



Traditional veterinary herbal practice of Kalahandi district, Orissa, India.

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Abstract

Objective: To document the traditional veterinary practice in Kalahandi District, Orissa, India. **Materials and methods:** Field survey and personal discussion method was used to collect data. **Results and conclusions:** All together 42 numbers of plants belonging to 42 genera and 29 families those are used to treat various veterinary diseases, in Kalahandi district of Orissa, India are enumerated.

Key words: Traditional, veterinary, medicine, Kalahandi, Orissa, India.

1. Introduction

Cloud with dense forest and valleys the present Kalahandi district, Orissa, occupies the southwestern portion of Orissa; It is situated with in 19°, 10' and 20°, 30' North latitude & 82°, 30' and 83° 50' Eastern longitude. The district has variegated plants occupying both exotic and native flora of substantial recuperative utility. Topographically the district is undulating, characterized by hillocks and tributaries. Its eastern to southeastern zone is hilly and locally called as Dongerla Area, which is a part of Eastern ghats. The other half is almost with few isolated hill-locks and cluster of hills. This tract is locally called as Pahilpar Area.

The district is inhabited by large rural population. Several scheduled tribes like Bhunjia, Bhottada, Gond, Kandh, Banjara, Sabar

and scheduled castes like Chamar, Dhoba, Dom. Ganda and Ghasi. As a land of nomadic tribes it has a vast treasure of ethno-veterinary practices. Therefore this study was under taken to collect information on different plants used as veterinary medicines by the scheduled caste and tribes. The available information on traditional-veterinary medicine in India includes contributions of few workers [1-8]. The data in this report are based on the information gathered in the field during 1999-2002.

2. Materials and methods

The data are based on information & gathered from traditional veterinary medical practitioners and through personal observations of authors in the treatment of cattle and buffaloes. Farmers,

cattle growers, and veterinary practitioners were interviewed for traditional uses of herbal plants, about the plants they collect and use, their local names, plant parts used, preparation of remedies, diseases treated, dose and regimen of the drug. The specimens are collected and preserved in Department of Botany, Govt. Autonomous College, Bhawanipatna, Kalahandi Orissa, India.

The plants are arranged in alphabetical order with their family in parenthesis, local name, plants part used and traditional use. (Local name is abbreviated as Ln.)

3. List of medicinal plants

1. *Abutilon indicum* (L). Sweet (Malvaceae)
Ln : Jharbhendi.

Parts used: Root.

Uses: Roots fed each day to lactating cows as galactagogue.

2. *Achyranthes aspera* L. (Amaranthaceae) Ln: Kukurdanti

Parts used: Leaf.

Uses: Leaves pounded into a paste is applied on genital part and allowed to inhale the same for easy delivery and retained placenta.

3. *Aegle marmelos* L. (Rutaceae) Ln : Bel
Parts used : Leaf.

Uses: Leaves of the plant pounded with leaves of lemon grass: *Cymbopogon flexuosus* & rhizome of *Curcuma domestic* into a paste is fed to cattle twice daily in dyspepsia till cured.

4. *Allium sativum* L. (Liliaceae) Ln : Lesun.
Parts used : Bulb.

Uses: 100 gm bulb fried with 100 ml of mustard oil. After cooling it is massaged on neck of cattle for treatment of cold and cough, swollen throat and haemorrhagic septicaemia. Decoction prepared by boiling 20 gms bulbs with 20 gms. of fruits of *Piper longum* and 20 gms leaves of *Ocimum sanctum*, with 2 litre water until it becomes half litre. After cooling it is given twice

a day for 3 days for cure of haemorrhagic septicaemia, cough cold, swollen throat.

5. *Anona squamosa* L. Annonaceae, Ln : Sitafal.
Parts used : Leaf.

Uses: Leaf paste is topically applied on wounds for healing.

6. *Andrographis paniculata* (Burm. f.) Wall. (Acanthaceae) Ln : Bhuinlimba.

Parts used : leaf.

Uses: 100 gm of leaf, 100 gm fruits of *Coriandrum sativum* and 10 gm of *Piper nigrum* together pounded with water, and the filtrate is given orally to cattle thrice a day as a cure for Babesiosis.

7. *Anthocephalus cadamba* (Roxb.) Miq. (Rubiaceae), Ln : Kadam

Parts used : leaf.

Uses : Half litre of leaf juice extracted mixed with fruit 21 numbers of fruit's powder of *Piper longum* and 20 gm of rock salt. It is given orally twice a day for abdominal pain.

