



TRADITIONAL ANIMAL HEALTH CARE PRACTICES OF PASTORALISTS AND FOLK LORE COMMUNITIES IN THE MEDAK DISTRICT OF TELANGANA, INDIA

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ABSTRACT

The paper deals with exploration of Traditional animal health care practices of pastoralist and folk-lore communities in the Medak district of Telangana State. 56 healers were interviewed and recorded the methods of collection of medicinal plants and methods of preparation of the drugs used by Pastoralist communities like Kuruma, Golla, Lambada and other folk-lore of Mudiraj, Kapu and Gouda communities. A total of 172 plant species belonging to 149 genera under 66 families of angiosperms are recorded. In all a total of 214 remedies were recorded for 43 veterinary disease conditions. The herbal medicines are composed of single plant drugs, two plant drugs, and three or more than three plant drugs. The herbal medicine is presented disease-wise alphabetically. The information includes the medicine, mode and duration of administration along with vernacular and scientific names of the plant parts and other ingredients. The common veterinary disease in Medak district for which folk-lore herbal medicine are available for anoestrus, anorexia, bloat, bone setting, bronchitis, corneal opacity, controlling bluetongue, cuts and burns, debility, diarrhoea/ dysentery, difficulty in delivery, dog bite, dyspepsia, eye injury, fevers, foot rot, fowl pox, galactagogues, haematuria, horn fracture, hydrocynic acid poison (tympy occurs due to consumption of poison leaves which contain hydrocyanic acid), intestinal worms, impotency in bulls, maggot or septic wounds, mastitis, paraplegia, *Peste des petites ruminant* (PPR), pneumonia, postpartum haemorrhage, poultry diarrhea, retained placenta, snake bite, sprains, stomach ache, stomatitis, swelling in testis, trypanosomiasis, tick/lice, tumors, weakness and yoke gall.

Key words: Pastoralists, Folk-lore communities, Traditional healers, Herbal remedies, Veterinary diseases, Medak, Telangana State.

INTRODUCTION

Kuruma, Golla, Lambada are pastoralists and Mudiraj, Kapu and Gouds are other major folk-lore communities of the Medak district of Telangana State. These communities predominantly depend on livestock for their livelihoods. There was no significant exploratory study on Ethnoveterinary medicine in this district however, some studies on Ethno-veterinary medicine done in other parts of India and within the state were done; Plants used as veterinary medicine, Observation on folklore about plants used in veterinary medicine in Bengal, Orissa & Bihar by Pal, DC (1980)¹,

Galactagogues and fodder in Rajasthan by Sebastine, K.M (1984)², Plants used in veterinary Medicine in Chittoor dist., AP by Reddy, C.S and Sudarsanam, G (1987), Botanical aspects of Ethnoveterinary prescriptions in Mithila, North Bihar by Jha *et al.* (1991)⁴, Plants in Ethno veterinary practices in Darbhanga of North Bihar by Mishra *et al.* (1996)⁵, Ethno veterinary Medicine in Western India by Malik *et al.* (1996)⁶, Folk Veterinary Medicine of Kurnool District, Andhra Pradesh by Goud, P.S & Pullaiah, T (1996)⁷, Traditional Veterinary Practices in Rural areas of Dindigul dist of Tamil Nadu by Rajan and Sethuraman (1997)⁸, Ethno-veterinary practices in Warangal by Reddy *et al.* (1998)⁹, Ethno-veterinary treatments for elephants from Assam by Borthakur *et al.* (1998)¹⁰, Dictionary of Ethnoveterinary plants of India by Jain S.K (1999)¹¹, Common surgical conditions in animals in some districts of AP by Ramdas *et al.* (2000)¹², Folk-lore biomedicine for common veterinary diseases in Nalgonda dist by Reddy and Raju (2000)¹³, Ethno veterinary Medicine among the Gaddi tribe of Himachal Pradesh by Singh and Kumar (2000)¹⁴, Ethno veterinary practices in Satpadas of Nandurbar dist of Maharashtra by Patil and Merat (2003)¹⁵, Plants used as veterinary Medicine in Ratnagiri dist of Maharashtra by Mokate and Deokule (2004)¹⁶, Ethno-veterinary medicine for livestock in Eastern

Ghats of AP by Reddy *et al.* (2006)¹⁷, Ethnoveterinary plants of Uttarakashi district, Uttarakhand by Tiwari and Pandey (2006)¹⁸, Plants used in Ethno veterinary medicine by Kurchya tribe of Waynad dist of Kerala by Mini and Sivadasan (2007)¹⁹.

Healers of folk-lore communities of Medak district are still in possession of tremendous ancestral traditional knowledge on medicinal plants of their surroundings. In the absence of any comprehensive attempt to study the usage of Medicinal Plants by these communities to cure veterinary diseases in Medak district, Telangana State, the present study was undertaken.

STUDY AREA

Before formation of Telangana State, Medak is located in Telangana region of Andhra Pradesh, India. Medak district forms part of the Deccan Plateau. The total geographical area of the district is 9,699 sq. km, and it covers 3.5% of the total area of the state. It lies between 17°28' and 79°10' of Eastern longitude.

Generally dry weather, with hot summer and some pleasing showers, except during the south-west monsoon season in the Medak district. The average annual rainfall in the district is 896.7 mm. Temperatures range from a minimum of 34°C and a maximum of 40° Celsius.

Traditionally livestock rearing has been a critical source of livelihood for people of Medak, with small and marginal farmers rear animals as an integral component of farming, or as pastoralist communities rearing sheep and goats. Pastoralist communities followed semi-migratory grazing system. A group of 5-6 shepherds join together and form an association or group or team called "Melam".

This group of shepherds (Melam) could be from one village or more. Melam move with their animals in search of fodder and water for their animals. The major livestock reared in the district are Sheep, Goats, Cattle, Buffaloes and Poultry. In the

semi-arid context with a history cyclic droughts and seasons of good rains, animals have always played been crucial for peoples livelihoods.

MATERIALS AND METHODS

Intensive field work was undertaken for a period of five years from December 2006 to December 2011. Locally well known traditional healers and elders from pastoral communities who are still practicing traditional medicine identified.

The author has taken help from the local registered veterinary practitioners for diagnosing the diseases described by the illiterate healers. During field work the author has visited pastoralist villages, Lambada thandas and adjoining forest localities.

Standard methods of botanical collection and techniques of herbarium preparations were followed as suggested by Jain and Mudgal (1999)²⁰.

Plants have been collected in flowering and fruiting stages for the preparation of herbarium. Plant specimens were prepared and tagged with collection number. The plant specimens were identified using district, regional and state flora's like Flora of Medak District by Pullaiah et al.(1998)²¹, Flora of the Presidency of Madras by Gamble (1957)²³ and other relevant literature. The herbarium of the plant specimens collected during this work has been prepared and mounted on the standard herbarium sheet and Vouched herbarium specimens were deposited in the Herbarium, Department of Botany, Osmania University, Hyderabad.

The approaches and methodologies described by Jain and Mudgal (1999)²⁰ have been followed. The traditional healers were interviewed from time to time to record the first-hand information regarding plants or with their parts, preparation of the medicine, dosages, method of administration and described recipe for animal ailments were recorded. Healer name was given at the end of each recipe as an authenticity. Photographs of plants of their parts collected during field work are presented to authenticate the information accrued.

Disease wise treatments are given below alphabetically with local vernacular names of Telugu in brackets. For each ailment, botanical name, family name in bracket and telugu name of the plant were also given.

