



Studies On Ethno-Veterinary Uses Of Plants Around Akot Tahsil, Dist. Akola, Maharashtra, India

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ABSTRACT

The present study deals with the ethno veterinary practices of Akot tehsil of Akola district, Maharashtra, India. The survey was conducted in Akot and surrounding villages to document the use of medicinal plants for ethno veterinary practices by people living in this area. Seven villages viz. Popatkhed, Bordi, Akolkhed, Mohala, Khairkhed, Umra and Adgaon were selected from Akot tehsil of Akola for the study. Plants used in the ethno veterinary practice in the Akot tahsil and surrounding area were investigated in this study. Total 40 plant species were documented for different medicinal uses for animals in the area.

KEYWORDS: Medicinal uses, veterinary practices, traditional knowledge, Akot tahsil.

INTRODUCTION:

Ethno veterinary practices include the use of local medicinal plants to prevent, cure or treat various ailments in animals. It can be considered as traditional knowledge, which is used for the well-being of animals. Maharashtra state in India is a rich in plant biodiversity. Traditional knowledge is being forgotten these days; hence some researchers are attempting to document this important knowledge as written documents. Due to easy availability and low cost of medicinal plants, the livestock owners of the remote areas use them as a first aid for their animals. Documentation of traditional ethno veterinary knowledge is a requirement due to increasing demand for herbal drugs in the veterinary field along with some known side-effects of allopathic products. Recognition of ethno veterinary practices in this region and their documentation is necessary for creating new herbal-based treatments. Thus, the present study was carried out to gather traditional knowledge. This documentation may help to create awareness of the importance of veterinary therapy with medicinal plants.

METHODOLOGY:

Seven villages viz. Popatkhed, Bordi, Akolkhed, Mohala, Khairkhed, Umra and Adgaon were selected from Akot tehsil of Akola for the study. Minimum 10 people from each village were contacted randomly. All peoples were contacted either at their farm or at home. Some cowshed owners were also contacted for this survey. A questionnaire was prepared in the local Marathi language, which contained more than 8 questions that included personal details along with occupation, ailments of animals and medicinal plants used in particular ailments, type of application of plants and part of the plant. The plant species cited by the informant were determined from flora of Akola District.

RESULTS & DISCUSSION:

Plants used in the ethno veterinary practice in the Akot tahsil and surrounding area were investigated in this study. Total 40 plant species were documented for different purposes in the area (Table -1). Interviews were conducted with the peoples by a questionnaire, which contained basic questions related to the aim of this study.

Table-1: Enumeration of medicinal plants used in ethno veterinary practices in Akot ahsil, Maharashtra, India.

S.N.	Botanical Name of plant	Family	Vernacular name	Medicinal uses
1	<i>Abrus precatorius</i> L.	Fabaceae	Gunja, Ratti	Seeds crushed and mixed with jaggery are given in retention of the placenta of Cattles.
2	<i>Achyranthes aspera</i> L.	Amranthaceae	Aghada	Seeds Juice is given in luke-warm water in Gastric ailments of Cattles.
3	<i>Adhatoda vasica</i> Nees.	Acanthaceae	Adulasa	Leaves decoction is used to cure cough
4	<i>Aegle mormelos</i> (L.) Correa	Rutaceae	Bel	Crushed fruits are given in diarrhea
5	<i>Allium cepa</i> L.	Liliaceae	Kanda	Bulbs are given for retention of placenta
6	<i>Alove vera</i> Mill.	Liliaceae	Korphad	Leaf juice and gel is used on burns, itching and wounds
7	<i>Annona squamosa</i> L.	Annonaceae	Sitaphal	Paste of fresh leaves is applied topically on wounds.
8	<i>Aristolochia bracteolata</i> Lam.	Aristolochiaceae	Kidamari, Badakphul	Paste of leaves is applied topically on parasites on skin.
9	<i>Asparagus racemosus</i> Willd.	Asparagaceae	Satavari	Roots are used to increase the milk in cattles
10	<i>Azadirachta indica</i> A. Juss.	Meliaceae	Kadu neem	Decoction of leaves and bark is applied topically on itching and skin infections
11	<i>Bauhinia variegata</i> L.	Caesalpiniaceae	Kachnar	Bark powder is applied topically on wounds
12	<i>Bryophyllum pinnatum</i> (Lam.) Oken	Crassulaceae	Panphuti	Paste of leaves are given in Urinary and stomach problems
13	<i>Butea monosperma</i> (Lam.) Taub.	Fabaceae	Palas	Bark powder is applied topically on wounds
14	<i>Calotropis procera</i> (Aiton) Dryand.	Asclepiadaceae	Rui	Leaf is applied topically on joint inflammation
15	<i>Cassia fistula</i> L.	Caesalpiniaceae	Amaltas	Seeds are given for stomach problems
16	<i>Cassia tora</i> L.	Caesalpiniaceae	Tarota	Paste of seeds and roots applied topically for curing ringworms and fungal infections
17	<i>Clerodendrum</i>	Verbenaceae	Arni	Paste of leaves and flowers