8. *Azadirachta indica* A. Juss. (Meliaceae) Ln: Lim.

Parts used: Leaf, Bark.

Uses: 10 gm leaf, leaf of *Andrographis paniculata* and *Curcuma longa* are made into a paste and given orally to cattle a for worm infection. A concentrated decoction of bark with leaves, is used to wash the wounds in foot of cattle, bark powder is also used to sprinkle on wound. Fruit oil is used to drop in ears to cure mouth diseases.

9. *Bambusa vulgaris* Schrad. Ex wendl. (Poaceae), Ln : Baunsh.

Parts used: Leaf, Young sprouting,

Uses : 200 gm fresh leaf pounded with 20 gm of Hendua (a product obtained by drying small cut pieces of tender culms of this plant) and 200 ml of three years old jaggery into a paste. It is fed to cattle and buffaloes for control of diarrhea.

10. *Bidens biternata* (Lour.) Merr & Sherff. (Asteraceae) Ln : Bankakhamali.

Parts used: whole plant.

Uses: Whole plant in fresh is fed to cow lactating cow as galactagogue.

11. *Biophytum sensitivum* (L) DC. (Oxalidaceae)

Ln : Badilajkuri.

Parts used - Whole plant.

Uses: Fresh plants are fed to lactating cows as galactagogue.

12. *Bombax ceiba* L. (Bombacaceae) Ln : Semel.

Parts used : Seed.

Uses : 50 gm of seed powder is given for 3 days twice daily to cure measles.

13. *Kalanchoe pinnata* (Lam.) Pers. (Crassulaceae), Ln : Patragaja.

Parts used : Leaf.

Uses : 100 gm leaf with 21 black peppers are made in to a fine paste is given orally (to cattle) twice a day to treat dyspepsia.

14. *Careya arborea* Roxb. (Barringtoniaceae) Ln : Kum.

Parts Used : Root.

Uses : Root bark is made into a paste and applied on body of cattle to kill flea and lice.

15. *Cassia fistula* L. (Caesal piniaceae) Ln : Sunari.

Parts used: Fruit.

Uses: Ghee obtained from cow milk is applied on fruit and warmed up in flame and there after it is applied frequently on cold affected swollen throat of cattle for cure .

16. *Chloroxylon swietenia* DC. Flindersiaceae Ln : Bheru.

Parts used : Leaf.

Uses : Leaves fed to goat as galactagogue.

17. *Cleistanthus collinus* (Roxb.) Benth. & Hk. f. (Euphorbiaceae) Ln. Karla

Parts used : Leaf.

Uses: Leaves are crushed and spread on floor of cattle shed to cure foot diseases locally called Chapka.

18. *Diospyros melanoxylon* Roxb. (Ebenaceae) Ln : Kendu

Parts used - Fruit

Uses : The fresh fruit is made in to a paste and given orally to cattle to cure dysentery. 10 gm pulp of the fruit mixed with little water to make a lotion is applied on eyes to cure eye infection.

19. *Erythrina suberosa* Roxb. (Fabaceae) Ln: Baldia

Parts used : Leaf

Uses : Leaves are made into a paste and applied externally on neck to cure yoke sore.

21. *Ficus racemosa* L. (Moraceae) Ln : Dumer.

Parts used : Latex.

The fresh latex is applied on wounds of cattle as a cure.

22. *Gardenia gummifera* L.f. (Rubiaceae) Ln: Kurudu.

Parts used : Resin.

Uses: The Resin is made into powder and sprinkled on sores of cattle to keep flies and maggots away.

23. *Geniosporum elongatum* Benth, (Lamiaceae), Ln : Ghudatulsi

Parts used: Twigs.

Uses : Twigs tied on tail of cow to expel retained placenta.

24. *Gossypium herbaceum* L. (Malvaceae) Ln: Kapa.

Parts used – Leaf.

Uses: The leaf juice is given orally as a cure for suppuration of waist after delivery.

25. *Hibiscus cannabinus* L. (Malvaeae) Ln : Kanria.

Parts used : Seed.

Uses : Seeds fed to lactating cows to enhance lactation.

26. *Holarrhena antidysenterica* (Roxb.ex Fleming) Wall (Apocynaceae) Ln:Kure.

Parts used : Root

Uses: 20 gm root bark, 20 gm fruit pulp of *Punica granatum* and pinch of rock salt are made in to a paste and given orally to arrest diarrhoea to cattle.