Anoestrus (" Edakurakapovadam")

- Fed 1 kg boiled seeds of *Dolichos biflorus* L. (Fabaceae) 'Ulavalu' daily in the evening to the cow or female buffalo for 15 days. (Ref: Chiguri Ellaiah, Avancha and Golla Pochaiah, Thimmapur)
- 100 ml fruit extract of *Ficus religiosa* L. (Moraceae) 'Ravichettu' is mixed into 10g misri (crystalline sugar) and it is given internally once a day for 15 days for an adult cow. (Ref: Sadulu Venkaiah, Narsapur)

Anorexia ("Metha meyaka povadam")

- Ground 25 g fresh rhizome of *Curcuma longa* L.(Zingiberaceae) 'Pasupu' along with handful leaves of *Pergularia daemia* (Forssk.)Chiov.(Asclepiadaceae) 'Gutaguta' to make a bolus and fed affected adult animals once a day for 2 days.(Ref: Veeraiah, Kondapur)
- Ground fresh leaves of *Canthium parviflorum* Lam. (Rubiaceae) 'Balusu' to make 50 g bolus and it is given internally twice a day for two days for an adult animal. (Ref: Chinchettu Bandigonda, Gangapur)

- 1 kg leaves of *Trigonella foenum-graecum* L.(Fabaceae) 'Menthulu' and two well ripped bananas are fed to the affected animal for 2 days.(Ref: Satham Ramulu and Bheemaiah of Narsapur)

Bloat ("Kadupubbu")

- Tie across the mouth with stem fiber of *Butea monosperma* (Lamk.)Taub. (Fabaceae) 'Mothuga' keep a day then remove it. (Ref: Chinchettu Bandikonda-Gangapur, Chevula Adavigonda, Rekhal)
- 200 ml stem bark extract of *Butea monosperma* (Lamk.)Taub. (Fabaceae) 'Mothuga' is given internally twice a day for three days. (Ref: Manne Narayana, Muthrajapalli)
- 250 g leaves of *Tylophora indica* R.Br. (Apocynaceae) 'Mekameyani teega' ground together with 10 g of *Piper nigrum* L. (Piperaceae) 'Miriyalu', 100 g of jaggery and mixed into 1 liter water. One liter of this mixture is given as single dose for large animals and reduce it to half for sheep and goats (Ref: Golla pochaiah, Thimmapur)
- Drench 100 ml pulp juice of *Tamarindus indica* L. (Caesalpinaceae) 'Chintha chettu' to the sheep and goats and 500ml for large animals as a single dose.(Ref: Sara Hanumaiah (Ramachandrapur, Chinchettu Bandikonda-Gangapur)
- 5-6 dry flowers of *Butea monosperma* (Lamk.)Taub. (Fabaceae) 'Mothuga' are soaked in 200 ml rice water for 10 minutes and squeeze out the juice. Drench 100 ml of this extract twice a day for three days to small ruminants and double the quantity for large animals. (Satham Ramulu, Narsapur)
- 5 g of dried fruit powder of *Citrullus colocynthis* (L.) Schr. (Cucurbitaceae) 'Paparabudama' is mixed into 50 ml water. Drench this medicine to an adult animal as a single dose(Ref: Kadali narsagonda, Uthpalli)
- 200 ml fresh root extract of *Tephrosia purpurea* (L) Pers. (Fabaceae) 'Vempali' is mixed into 500ml water and it is drenched to an adult animal as a single dose. (Ref: Golla Pochaiah, Thimmapur, Peddakurma Narsaiah, Peddagotti mukkala)
- 50 ml leaf extract of *Tylophora indica* R.Br. (Apocynaceae) 'Mekameyani teega' is given along with 200 ml water twice daily till cured. (Ref: Golla Pochaiah, Thimmapur)
- Drench 500ml of till oil *Sesamum indicum* L. (Pedaliaceae) 'Nuvvulu' as single dose to get relief from bloat. (Ref: Elacha Pentaiah, Nastipur)
- Drench 500 ml of coconut water *Cocos nucifera* L. (Palmaceae) 'Kobbari' twice daily for two days. (Ref: Kondi Veeraiah, Avancha)
- Ground handful leaves of *Cassia auriculata* L. (Caesalpinaceae) 'Nelathangedu' and mixed into 200 ml of rice gruel and drench this mixture twice daily for 2 days (Ref: Encharla Pochaiah, Avancha)
- 10 ml decoction of *Carum copticum* Benth.&Hook. (Apiaceae) 'Oma' is mixed into 5 g of sweet soda and it is drenched as a single dose for sheep and goats to cure bloat. (Ref: Golla Pochaiah Thimmapur)

Bone setting ("Emukalu viruguta")

- Set the fractured bone and tie with fresh stem bark fiber of *Butea monosperma* (Lamk.)Taub. (Fabaceae) 'Mothuga' .(Golla Pochaiah, Thimmapur).

- 50 ml stem bark extract of *Bombax ceiba* L. (Bombacaceae) 'Buruga chettu' is given along with an equal amount of goat milk once a day for three days. Set the fractured bone and wrap with cloth then tie with fiber of *Butea monosperma* (Lamk.)Taub. (Fabaceae) 'Mothuga' tightly. (Ref: Laddi Beera gonda, Gangapur)
- 100 ml stem bark extract of *Boswellia serrata* Roxb. Ex colebr. (Burseraceae) 'Andugu' is mixed into 500 ml of goat milk and it is drenched once in a week for 3 weeks. Apply milk sap of *Ficus hispida* L. (Moraceae) 'Bomma medi' on the fractured part after setting up the bone. (Ref: Ganya, Atchampet thanda)
- 100 ml stem bark extract of *Buchanania lanzan* Spreng. (Anacardiaceae) 'Morri chettu' is given internally with goat milk once a day for 3 days. Stem bark paste of *Lannea coromandelica* (Houtt.)Merr. (Anacardiaceae) 'Gumpena chettu' is applied on the affected part by mixing goat milk. (Ref: Jarpala Gangaram, Narsapur)
- Latex of *Ficus hispida* L. (Moraceae) 'Bomma medi' is applied on the fractured part. Wrap with wollen yarn and also tie around with cloth after set right the bone. 100 ml stem bark extract of *Boswellia serrata* Roxb. Ex colebr. (Burseraceae) 'Andugu' is given internally along with 500ml of goat milk weekly twice (Thursday and Sunday) for three weeks. (Ref: Ganya, Atchampet thanda, Laddi Bandigonda, J Sangonda-Gangapur, Kadal narsagonda, Uthapalli)
- 50 ml stem bark extract of *Holoptelia integrifolia* (Roxb.) Planch. (Ulmaceae) 'Nemalinara' is mixed into one glass of goat milk and drench twice a week for 3 weeks. (Ref: Sappati Muthyalu, Gummadidala)
- 100 ml stem bark juice of *Lannea coromandelica* (Houtt.)Merr. (Anacardiaceae) 'Gumpena chettu' is drenched along with equal quantity of goat milk once a week for three weeks. Apply oil made out of *Vitex negundo* L. (Verbenaceae) 'Vavili' tropically on the fractured part after setting up the bone and bandied with a cloth. (Ref: Jarpala Gangaram, Narsapur)
- 100 ml fresh bark extract of *Lannea coromandelica* (Houtt.)Merr. (Anacardiaceae) 'Gumpena chettu' is given along with 250 ml of goat milk internally. Set the fractured bone and apply paste made out of stem bark of *Buchanania lanzan* Spreng. (Anacardiaceae) 'Morri chettu' and goat milk and tie with a cloth tightly. (Ref: Jarpala Gangaram, Narsapur)
- Make an ointment with seed resin of *Semecarpus anacardium* L. (Anacardiaceae) 'Nalla cheedi' mixed it into ash and 5 ml of sesame oil. Apply this ointment on wounds twice a day for 3 days. (Ref: Chinchettu bandigonda-Gangapur)
- 50 ml stem bark juice of *Bombax ceiba* L. (Bombacaceae) 'Buruga' is drenched along with an equal amount of goat milk once a day for three days. Wrap with cloth and tie tightly with stem fiber of *Butea monosperma* (Lamk.)Taub. (Fabaceae) 'Mothuga' after setting up the bone (Ref: Laddi beerugonda, Gangapur).
- Leaf paste of *Albizia amara* (Roxb.) Boivin (Mimosaceae) 'Nalrengi' is applied on the place of fractured (after setting up the bone) and tied with a cloth and do not remove untill 15 days. (Ref: Satham Ramulu, Narsapur)

Bronchitis ("Sardi")