	<i>phlomidis</i> L. f.			applied topically on worms and foot diseases
18	<i>Curcuma amada</i> Roxb.	Zingiberaceae	Ambe Halad	Rhizome paste applied on joint inflammations, bone fractures
19	<i>Curcuma longa</i> L.	Zingiberaceae	Halad	Rhizome paste applied as antiseptic on wounds
20	<i>Datura metel</i> L.	Solanaceae	Dhotra	Paste of leaves is applied on injuries of ankle bone
21	<i>Eclipta alba</i> (Lamk.) Hassk.	Asteraceae	Brungraj	Paste of leaves is applied topically on wounds
22	<i>Enecostemma littorale</i> Blume	Gentianaceae	Kadvi Nayi	Whole plant is given on stomach problems and intestinal worms
23	<i>Ficus benghalensis</i> L.	Moraceae	Vad	Paste of Bark applied on fractures
24	<i>Ficus racemosa</i> L.	Moraceae	Umbar	Paste of Bark is used on wounds
25	<i>Ficus religiosa</i> L.	Moraceae	Pimpal	Bark and leaves Juice is given for urino-genital problems
26	<i>Mangifera indica</i> Lam.	Anacardiaceae	Amba	Bark ash is given in cough
27	<i>Murraya koenigii</i> (L.) Spreng.	Rutaceae	God neem	Leaves are given during diarrhea
28	<i>Ocimum sanctum</i> L.	Lamiaceae	Tulas	Leaves used as antiseptic and antibacterial
29	<i>Prosopis julifera</i> (Sw.) DC.	Mimosaceae	Bangali babhul	Paste of leaves and pods applied on skin infections
30	<i>Psolalea corylifolia</i> L.	Fabaceae	Bavachi	Paste of seeds applied topically on itching and skin problems
31	<i>Pueraria tuberosa</i> (Willd.) DC.	Fabaceae	Vidari kand	Tubers are given to increase milk production
32	<i>Punica granatum</i> L.	Punicaceae	Dalimb	Decoction of fruit is given in diarrhea
33	<i>Semecarpus anacardium</i> L.	Anacardiaceae	Bibba, Bhilawa	Fruits are given to treat retention of the placenta
34	<i>Solanum xanthocarpum</i> Schrad. & H. Wendl.	Solanaceae	Bhui ringani	Fruits are given for curing cough
35	<i>Syzygium cuminii</i> Merr.	Myrtaceae	Jamun	Leaves paste is applied as antibacterial on wounds
36	<i>Tagetes erecta</i> L.	Asteraceae	Zendu	Paste of flowers are applied to cure wounds
37	<i>Thespesia populnea</i> (L.) Soland. ex Correa	Malvaceae	Paras pimpal	Paste of bark is applied topically on skin diseases
38	<i>Tridax procumbens</i> L.	Asteraceae	Kambarmodi	Leaves extract is applied topically on wounds
39	<i>Vitex nugundo</i> L.	Verbenaceae	Nirgudi	Paste of leaves applied topically for inflammation
40	<i>Zingiber officinale</i> Roscoe	Zingiberaceae	Adrak	Rhizomes with jaggary is given in indigestion

Some farmers have reported the use of fresh juice of *Tridax procumbens* in large injuries. This plant was reported to exhibit antiseptic and antihemorrhagic activity. These activities of this plant might be due to the presence of steroids and triterpenes. Another report from one of the farmers indicated use of fresh decoction of *Prosopis juliflora* leaves when an animal suffered from infectious diseases. Phytochemical analysis of *Prosopis juliflora* revealed the presence of four piperidine alkaloids with good antibacterial and antifungal activities. One of the widely distributed plants from this region is *Achyranthes aspera*, which has been used by livestock owners and farmers for gastric disturbance in animals. Various pharmacological actions like wound healing, spermicidal activity and hepato protective activity were reported. Veterinary use of this plant however was not reported.

