandal used for treatment of various ailments by plant parts which are used for medicinal preparations were bark, roots, leaves, fruits, flowers, stem and the whole plants. The most frequently utilized plant parts were leaves (31%), bark (12.5%), whole plant (15%), root (10%), exudation from the bark by injuring (2.5%), flowers (2.5%), fruits (10%), gum (5%), rhizome (7.5%) and wood (2.5%). Among the different plant parts used for the preparation of medicine the leaves were the most important and frequently used part. The oral administration of the leaves prescribed in majority of the remedies reported in the present study.

CONCLUSION

The present study depicts contemporary ethno-veterinary folk uses of medicinal plants of the area investigated. It would be beneficial to subject all these folk-medicinal claims (crude drugs) to scientific investigations. It is likely that through such examinations new medications of common starting point might be found for treatment of many diseases and infection of the animals for which there is little satisfactory cures available in current veterinary medicine.

REFERENCES

1. Gamble JS. Flora of the Presidency of Madras. Vol. 1-3. Authority of the Secretary of State for India in council, Dehra Dun: India; 1936.
2. Jain, S. K. Dictionary of Indian folk medicine and Ethnobotany. Deep publication, New Delhi; 1991.
3. Jain, S.K. Plants in Indian Ethno-veterinary medicine: Status and Prospects. Ind.J.Vet.Med. 2000; 20 : 1-11.
4. Katewa, S.S. and Chaudhary B.L. Ethno-veterinary survey of plants of Rajsamand district, Rajasthan. Journal of Vasundhara 2000; 5:95-98.
5. Neelima, M., Prasad, G.P., Sudarsanam, G., Penchala Pratap, G., Jyothi, B. Ethnobotanical studies in Rapur forest division of Nellore district in Andhra Pradesh. Life Sciences Leaf Lets 2011; 11:333-345.
6. Penchala Pratap, G, Prasad, G.P. & Sudarsanam, G. Ethno-medical studies in Kailasagirikona forest range of Chittoor district, Andhra Pradesh. Ancient Science of Life 2009; 29(2): 40-45.
7. Penchala Pratap, G, Prasad, G.P. & Sudarsanam, G. Ethno medical studies in Talakona forest range of Chittoor district, A.P. Ancient Science of Life 2009; 28 (3):42-49.
8. Penchala Pratap, G, Sudarsanam, G., Reshmi Pushpan, Prasad, G.P. Herbal remedies for Snakebites in Ethnic practices of Chittoor District, Andhra Pradesh, Ancient Science of Life 2010; 29 (4) : 13-16.
9. Penchala Pratap, G. Sudarsanam, G., B. Jyothi and Prasad, G.P. Ethnic practices on Urinary Disorders and Jaundice from the Tribes of Nellore District Andhra Pradesh, India, Ethnobotanical Leaflets 2010; 14: 976-85.

Cite this article as:

G. Sudarsanam *et al.* Ethno-veterinary herbal claims collected from rural people of Rapur Mandal, Nellore District, Andhra Pradesh, India. Int. J. Res. Ayurveda Pharm. 2017;8(Suppl 3):211-216 <http://dx.doi.org/10.7897/2277-4343.083202>

Source of support: Nil, Conflict of interest: None Declared

Disclaimer: IJRAP is solely owned by Moksha Publishing House - A non-profit publishing house, dedicated to publish quality research, while every effort has been taken to verify the accuracy of the content published in our Journal. IJRAP cannot accept any responsibility or liability for the site content and articles published. The views expressed in articles by our contributing authors are not necessarily those of IJRAP editor or editorial board members.