- Sundry 100 g each leaves of *Cissus quadrangularis* L. (Vitaceae) 'Nalleda', *Vitex negundo* L. (Verbenaceae) 'Vavili', *Phyllanthus amarus* Schum.&Thonn. (Euphorbiaceae) 'Nela usiri' and stem bark of *Holoptelia integrifolia* (Roxb.) Planch. (Ulmaceae) 'Nemalinara', seeds of *Carum copticum* Benth.&Hook. (Apiaceae) 'Oma', bulbs of *Allium sativum* L. (Liliaceae) 'Elligadda' to make a powder and 20 g of Jaggery is added to this powder. 50g is given internally twice daily for 3 days. (Ref: Sappati Muthyalu, Gummadidala).
- 100 ml leaf juice of *Euphorbia hirta* L. (Euphorbiaceae) 'Pala alam' is given along with 5 g of black pepper powder once a day for 3 days. (Ref: Malgonda, Dhakur)
- 25 g of *Carum copticum* Benth.&Hook. (Apiaceae) 'Oma' grind along with 5 g of *Ferula asafoetida*, 25 g of jaggery to make a 10g sized pills. Pill is given internally twice a day for 3 days. (Ref: Satham Ramulu, Narsapur)
- 10 g of *Carum copticum* Benth.&Hook. (Apiaceae) 'Oma' are grind along with one bulb of *Allium sativum* L. (Liliaceae) 'Elligadda', 10 g rhizome of *Curcuma longa* L. (Zingiberaceae) 'Pasupu', 5 fruits of *Capsicum annum* L. (Solanaceae) 'Mirapa', 1 teaspoon full of salt to make a bolus. Feed this bolus twice a day for 3 days. (Ref: Elacha Pentaiah, Nastipur)

Controlling bluetongue ("Muti rogam rakunda")

- Put smoke using grass of *Cymbopogon coloratus* (Hook.f) Stapf. (Poaceae) 'Nimma gaddi' along with leaves of *Tephrosia purpurea* (L) Pers. (Fabaceae) 'Vempali' in the front of the sheep shed once daily in the evening particularly in the winter season (Ref: Chiguri Ellaiah, Avancha)

Corneal opacity ("Kantilo puvvu")

- Fruit paste of *Balanites aegyptiaca* (L.) Penn. (Balanitaceae) 'Garachettu' is applied on the affected eye once daily for 3 days. (Ref: Kadali Narsagonda, Uthpalli)
- Apply 2-3 drops fresh leaf extract of *Cayratia trifolia* (L.) Domin. (Vitaceae) 'Pullagummudu teega' on the affected eye twice daily till cured. (Ref: Chiguri Ellaiah, Avancha)
- 2-3 drops of root extract of *Curculigo orchoides* Gaertn. (Hypoxidaceae) 'Nelatadi' is applied on the affected eye twice daily for three days. (Ref: J Sangonda, Gangapur)

Cuts and Burns ("Tegina/ Kalina gayalu")

- Grind equal quantity of fresh whole plants of *Cynodon dactylon* (L.) Pers. (Poaceae) 'Garika gaddi' and *Tridax procumbens* L. (Asteraceae) 'Gayapaku' to make paste and it is applied on the place of cut once daily for 3- 4 days. (Ref: Golla Narayana Hathnura)
- Apply fresh plant juice of *Justicia procumbens* L. (Acanthaceae) 'Papataku' externally to control bleeding and swelling. (Ref: Sadula Venkaiah, Narsapur)

Debility ("Nalleda")

- Feed 50 g tuber of *Pueraria tuberosa* DC. (Fabaceae) 'Nelagummadi' by adding 2 g of pepper powder once daily for 3 days. (Ref: Satham Ramulu, Narsapur)

Diarrhea and Dysentery (“Purru/ Vasana purru”)

- Ground 100 g leaves of *Phyllanthus reticulatus* Poir. (Euphorbiaceae) ‘Pulcheri’ and mixed into 200 ml of buttermilk. Drench this mixture twice a day for three days. (Ref: P.veeraiah peddagottimukkala, Chinchettu Bandigonda-Gangapur, Kadal narsagonda, Uthpalli)
- Ground 150 g fresh stem bark of *Holarrhena antidysenterica* (Buch.-Ham.) Wall. Ex G. Don (Apocynaceae) ‘Palakodisa’ and mixed into 200 ml rice gruel and drench, twice a day for three days. (Ref: Golla narayana, Hathnura)
- Ground 50 g fresh stem bark of *Bombax ceiba* L. (Bombacaceae) ‘Buruga’ and it is mixed into 500 ml water. Drench this medicine twice a day for three days. (Ref: Jarpala Gangaram, Narayanpur thanda)
- 500 g stem bark of *Cassia fistula* L. (Caesalpianaceae) ‘Rela’ is mixed with 250 g of jaggery to make a bolus. Administer orally twice a day for two days. (Golla narayana, Hathnura)
- Ground 10 g seeds of *Cassia tora* L. (Caesalpianaceae) ‘Thydansa’ and mix in 100 ml water. Drench this mixture twice daily for three days. (Ref: Golla Pochaiah, Thimmapur).
- Pound handful full leaves of *Andrographis paniculata* (Burm.f.)Wall. ex Nees (Acanthaceae) ‘Nelavemu’ to squeeze out the juice and add 50 ml of Tamarind pulp juice. Drench this mixture once a day for one day. (Ref: Kadal Narsagonda, Uthapalli)
- Feed leaves of *Bambusa arundinaceae* (Retz.)Willd.(Poaceae) ‘Elithe’ once a day for two days (Ref: Chevula Adavigonda, Rekhal)
- Ground 25 g stem bark of *Grewia taelifolia* Vahl.(Tiliaceae) ‘Jivilike’ to squeeze out the juice. 10 ml of this juice is drenched twice a day for 3 days. (Ref: Sampati Muthyalu, Gummadidala)
- Ground 25 g stem bark of *Bauhinia racemosa* Lam. (Fabaceae) ‘Are’ to squeeze out the juice. 10 ml of this juice is drenched twice a day for 3 days. (Ref: Sampati Muthyalu, Gummadidala).
- Ground 25 g stem bark of *Abutilon indicum* (L.) Sweet. (Malvaceae) ‘Botlabenda’ to squeeze out the juice. 10 ml of this juice is drenched twice a day for 3 days. (Ref: Sampati Muthyalu, Gummadidala)
- 10 ml leaves extract of *Securinega leucopyrus* (Willd.) Muell-Arg.(Euphorbiaceae) ‘Tellapulcheri’ is mixed with about 250 g of curd and drenched twice a day for two days. (Ref: Bheemappa, Eedulapally village).
- 200 g dried leaf powder of *Securinega leucopyrus* (Willd.) Muell-Arg.(Euphorbiaceae) ‘Tellapulcheri’ is mixed into 500 ml water. Drenched this mixture twice a day for two days. (Ref: Bagamma, Sangapur village).
- Ground 100 g leaves of *Psidium guajava* L.(Mirtaceae) ‘Jama’ along with same quantity of *Securinega leucopyrus* (Willd.) Muell-Arg.(Euphorbiaceae) ‘Tellapulcheri’ to squeeze out the juice. Drench 100 ml extract by adding buttermilk once a day for two days. (Ref: Gangamma, Chilkapali village).
- Feed handful full leaves of *Bambusa arundinaceae* (Retz.)Willd.(Poaceae) ‘Elithe’ once a day for two or three days. (Ref: Sangaiah, Jambigi village).
- Drench 100 ml leaf juice of *Ageratum conyzoides* L. (Asteraceae) ‘Ganagaju’ to adult animal twice a day until cured. (Ref: Narsagonda, Gangapur)
- The whole plant of *Amaranthus tricolor* L. (Amaranthaceae) ‘Chilaka thotakura’ is decocted and 100 ml of this decoction is given internally twice daily for three days. (Ref: Laddi Bandigonda, Gangapur)
- 30 ml stem bark extract of *Bridelia montana* Willd. (Euphorbiaceae) ‘Panchothkam’ is given internally twice daily till cured. (Ref: Laddi Bandigonda, Gangapur)
- 20 ml stem bark extract of *Bridelia retusa* (L.) Spreng. (Euphorbiaceae) ‘Mulumaddi’ is given orally along with one glass of water twice daily for 2 days. (Ref: Jampati Sangonda, Gangapur)
- 50 ml stem bark extract of *Careya arborea* Roxb. (Barringtoniaceae) ‘Dudippa’ is given internally twice daily for 3 days. (Ref: Ailaiah, Nallavalli)
- 10 g seed powder of *Celosia argentea* L. (Amaranthaceae) ‘Gunugu’ is mixed into to 500 ml buttermilk and drenched twice daily for two days. (Ref: Kadali Narsigonda, Uthpalli)
- 100 ml fresh tuber juice of *Cissus vitiginea* L. (Vitaceae) ‘Kududine’ is drenched twice daily untill cured. (Ref: Satham Ramulu, Narsapur)
- 100 ml stem bark extract of *Cordia dichotoma* Forst. f. (Boraginaceae) ‘Iriki’ is drenched twice daily till cured. (Ref: Laddi Bandigonda, Gangapur)
- 200 ml stem juice of *Cuscuta reflexa* Roxb. (Convolvulaceae) ‘Pasi teega’ is given internally twice daily till cured. (Ref: Narsimlu, Ramchandrapur)
- 50 ml stem bark juice of *Grewia hirsuta* Vahl, Symb (Tiliaceae) ‘Bontha’ is mixed into 200 ml buttermilk and drenched once daily till cured (Ref: Golla Pochaiah, Thimmapur)
- 50 ml fresh stem bark juice of *Helicteres isora* L. (Sterculiaceae) ‘Nulithada’ is drenched once daily for three days. (Ref: Narsagonda, Gangapur)
- 50 ml root juice of *Holostemma ada-kodien* Schultes in L., (Asclepiadaceae) ‘Adavipala teega’ is drenched by adding 5g curcuma powder, twice daily till cured. (Ref: Elcha Pentaiah, Nastipur)
- Grind 50 g stem bark of *Jatropha curcas* L. (Euphorbiaceae) ‘Nepalam’ and mixed into 200 ml butter milk. Drench this medicine once daily for two days (Ref: Laddi Bandigonda, Gangapur)
- Fresh leaf juice of *Sida acuta* Burm.f. Borss. (Malvaceae) ‘Visaboddi’ is given along with buttermilk once daily till cured. (Ref: Satham Ramulu, Narsapur)
- 10 ml Stem bark juice of *Streblus asper* Lour. (Moraceae) ‘Barrenka’ is given with equal quantity of butter milk, twice daily till cured. (Ref: J Narsagonda, Gangapur)
- 100 ml fresh stem bark juice of *Wrightia tinctoria* (Roxb.) R.Br. (Apocynaceae) ‘Tellapalakodisa’ is drenched twice daily for 3 days. (Ref: Golla Pochaiah, Thimmapur)
- 100 ml fresh stem bark juice of *Zizyphus mauritiana* Lam. (Rhamnaceae) ‘Regu’ is given internally twice daily for 3 days. (Ref: Golla Pochaiah, Thimmapur)
- 100 ml stem bark juice of *Zizyphus xylopyrus* (Retz.) Willd. (Rhamnaceae) ‘Gotte’ is given internally once daily till cured. (Ref: Mucha Narayana, Ramachandrapur)