Butea monosperma is one of the important medicinal plants found throughout India. Ayurvedic Pharmacopoeia of India described the use of stem bark of this plant in chronic diseases like abdominal tumor and other intestinal conditions. But it was surprising to note the use of the plant for instant wound healing purpose, in which stem bark powder was applied to the fresh injury of animals. Though the mechanism of action is still unknown the presence of palastrin, isobutein, and other flavonoids, as well, tannins might help in wound healing through antioxidant and astringent mechanisms. Use of various parts of *Azadirachta indica* leaves, stem bark in itching and other skin-related diseases has been documented. Triterpenes like nimbin, azadirachtin, limonoid present in neem could be responsible for this therapeutic activity. Some people cited this Ayurvedic treatment, which was generally practiced for the human. Under that, use of *Solanum xanthocarpum* for respiratory diseases, *Psoralea corylifolia* for the skin and related ailments were also informed. This shows that Ayurveda system of medicine constituted traditional knowledge that passed from generation to generation since long.

CONCLUSION:

After the thorough survey by interviews with livestock keepers, farmers and traditional healers, it was realized that important ethno veterinary knowledge is possessed by rural people. This valuable information needs to be validated for further studies. Proper utilization of this information might help in developing alternate therapy of ailments.

REFERENCES:

1. Ahmed V.U. and Sultana A, Qazi S. 1989 Alkaloids from the leaves of *Prosopis juliflora*. J Nat Prod. 52:497-501.
2. Bhadoriya S.S., Ganeshpurkar A, Narwaria J, Rai G. and Jain A.P. 2011 *Tamarindus indica*: Extent of explored potential. Pharmacogn Rev. 5:73-81.
3. Bhandari P.R. and Mukerji B. 1958 Role of indigenous drugs in veterinary medicine in India. Indian Vet J. Pp.1:55.
4. Bhatt P.R., Kajal B. Pandya, U. D. Patel, H. B. Patel and C. M. Modi. 2019. Survey on ethnoveterinary practices around Junagadh, Gujrat, India. Indian J Pharm Sci 81 (1): 161-167.
5. Edwin S, Jarald EE, Deba L, Jaina A, Kingera H, and Dutta K.R, et al. 2008 Wound Healing and Antioxidant Activity of *Achyranthes aspera*. Pharm Biol ;46:824-8.
6. Kamble S.Y. & Pradhan S. G. 1988 Flora of Akola district, Maharashtra. Botanical Survey of India, Calcutta.
6. Jadeja BA, Odedra NK, Solanki KM, and Baraiya NM. 2006 Indigenous animal healthcare practice in district porbandar, Gujarat. Indian J Tradit Know; 5:253-8.
7. Jafri M, and Mehta B.K. 2014 Evaluation of chemical constituents of *Butea monosperma* (Bark). Int J Pharm Sci Res ;5:4548-51.
8. Kumar A, Pareek P.K, Kadam V.V, and Shakyawar D.B. 2016 Anti-moth activity of Neem (*Azadirachta indica* A, Juss.) on woollen fabric. Indian J Trad Knowl ;15:272-77.
9. Mazars G. 1994 Traditional veterinary medicine in India. Rev Sci Tech;13(2):443-51.
10. Patel H.B, Patel U.D, Modi C.M, Javia B.B, Bhatt P.R, and Pandya K.B. 2015 *In vitro* Antimicrobial Effect of *Adhatoda vasica*, *Annona squamosa*, *Aloe vera*, *Butea monosperma* and *Prosopis juliflora*. World J Pharm Res;4:1168-77.