27. *Justicia adhatoda*. L. (Acanthaceae) Ln : Basang

Parts used : Leaf.

Uses : 250 gm of leaf paste mixed with 250 gm curd, 100gm of resin powder obtained from *Shorea robusta* and given to cows for easy delivery. Half litre juice obtained from pounded leaves boiled with 20 gm of *Piper nigrum* and 1 litre of water. This decoction after cooling is given orally to cattle twice a day for bronchial problem. Half litre of leaf juice mixed with 20 gm of fruit powder of *Piper longum* is prescribed twice a day for severe cough.

28. *Lawsonia inermis* L. (Lythraceae) Ln : Menjati.

Parts used : Bark.

Uses : Decoction prepared by boiling 250 gm bark with 2 litre water is prescribed for constipation in luke warm condition with rock salt in 50 ml dose twice daily.

29. *Leucas cephalotes* (Koen. ex Roth) spreng Ln : Gubi.

Parts used : Whole plant.

Uses : Whole plant and 21 fruits of *Piper nigrum* are made into a paste and given orally to cattle as a cure for snake bite.

30. *Madhuca indica* J. F. Gmel. (Sapotaceae) Ln : Mahul.

Parts used: Seed.

Uses: Cake obtained after oil extraction is applied on chronic wounds to expel worms.

31. *Millettia extensa* (Benth.) Baker (Fabaceae.)

Ln : Mankadmal

Parts used : Leaf.

Uses: Crushed leaves spread on cattle shed to cure foot diseases.

32. *Mimusops elengi* L. (Sapotaceae) Ln: Baulo.

Parts used : Leaf.

Uses : 100 gm of leaves pounded and squeezed juice is given orally twice a day to cows to cure suppuration of waist after delivery. 100 gms of fruits pounded to a fine paste. It is mixed with ½ litter water and given orally twice a day as a cure for urinary problems..

33. *Nyctanthes arbor-tristis* L. Oleaceae. Ln : Kukuda had.

Parts used : Leaf, Bark.

Uses : Half litre of extracted leaf juice boiled with 20 gm fruit of *Piper nigrum* and 1 litre water until it becomes ½ litre. After cooling it is given orally to cure fever, for 3 days.

Leaf juice is extracted and boiled with 20 gm *Elettaria cardamomum*, and 1 litre water. Until it becomes ½ litre. This decoction is given orally to cattle as a cure for rheumatism. ½ litre of leaf juice mixed with 20 gm of *Piper nigrum* fruit powder is given twice a day for 2 days for cure of cough. The stem bark pounded with 2 fruits of *Terminalia chebula* to a fine paste and applied on bone fracture site as a bone setting.

34. *Pueraria tuberosa*. (Willd) DC. (Fabaceae) Ln : Bhuin Kumda.

Parts used : Root tuber.

Uses : Root tuber pounded with water and given orally to cow as a galactagogue.

35. *Psidium guajava* L., (Myrtaceae), Ln : Maya (Jam)

Parts used : Leaf.

Uses : 20 gm tender leaves of the plant, *Syzigium cumini* and *Mangifera indica* are pounded together, and the Juice is given orally to cattle for the treatment of dysentery.

36. *Ricinus communis* L. (Euphorbiaceae) Ln: Jada.

Parts used : Seed.

Uses : 10 ml seed oil is mixed with 10 gm leaves and rhizome paste of *Curcuma longa*. and applied on burn wounds. Oil obtained from seed is given orally in 10 ml dose once a day for treatment of constipation of cattle.

37. *Schleichera oleosa* (Lour.) Oken (Sapindaceae) Ln : Kusum.

Parts used: Seed.

Uses : Oil obtained from the seeds is massaged on skin to kill flea.

38. *Strychnus potatorum* L.f., (Loganiaceae), Ln : Kaya

Parts used : Fruit

Uses : The fruit pulp is made into a paste and applied on wound for healing.

39. *Terminalia arjuna* (Roxb. ex DC.) Wight & Arn. (Combretaceae), Ln : Kha.

Parts used : Leaf.

Uses: 250 ml leaf juice is given orally to cows twice a day to cure for suppuration of waist after delivery. Leaves fed to cattle to strengthen bones.

40. *Terminalia chebula*. Retz. (Combretaceae), Ln : Harda.

Parts used : Fruits.