Difficulty in delivery (“Enaleka Povadam”)

- Apply leaf pulp of *Aloe vera* (L.) Burm.f. (Liliaceae) Kalabanda’ at cervix (Ref: Papanolla Manaiah, Konyala)

- 50 ml stem bark juice of *Gmelina arborea* Roxb. (Verbenaceae) 'Gummudu chettu' is drenched for one time only. (Elcha Pentaiaha, Nastipur)

Dyspepsia ("Ajeerti")

- Drench 100 ml leaf juice of *Acalypha indica* L. (Euphorbiaceae) 'Kuppi or Pittakura' along with 5 g of hing to the affected animal to get immediate relief from dyspepsia. (Ref: Elcha Pentaiaha, Nastipur)
- Feed leaves of *Basella alba* L. (Basellaceae) 'Bachali' along with other fodder to get relieve from constipation. (Ref: Laddi Bandigonda, Gangapur)

Eye injury ("Kanti debbalu")

- Chew fresh leaves of *Albizia lebeck* (Linn.) Willd. (Mimosaceae) 'Tella dirisena' and spit on the injured eye of cattle repeat if necessary. (Ref: Cheeguri Ellaiah, Avancha)
- Handful full fresh leaves of *Gymnema sylvestre* (Retz.) R.Br. (Asclepiadaceae) 'Teepi aku', *Ocimum sanctum* L. (Lamiaceae) 'Tulasi', *Phoenix sylvestris* (L.) Roxb. (Palmaceae) 'Eeta chettu' grind them all to make juice. Wash the affected eye with this prepared juice once daily till cured. (Ref: Sampati Muthyalu, Gummadidala)

Fevers ("Jvaram")

- Drench 100ml stem bark juice of *Soymida febrifuga* (Roxb.) A. Juss. (Meliaceae) 'Somi chettu' internally once daily till cured (Ref: Golla Pochaiah, Thimmapur)
- Grind 50g stem bark of *Syzigium cumini* (L.) Skeels . (Mirtaceae) 'Neredu chettu' along with equal quantity of leaves of *Ocimum sanctum* L. and 25g whole plant of *Andrographis paniculata* (Burm.f.) Wall. ex Nees (Acanthaceae) 'Nelavemu' to make 10g size of bolus. Boluses are given internally twice daily till cured (Ref: Cheeguri Ellaiah, Avancha)
- 100 ml decoction of *Centella asiatica* is drenched twice daily for two days. (Ref: Kondi Veeraiah, Avancha)

Foot and Mouth Disease ("Galikuntu rogam")

- Feed ½ kg Coriander leaves along with bananas once daily for 3- 4 days. This remedy can be used as preventive medicine for FMD. (Ref: Satham Ramulu, Narsapur)
- Make porridge with 500 g grain flour of *Eleusine coracana* L. Gaerth . (Poaceae) 'Thydaalu' and feed twice a day for 3-4 days. Feed Fenugreek and bananas during treatment. (Ref: Golla Pochaiah, Thimmapur)
- 12 fruits of *Musa paradisiaca* L. (Musaceae) 'Arati' are fed along with leaves of *Trigonella foenumgraceum* L. (Fabaceae) 'Menthulu' for a week (Ref: Golla Pochaiah, Thimmapur)

Foot rot ("Gittala rogam")

- Apply resin collected from the stem bark of *Tectona grandis* L. (Verbenaceae) 'Teku' externally on the affected hooves once daily till cured. (Ref: Kurma Anjaiah, Avancha)
- Wash affected part with stem bark extract of *Acacia nilotica* (L.) Del. (Mimosaceae) 'Nalla thumma' once daily till cured. (Ref: Satham Ramulu, Narsapur)
- Crush stem bark of *Cleistanthus collinus* (Roxb) Benth. (Euphorbiaceae) 'Billakodisa' along with stem bark of *Soymida febrifuga* (Roxb.) A. Juss. (Meliaceae)

'Somi chettu' pour this mixture in a tub and allow affected animal to step in for 15 minutes repeat it until cured. (Ref: Golla Pochaiah, Thimmapur)

- Apply leaf pulp of *Aloe vera* (L.) Burm.f. (Liliaceae) 'Kalabanda' by mixing little salt externally on the affected part once daily till cured. (Ref: Sampati Muthyalu, Gummadidala)
- Grind stem bark of *Pithecellobium dulce* (Roxb) Benth. (Mimosaceae) 'Seemachintha' along with stem bark of *Acacia nilotica* (L.) Del. (Mimosaceae) 'Nalla thumma' to make paste and boil this paste in water for 5 minutes and apply on the affected part once daily till cured. (Ref: Golla Pochaiah, Thimmapur)
- Pound the stem barks of *Soymida febrifuga* (Roxb.) A. Juss. (Meliaceae) 'Somi chettu' and *Cleistanthus collinus* (Roxb) Benth. (Euphorbiaceae) 'Billakodisa' and put them in wet mud pit. Allow the affected animal to stand on it for 15 minutes twice daily till cured. (Golla Pochaiah, Thimmapur)
- Pound fresh stem bark of *Strychnos nux-vomica* L. (Loganiaceae) 'Musti' soaked them in water for 6-7 hours. Wash infected hooves daily with this water and apply neem oil on wounds for 3-4 days. (Ref: Golla Pochaiah, Thimmapur)
- Apply Stem bark paste of *Alangium salvifolium* (L.f.) Wang. (Alangiaceae) 'Uduga' is externally on affected part by mixing curcuma powder once a day for three days. (Ref: Mallesh, Nawabpet)

Fowl pox ("Masuchi")

- Handful fresh leaves of *Abrus precatorius* L. (Fabaceae) 'Guruvida' are grind with little salt by adding 5 g of turmeric powder to make a paste. It is applied on the affected part, twice daily for three days. (Ref: Illutla China Penta Goud, Kagajmaddur)

Galactagogues ("Palu ivvaka povadam")

- Feed leaves of *Syzigium cumini* (L.) Skeels . (Mirtaceae) 'Neredu chettu' as green fodder daily to the cattle for 15 days to enhance milk production. (Ref: Golla Pochiah, Thimmapur)
- 100 g root powder of *Asparagus racemosus* Willd. (Liliaceae) 'Sathavari' is mixed into cattle feed and fed to the cow once in a week to increase milk production. (Ref: Satham Ramulu, Narsapur)
- Feed leaves of *Alternanthera sessilis* (L.) DC. (Amaranthaceae) 'Ponnaganti' as green fodder daily to the cattle for 15 days (Ref: Golla Pochiah, Thimmapur)
- Feed dried flowers of *Madhuca longifolia* (Koen.) MacBr. (Sapotaceae) 'Ippa' to the cows along with other fodder to enhance milk production. (Ref: Satham Ramulu, Narsapur)

Heamaturia ("Bodderu kuttu")

- Grind 50 g fresh stem bark of *Abutilon indicum* (L.) Sweet. (Malvaceae) 'Botlabenda' along with 10 g of *Cuminum cyminum* L. (Apiaceae) 'Jeelakarra' and mix into 500 ml water. Drench this medicine once daily for three days. Give 250 ml of this mixture in case of sheep and goats. (Ref: Golla Pochaiah, Thimmapur)
- Prepare 100 ml root decoction of *Aerva lanata* Juss. (Amaranthaceae) 'Pindikura' and it is mixed with 10 g

powder of *Cuminum cyminum* L. (Apiaceae) ‘Jeelakarra’. 30 ml of this mixture is drenched to the cattle twice daily for 3 days. (Ref: Muthyalu, Gummadidala)

- Grind 50 g stem bark of *Bauhinia racemosa* Lam. (Fabaceae) ‘Are’ along with 5 g of black pepper to make a pill. 30 g size of pill is given internally through water twice daily for three days. (Ref: Panyala Pochaiah, Kasala)
- 50 ml root extract of *Hemidesmus indicus* (L.) Schult. (Periplocaceae) ‘Sugandi pala’ is drenched twice daily till cured. (Ref: Chiguri Ellaiah, Avancha)
- 100 ml fresh root extract of *Typha angustifolia* L. (Typhaceae) ‘Siripunjaram’ is drenched twice daily for 3-4 days. (Ref: Golla Pochaiah, Thimmapur, Muddagalla Narsaiah)

HCN poison (tympy occurs due to consumption of poison leaves which contain hydrocyanic acid) (“**Namu ekkuta**”)

- Crush handful full leaves of *Annona squamosa* L. (Annonaceae) ‘Seethaphalam’ to make bolus, 30 g size of bolus is given orally twice for one day. (Ref: Golla Pochaiah, Thimmapur)

Horn fracture (“Kommu viruguta”)

- Crush fresh stem bark of *Cissus vitiginea* L. (Vitaceae) ‘Kududine’ and it is boiled in sesame oil for 15 minutes. Apply this medicine externally once daily till cured. (Ref: Satham Ramulu, Narsapur)

Intestinal worms (“Nattalu”)

- Grind handful leaves of *Aristolochia bracteolata* Lam. (Aristolochiaceae) ‘Gadida gadapa’ along with 50g of *Cuminum cyminum* L. (Apiaceae) ‘Jeelakarra’, 10g of Sonf to make a 30g size of bolus. Bolus is given orally in the morning and evening for one day. Dosage: 30g for sheep and goats and calves. (Ref: Golla Narayana-Hathnura)
- 20 g of seed powder of *Carica papaya* L. (Caricaceae) ‘Boppayi’ is given internally for three days for calves of bovines. (Ref: Satham Ramulu, Narsapur)
- Grind handful leaves of *Enicostemma axillare* (Lam.) Raynal. (Gentianaceae) ‘Resika’ along with 5g of common salt, 5g of *Curcuma longa* L. (Zingiberaceae) ‘Pasupu’ to make a bolus. 30g bolus is given internally twice a day for two days. (Ref: Golla Pochaiah, Thimmapur, Shivampet, Cheeguri Ellaiah, Avancha)
- 2 g bristles of *Mucuna pruriens* (L.) DC. (Fabaceae) ‘Peddadalagondi’ are mixed into 50 ml butter milk and it is given orally as a single dose. (Ref: Kadal Narsagonda, Uthapalli)
- Grind 2 flowers of *Cucurbita maxima* and mixed into 100 ml milk. Drench this medicine once a day for three days to get rid of worms. (Ref: Kondi veeraiah, Avancha)
- 1 seed of *Semecarpus anacardium* L. (Anacardiaceae) ‘Nalla cheedi’ is ground with 50 g of jaggery and make 20g sized pills. Feed a pill twice a day for two to three days. (Ref: Golla Pochaiah, Thimmapur)

Impotency in bulls (“Eddu datakunduta”)

- Feed ½ kg each boiled seeds of *Cicer arietinum* L. (Fabaceae) ‘Senagalu’ and *Dolichos biflorus* L. (Fabaceae) ‘Ulavalu’ are fed to bulls once daily for a week (Ref: Golla Pochaiah, Thimmapur)

Mad dog bite (“Pichi Kukka Katu”)

- 100 ml stem bark juice of *Acacia farnesiana* (L.) Willd. (Mimosaceae) ‘Muriki tumma’ is given twice a day for three days. (Ref: Golla Pochaiah, Thimmapur)

Mange (“Gajji”)

- Leaf paste of *Clerodendrum multiflorum* (Burm. f.) O. Ktze. (Verbenaceae) ‘Takkalaku’ is applied externally on the affected part once daily for 3-4 days (Ref: Gopyanaik, Chinagottimukkala)
- Leaf paste of *Cryptostegia grandiflora* R.Br. (Periplocaceae) ‘Nagamalli teega’ is applied externally on the affected part once daily for 3-4 days (Ref: Bandigonda, Gangapur)
- Leaf paste of *Feronia elephantum* Correa. (Rutaceae) ‘Velaga’ is applied on the affected part till cured. (Ref: Golla Pochaiah, Thimmapur)

Mastitis (“Podugu vapu”)

- Make paste with whole plant of *Ammannia baccifera* L. (Lythraceae) ‘Agnivendram’ by adding with turmeric powder. Apply this paste externally once daily till cured. (Ref: Kokkarakonda Mallesh, Gummadidala)
- Leaf paste of *Argemone mexicana* L. (Papaveraceae) ‘Ullivinjara’ is applied along with neem oil externally on the udder once daily till cured. (Ref: Chettukinda Malugonda, Gangapur)

Paraplegia (“Enuka kallu chachubaduta”)

- Pound equal quantity of the leaves of *Clerodendrum multiflorum* (Burm. f.) O. Ktze. (Verbenaceae) ‘Takkalaku’, *Phyllanthus reticulatus* Poir. (Euphorbiaceae) ‘Pulcheri’, *Argemone mexicana* L. (Papaveraceae) ‘Ullivinjara’, *Tylophora indica* R.Br. (Apocynaceae) ‘Mekameyani teega’ to squeeze out the juice. 100ml of this juice is given orally along with 300ml butter milk once daily for three days. (Ref: Chettukinda malugonda, Gangapur)
- 100 ml leaves extract of *Caesalpinia bonduc* (L.) Roxb. (Caesalpinaceae) ‘Gachakai’ is mixed into equal quantity of goat milk and it is drenched daily once in the morning for two days. (Ref: Laddi Pedaramgonda, Gangapur)

Pneumonia (“Domma rogam”)