Uses : The dried part of the following plants such as, *Terminalia chebula* leaves of *Achyranthes aspera* leaves of *Leucas cephalotes* leaves of *Ocimum sanctum* equal quantity are made into a powder & a pinch of hing is mixed with water to make a lotion and applied on teeth of cattle to cure tooth diseases. Fruit powder of *Terminalia chebula* *Terminalia belerica* and *Phyllanthus embelica* equal amount and mixed with salt is given orally to cattle for abdominal pain. Epicarp of fruits of *Terminalia chebula*, *Terminalia belerica* and *Phyllanthus embelica* are made into a paste and applied on skin of cattle to kill lice. Fruit of *Terminalia chebula* is rubbed on stone surface pulp mixed with water is applied on tongue for tongue sore.

41. *Vitex negundo* L. (Verbenaceae) Ln : Nirgundi.

Parts used : Leaves.

Uses : 20 ml leaf juice, 20 gms *Elettaria cardamomum* are boiled with 1 litre water and it becomes half and after cooling is given orally twice a day to cure rheumatism.

42. *Cayratia auriculata* (Roxb.) Gamble, (Vitaceae) Ln : Masnia.

Parts used: Root.

Uses: The root is made into a paste and applied on wounds as a cure.

4. Discussion and conclusions

Analysis of the data shows 23 types of diseases and use of 42 species of medicinal plants for curing them belonging to 42 genera and 29 families. Eight species of plants are used to treat wounds, 6 for enhancement of lactation, 4 species for diarrhea and dysentery, 3 each for suppuration of waist after delivery, cold, cough and bronchial problem, 2 each for constipations, mouth disease, flea and lice repellants, 1 each for babesiosis, abdominal pain, worm infection, measles retained placenta, easy delivery, snake bite, fever, bone fracture and tooth diseases.

Many of the information reported in this communication particularly for the species namely *Abutilon indicum*, *Aegle marmelos*, *Andrographis paniculata*, *Allium sativum*, *Anthocephalus cadamba* *Bambusa vulgaris*, *Kalanchoe pinnata*, *Bombax ceiba*, *Careya arborea*, *Chloroxylon swietenia*, *Diospyros melanoxylon*, *Erythrina suberosa*, *Geniosporum elongatum*, *Gossypium herbaceum*, *Hibiscus cannabinus*, *Justicia adhatoda*, *Lawsonia inermis.*, *Mimusops elengi*, *Schleichera oleosa*, *Strychnus potatorum*, *Terminalia chebula* *Vitex negundo* are found to be less known to the literature of Indian medicinal plants used in veterinary diseases [9].

Like wise disease cured by plant species viz. *Achyranthus aspera*, *Annona squamosa*, *Azadirachta indica*, *Bidens biternata*, *Biophytum sensitivum*, *Cassia fistula*, *Cleistanthus collinus*, *Ficus glomerata*, *Holarrhena antidysenterica*, *Madhuca indica*, *Milletia extensa*, *Leucas cephalotes*, *Ricinus communis*, are found to be similar to the uses by other ethnic groups in other parts of India [9] indicating their authenticity of usefulness in treated diseases but, method of uses differ for a plant species from place to place.

The simultaneous uses of a particular plant for the treatment of number of diseases as observed in present investigation for the species like *Allium sativum*, *Azadirachta indica*, *Diospyros melanoxylon*, *Justicia adhatoda*., *Mimusops elengi*, *Nyctanthes arbor-tristis*, *Ricinus communis*, *Terminalia chebula* may also be considered encouraging with regards to their specific uses reported herein, which otherwise un-reported in previous literature.

The plants mentioned here are still very popular in this area and enjoy a good reputation in traditional medicine for treatment of veterinary diseases. In spite of an extensive modern programme sponsored governmental

organisation and hospitals to uplift the rural health care of domestic animals; the traditional treatments have retained popularity in the district. Most of the drugs are utilized in fresh state or as cooled decoction, infusion etc.

Further investigations on ethnomedicine and conservation of plant biodiversity *in situ* or *ex situ* would protect extinction of plants having ethno-veterinary importance. Steps could be taken by the Government and Non-Governmental Organizations to enunciate a clear policy of conservation and sustainable use of medicinal plants at this stage where a rapid deforestation is uncontrollable.

The therapeutically significant plants need to be cultivated in a systematic manner to meet Indian system of tradition medicine based drug industry and to validate pharmacologically the efficacy of all ethno-veterinary claims.

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