- 30 ml of Leaves extract of *Agave Americana* L. (Agavaceae) is mixed into equal amount of human urine. Drench this medicine to the affected animal twice a day for two days. (Ref: Laddi Pedda Ramgonda, Gangapur)
- Mix 50 ml stem bark extract of *Holoptelea integrifolia* (Roxb.) Planch. (Ulmaceae) ‘Nemalinara’ with 10 g seed powder of *Carum copticum* Benth.&Hook., 10g of *Piper nigrum* L. (Piperaceae) ‘Miriyalu’, and 10 dry fruit powder of *Capsicum annum* L. (Solanaceae) ‘Mirapa’ and mix into 750ml water. 750ml of this mixture is drenched for cattle and buffaloes once a day for three days. (Ref: Golla Pochaiah, Thimmapur and Dasharadha Panyala)
- Grind 3 leaves of *Solanum melanginum* L. (Solanaceae) ‘Vankaya’ with 5g of *Carum copticum* Benth.&Hook., 3 tender leaves of *Vitex negundo* L. (Verbenaceae) ‘Vavili’ to squeeze out the juice. 10 ml juice is given along with 200ml water twice a daily for three days. (Ref: P.Gopyanaik, Chinnagottimukkala)

- 100ml root extract of *Solanum xanthocarpum* Schrad. & Wendl. (Solanaceae) 'Mulkakaya' is given internally along with 200ml warm water twice a day for 3 days. (Ref: Golla Pochaiah, Thimmapur)
- 50g root powder of *Withania somnifera* (L.) Dunal (Solanaceae) 'Bommadologadda' is given internally with 750 ml of rice gruel thrice daily for 3 days (Ref: Golla Pochaiah, Thimmapur)

Peste des petites ruminant ("Purru Sorpu")

- Grind 150 g fresh stem bark of *Holarrhena antidysenterica* (Buch.-Ham.) Wall. Ex G. Don (Apocynaceae) 'Palakodisa' along with equal quantity leaves of *Andrographis paniculata* (Burm.f.) Wall. ex Nees (Acanthaceae) 'Nelavemu' and mix it in 200 ml rice gruel and drench, twice a day for three days. (Ref: Golla narayana, Hathnura)

Postpartum haemorrhage ("Inina taruvata rakta sravam")

- Vaginal part is washed with leaf decoction of *Psidium guajava* L. (Mirtaceae) 'Jama' to control bleeding and other infection. (Ref: Satham Ramulu, Narsapur)

Poultry diarrhea ("Kollalo parudu")

- Pound 50 g stem bark of *Ailanthus excelsa* with 10 g of *Curcuma longa* L. (Zingiberaceae) 'Pasupu' and mix into poultry feed. Feed this mixture once a day for 3 days. (Ref: Veeraiah, Kondapur)
- 5 ml fruits juice of *Citrus aurantifolia* is mixed into 10 ml country arrack. 3 drops of this mixture is given orally to a adult bird and one drop in case of small chicks once in the early morning for three days. (Ref: Veeraiah, Kondapur)
- 5 g rhizome powder of *Curcuma longa* is mixed in one liter water and it is given orally once a day for 3 days. (Ref: Gopya Naik, Chinagottimukkala)
- 3 drops tuber extract of *Dioscorea bulbifera* is given orally by adding 1 drop of lime juice to an adult bird once daily for 3-4 days. (Ref: Veeraiah, Kondapur)
- 3 drops leaf juice of *Momordica charantia* is poured orally to an adult bird once in the morning for 3 days. (Ref: Muthyalu, Gummadidala)

Retained placenta ("Mayapadaka povadam")

- Feed green leaves of *Bambusa arundinaceae* (Retz.) Willd. (Poaceae) 'Elithe' to cow or buffalo after delivery or 200 ml leaf decoction is given internally as a single dose. (Ref: Golla Pochiah, Thimmapur)
- 50 g fresh leaves of *Mangifera indica* are boiled in half liter water for 15 minutes. 200 ml of this decoction is given orally twice a day for one day. (Ref: Illutla Penta Goud, Kagajmadduru)
- 1 kg of boiled grains of *Panicum sumatrense* are fed to the animal for quick removal of placenta. (Ref: Elcha Pentaiah, Nastipur)
- Feed 2kg boiled grains of *Pennisetum americanum* to the animal for quick removal of placenta after delivery. (Ref: Golla Pochaiah, Thimmapur)
- 500 ml stem bark juice of *Aegle marmelos* is drenched to the cow for one time only. 250 ml is given in case of Sheep and Goats. (Ref: Muthyalu, Gummadidala)

Snake bite ("Pamukatu")

- 100 ml root extract of *Citrullus colocynthis* (L.) Schr. (Cucurbitaceae) 'Paparabudama' is given internally twice in a day. (Ref: Jakkula Kistaiah, Nawabpet)

Sprains and Swellings (Benukulu/ Vapulu")

- Grind handful leaves of *Vitex negundo* L. (Verbenaceae) 'Vavili' to make a paste and it is applied on the affected part once daily for 3-4 days.
- 250 g leaves of *Wattakaka volubilis* fry them up for 15 minutes and put them on the affected part and wrap with cloth, once a day for 3-4 days. (Ref: Satham Ramulu, Narsapur)
- Leaf extract of *Datura metel* (Solanaceae) is applied externally on the affected part once daily for 3-4 days. (Ref: Chiguri Ellaiah, Avancha)
- 100 ml leaf extract of *Coccinia grandis* (Cucurbitaceae) is mixed into equal quantity of sesame oil and boil it for 15 minutes. The medicated oil is applied externally on the affected part once daily until cured (Ref: Kondi veeraiah, Avancha)
- Milk sap of *Calotropis gigantea* (Asclepiadaceae) is applied externally on affected part twice daily i.e morning and evening until cured. (Ref: J Ramgonda, Gangapur)
- 100 g seeds of *Celastrus paniculatus* are crushed and boiled them in 100 ml of sesame oil for 15 minutes and it is applied externally on the affected part once daily till cured. (Ref: Malgonda, Gangapur)
- Leaf paste of *Dodonaea angustifolia* is applied on the affected part once daily till cured. (Ref: Chiguri Ellaiah, Avancha)
- Milk sap of *Euphorbia tirucalli* is applied externally on the affected part once daily till cured. Do not allow animal to lick (Ref: Satham Ramulu, Narsapur)
- Leaves of *Hibiscus rosa-sinensis* are decocted in the coconut oil and it is applied externally twice daily till cured. (Ref: Illutla China Pentaiah, Kagaj Madduru)
- 100 ml stem bark extract of *Mitragyna parvifolia* is given once daily for 5 days. (Ref: Kokkarakonda Mallesh, Gummadidala)
- 100 g root paste of *Plumbago zeylanica* is boiled in the equal quantity of sesame oil for 15 minutes and it is applied externally on the affected part once daily till cured. (Ref: Satham Ramulu, Narsapur)
- Apply stem bark paste of *Ricinus communis* externally and on the affected part once daily till cured. (Ref: Satham Ramulu, Narsapur)
- Leaf extract of *Vitex negundo* L. (Verbenaceae) 'Vavili' is decocted with 500 ml of Sesame oil and it is applied externally once daily till cured. (Ref: Golla Pochaiah, Thimmapur)
- Roast the leaves of *Wattakaka volubilis* and placed them on affected part while they are warm once daily for 3 days. (Ref: Jarpal Gangaram, Narayanpur)
- Root paste of *Barleria prionitis* is applied externally on the affected part for 2-3 days. (Ref: Kokkarakonda Mallesh, Gummadidala)
- Latex of *Cryptolepis buchananii* is applied on the affected part once daily till cured. (Ref: Cheeguri Ellaiah, Avancha)

Stomachache (“Kadupu noppi”)

- Grind 2 bulbs of *Allium cepa* L. (Liliaceae) ‘Elligadda’ with 50 g roots of *Cleome gynandra*, 10g of *Trachispermum ammi* and mix it into 200 ml of rice water. 100 ml of this medicine is drenched to the adult animals twice daily for two days. (Ref: Bhumakelli Malliah, Atchampet)
- Grind 2 cloves of *Allium sativum* L. (Liliaceae) ‘Elligadda’ along with handful young leaves of each *Vitex negundo* L. (Verbenaceae) ‘Vavili’, *Tylophora indica* R.Br. (Apocynaceae) ‘Mekameyani teega’, 50g *Cuminum cyminum* L. (Apiaceae) ‘Jeelakarra’, 5 dry fruits of *Capsicum annum* L. (Solanaceae) ‘Mirapa’ and mix with 750ml of warm water. Drench this medicine to the cattle as a single dose. (Ref: Pochaiah-Gudemgada)
- Make bolus with fruit pulp of *Cassia fistula* L. (Caesalpiniaceae) ‘Rela’ feed twice daily for two days. (Ref: Nadipi Anjavva, Saipet)
- 5 ml fruit extract of *Citrullus colocynthis* (L.) Schr. (Cucurbitaceae) ‘Paparabudama’ is mixed into 50 ml water and drenched as single dose. (Ref: Kadal Narsagonda, Uthaplli and Laddi Beerugonda, Gangapur)
- 50 g roots of *Cleome gynandra* are crushed along with 1 onion and 10 g of *Trachispermum ammi* and mixed into 200 ml of rice water and 200 ml of this solution is drenched twice daily for three days. (Ref: Bhumakelli Malliah, Atchampet)
- 50g leaves of *Clerodendrum multiflorum* (Burm. f.) O. Ktze. (Verbenaceae) ‘Takkalaku’ are crushed and given internally twice daily for two days. (Ref: Elcha Pentaiah Nastipur)
- Grind together 10g fruits of *Cuminum cyminum* L. (Apiaceae) ‘Jeelakarra’, 10 g leaves of *Aristolochia bracteolata*, *Pimpinella anisum* and mix them into 1 glass of water. Drench 200 ml of this medicine internally twice a day for 3 days. (Ref: Golla narayana, Hathnura)
- 10 g of tubers of *Cyperus rotundus*, 10 g stem bark of *Holarrhena anti dysenterica antidysenterica* (Buch.-Ham.) Wall. Ex G. Don (Apocynaceae) ‘Palakodisa’, 10 g of *Zingiber officinalis* sun dry them to make powder. 30 g powder is given internally along with 250 ml of buttermilk twice daily till cured. (Ref: Satham Ramulu, Narsapur)
- Grind handful leaves of *Enicostemma axillare* (Lam.) Raynal. (Gentianaceae) ‘Resika’ along with equal quantity of leaves of *Solanum melanginum* to make a bolus. 30g size bolus is given internally for sheep and goats 3 times a day. (Ref: Golla narayana, Hathnura)
- 20ml of stem bark juice of *Ficus racemosa* is given internally twice daily for three days. (Ref: Sadulu Venkaiah, Narsapur)
- 2 seeds of *Semecarpus anacardium* L. (Anacardiaceae) ‘Nalla cheedi’, 10g of *calcium carbonate (lime)* boil it in 500ml water for 10 minutes. 200ml of this medicine is given internally twice a day. (Ref: Linga goud, Thimmapur)
- Ground the leaves of *Solanum melanginum* along with *Enicostema axillare* to make bolus. 30 g are given internally thrice a day for one day. (Ref: Golla narayana, Hathnura)
- 50 ml fresh stem bark extract of *Woodfordia fruticosa* is drenched in the morning and evening to get relief from stomachache. (Ref: Golla Pochaiah, Thimmapur)

Stomatitis (“Noti gallu”)

- Crush 5 dry fruits of *Capsicum annum* L. (Solanaceae) ‘Mirapa’ with salt and rub on the tongue once a day for 3-4 days (Ref: Laddi Anjigonda, Gangapur)

Swelling in Testis (“Buddala Vapu”)

- Seed paste of *Caesalpinia bonduc* is applied on the affected part once a day for three to four days (many healers in the district)

Trypanosomiasis (“ Tikka Rogam”)

- Grind handful leaves of *Clerodendrum multiflorum* (Burm. f.) O. Ktze. (Verbenaceae) ‘Takkalaku’ along with 5g black pepper and given orally twice a day for 3 days. (Ref: Jakkula Kistaiah, Nawabpet)
- 10 ml leaf extract of *Cleome gynandra* is mixed into 100 ml of water and it is drenched twice a day for 3 days. (Ref: Sappati Muthyalu, Gummididala)
- One table spoon full root extract of *Leonotis nepetifolia* is given internally for one day (Ref: Ganya, Atchampet).

Ticks/lice (“Pelu/ Pidulu”)

- A twig of *Heliotropium indicum* is placed at poultry shed and it is removed in the morning to burn it. Repeat it if necessary. (Ref: Elcha Pentaiah, Nastipur)
- Fresh young leaves of *Passiflora foetida* are soaked in the cow urine for whole night and animals are washed with this solution once daily for 3 days. (Ref: Satham Ramulu, Narsapur)
- Apply seed oil *Pongamia pinnata* externally on the affected part twice daily till cured. (Ref: Elcha Pentaiah, Nastipur)
- A twig of *Chloroxylon swietenia* is placed at poultry hut daily during night time and burnt in the next day morning repeat the process for 3-4 days. (Ref: Gopya Naik, Chinagottimukkala)

Tumors (“ Kanithi”)

- Apply milk sap of *Croton bonplandianum* externally on the affected part once daily for 3- 4 days. (Ref: Golla Pochaiah, Thimmapur)

Weakness (“ Endu rogam”)

- 30 ml root extract of *Boerhaavia diffusa* is given internally once daily for a week. (Ref: Jakkula Kristaiah, Nawabpet)
- Feed boiled seeds of *Dolichos biflorus* to the bullocks once a day for 15 days. (Ref: Golla Pochaiah, Thimmapur)
- Feed leaves of *Euphorbia geniculata* as green fodder to the sick animal daily for quick recovery from illness. (Ref: Sangaiah, Jambigi)
- 500 ml leaf juice of *Solanum nigrum* is drenched once daily for a week (Ref: J Narsagoud, Gangapur).

Wounds and Maggot or Septic Wounds (“Pundlu/ Puchina pundlu”)

- Apply leaf paste of *Tridax procumbens* L. (Asteraceae) ‘Gayapaku’ and on the wound once a daily till cured (Ref: Sappati Muthyalu, Gummididala)
- Make leaf paste of *Achyranthes aspera* and it is applied on the affected part once a daily till cured. (Ref: Sappati Muthyalu, Gummididala)

- Grind handful leaves of *Acanthospermum hispidum* and to make paste. Apply this paste on the wound once a daily till cured. (Ref: Kadal narsagonda, Uthpalli)
- Apply leaf paste of *Tridax procumbens* L. (Asteraceae) 'Gayapaku' by mixing with coconut oil twice daily until cured. (Ref: J Sangonda, Gangapur)
- Fruit paste of *Annona squamosa* L. (Annonaceae) 'Seethaphalam' is applied externally until cured. (Ref: Kadal narsagonda, Uthpalli)
- Apply seed resin of *Semecarpus anacardium* L. (Anacardiaceae) 'Nalla cheedi' by mixing ash and sesame oil externally twice a day for 3 days. (Chinchettu bandigonda-Gangapur)
- Grind hand full leaves of *Ximenia americana* to make a paste and it is applied on the affected part once a daily till cured. (Ref: Golla pochiah, Thimmapur)
- Apply seed resin of *Semecarpus anacardium* along with leaf past of *Azadirachta indica*, once daily until cured (Ref: J.Sangonda,Gangapur)
- Leaf paste of *Alysicarpus monolifer* is applied externally on the affected part once daily till cured. (Ref: P.Gopya Nayak, Chinagottimukkala)
- Make root paste of *Amaranthus spinosus* along with turmeric powder and apply this paste externally twice daily for 3 days. (Ref: Erramma, Guntamarpalli)
- Leaf paste of *Argyrea nervosa* is applied externally by mixing neem oil on the affected part once daily till cured. (Ref: Panyala Pochiah, Kasala)
- Stem bark paste of *Haldinia cordifolia* is applied externally daily once till cured. (Ref: Maddikunta Bhimaiah, Rustumpet)
- Wrap stem bark fiber of *Abutilon indicum* (L.) Sweet. (Malvaceae) 'Botlabenda' around the animal neck and keep it for 3-4 days. (Ref: Cheviti Ramulu, Madduru)
- Make leaf paste of *Acalypha indica* L. (Euphorbiaceae) 'Kuppi or Pittakura' along with 4 fruits of black pepper and 3 cloves of garlic. Apply this medicine topically once daily until cured. (Ref: Elcha Pentaiah, Nastipur)
- Leaf paste of *Annona squamosa* L. (Annonaceae) 'Seethaphalam' is applied externally on the affected part of the body once daily till cured (Ref: Kadal narsagonda, uthpalli)
- Make paste with leaves and roots of *Aristolochia indica* and apply externally on the affected part once daily for 3-4 days. (Ref: J Narsagonda, Gangapur)
- Apply leaf paste of *Cassia occidentalis* externally once a day until cured. (Ref: Kadali Narsagonda, Uthpalli)
- Stem bark paste of *Dalbergia paniculata* is applied along with turmeric powder once daily till cured. (Ref: Satham Ramulu, Narsapur)
- Leaves and stem bark paste of *Diospyrus montana* is applied externally once daily till cured. (Ref: Jakkula Kistaiah, Nawabpet)
- Milk sap of *Ficus bengalensis* is applied on the wound to kill maggots twice daily for 2 days and the next day turmeric powder is applied along with neem oil twice a day for three days. (Ref: Satham Ramulu, Narsapur)
- Corm paste of *Gloriosa superba* is applied externally on wounds once a day for three days. (Ref: Elcha Pentaiah, Nastipur)
- Paste made out of whole plant of *Gomphrena celosioides* is applied externally once daily till cured. (Ref: Ganya Atchampeta)
- Fresh leaves paste of *Jatropha gossypifolia* is apply externally once daily till cured (Elcha Pentaiah, Nastipur)
- Boil leaf paste of *Lagerstroemia parviflora* with coconut oil for five minutes and it is applied externally on wounds once daily for 4 days. (Ref: Laddi Bandigonda, Gangapur)
- Grind handful leaves of *Lantana camara* with salt and turmeric powder and it is applied externally twice a day till cured. (Ref: Erramma, Guntamarapalli)
- Apply leaf paste of *Lawsonia inermis* is externally once a day till cured (Ref: J Narsagoud, Gangapur)
- Stem bark paste of *Strychnos nux-vomica* is applied externally on the affected part once daily till cured. (Ref: Satham Ramulu, Narsapur)
- Leaf paste of *Tragia plukenetii* applied externally on the affected part twice daily till cured. (Ref: Muddagalla Narsaiah, Rustumpet)
- Plant paste of *Tribulus terrestris* is applied externally once daily till cured. (Ref: Golla Pochiah, Thimmapur, Anjaiah, Kanrla)
- Leaf pasted of *Zizyphus oenoplia* is applied on the affected part once daily till cured. (Ref: P Gopyanaik, Chinnagotti mukkala, Medak)
- Make paste with whole plant of *Biophytum sensitivum* and it is applied locally once daily till cured. (Ref: Beerappa, Saipet)

Yoke gall (" Arru paguluta")

- Make stem bark paste of *Chloroxylon swietenia* is with leaves of *Vitex negundo* L. (Verbenaceae) 'Vavili' and apply externally on affected part twice daily until cured. (Ref: Beerappa, Saipet)
- Fresh leaf extract of *Citrullus colocynthis* (L.) Schr. (Cucurbitaceae) 'Paparabudama' is applied on the affected part twice daily for 3 days. (Ref: Illutla China Pentaiah, Kagajmadduru)
- Leaf extract of *Wattakaka volubilis* is applied externally on the affected part twice daily till cured (Ref: Kadal Narsagonda, Uthpalli, Mallaiah, Rajalingam)

RESULTS AND DISCUSSION

The present study revealed that the rural folklore communities of Medak district have immense knowledge on medicinal plants available in their surroundings for veterinary health care treatments. Golla, Kurma and Lambada communities in the district have rich knowledge for treating the disease prevailing among the livestock.

A total of 173 species belonging to 149 genera under 66 families are recorded.

In all a total of 214 remedies were recorded for 43 veterinary disease conditions. Of these 70 remedies were recorded under digestive disorders (3 remedies for anorexia, 12 for bloat, 2 for dyspepsia, 32 for diarrhoea/ dysentery, 6 for intestinal worms, 13 for stomach ache, 1 for hydrocynic acid tympani occurs due consumption of poison leaves which contain hydrocyanic acid), and 1 for stomatitis; 5 remedies were recorded under eye diseases (2 for eye injury, 3 for corneal opacity), 2 remedies were recorded under first aid conditions (1 for dog bite and 1 for snake bite). 25 remedies recorded under respiratory and circulatory system (4 for bronchitis, 1 for debility, 2 for paraplegia, 1 for *Peste des petites ruminant* (PPR), 5 for pneumonia, 3 for trypanosomiasis, 1

for controlling bluetongue, 3 for foot and mouth disease, 4 for weakness/ inactiveness and 1 for debility). 17 remedies were documented under reproductive problems (2 for anoestrus, 2 for difficulty in delivery, 4 for galactagogues, 1 for impotency in bulls, 5 for retained placenta, 2 for mastitis and 1 for postpartum haemorrhage). 16 remedies were recorded for skin problems (8 for foot rot, 4 for tick/lice, 3 for mange, 1 for tumors). 68 remedies were documented other disease conditions (11 for bone setting (fracture), 3 for yoke gall, and 31 for wounds/maggot or septic wounds, 16 sprains/ swellings, 1 for swellings in testis, 2 for cuts and burns, 1 for horn fracture and 3 for fevers). 5 remedies were recorded for haematuria under urinary problems. 6 remedies recorded for poultry diseases (1 for fowl pox, and 5 for diarrhea in poultry)

Of the total remedies, 90 remedies (42%) were recorded from Kuruma healers, 56 remedies (26%) recorded from Golla healers, 25 (11.6%) remedies from Lambada healers and 43 (20%) remedies were recorded from other folklore communities in the district.

Out of total treatments, 80 treatments were of single plant drugs, 32 of two plant drugs, and 102 treatments were of three, more than three plant drugs.

Leaves are used predominantly in the drug preparation (42%) and followed by stem bark (20%), root bark (9%), tuber and rhizomes (7%), Fruits (5%), seeds (6%), whole plant (5%), Latex or milk sap (4%) and only 2% of drugs comes from flowers. Healers generally use fresh plant materials like leaves, barks (of roots and stems), tubers, rhizomes either to make juice and decoction.

Of the total remedies, 92 remedies (41.6%) were recorded from Kuruma healers, 59 remedies (26.6%) recorded from Golla healers, 27 (12.2%) remedies from Lambada healers and 43 (19.4%) remedies were recorded from other folklore communities in the district.

The author has recorded several forms of medicines like fresh juice from the fresh plant materials in the form of mixtures, pills, decoctions, powders etc. Healers generally use fresh plant materials like leaves, barks (of roots and stems), tubers, rhizomes either to make juice and decoction.

CONCLUSION

As of today the pastoralists and other folk-lore healers are still in possession of tremendous ancestral traditional knowledge on medicinal plants of their surroundings. It is the first hand information on Folk-lore veterinary herbal medicine from the district. The study established the importance of dependency of the rural people on folk-lore medicine.

Even today 8-20% of rural folk-lore is dependent of their veterinary health care problems. This shows that the social impact of the herbal drug is found to be profound and still play as an important role in their lives subsequently in the society.

The Impact Factor is found to be 16-20% under Veterinary Health Care is recorded. This can be considered as a very important Social Impact Factor (SIF) influenced by herbal plants usage in the day to day lives of the folk-lore.

Due to changes in Social and Environmental pattern these traditional healers are losing their sheen in their medicinal practices; thus affecting the loss of their livelihood. There is a shift in the mind set of the people which is also one of the causes for the loss of forest cover subsequently loss of Biodiversity.

This resulted in non availability of medicinal plants (raw material) used by the healers. The folk-lore knowledge recorded must be preserved in the form of traditional knowledge register of the Medak district. The conservation of the traditional medicinal practice knowledge of the pastoral communities of Medak district must be taken as top priority by the State and Central governmental agencies.

Telangana State Biodiversity Board must initiate to conserve this traditional knowledge in the form of Traditional Knowledge Register (TK Register) for Medak district.

The State Forest Department, Govt., of Telangana must take action towards the conservation of medicinal plant biodiversity as well as to check the loss of the habitats of these plants.

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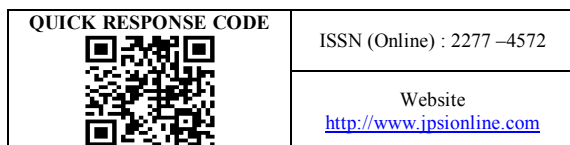
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