

## RESEARCH NOTE

## Ethno-veterinary Practices among Tribes of Banswara District of Rajasthan

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### ABSTRACT

*The present study was undertaken with the objective of studying the ethno-veterinary practices for gynecological & surgical ailments followed by tribes of Banswara district of Rajasthan. One hundred and twenty tribal livestock owners were selected from eight villages of two tehsils to document different ethno-veterinary practices. Information were obtained through personal observation, consultation with traditional healers, tribal family members having ethno knowledge and engaged with animal treatment, detailed discussion with key informants, aged persons and housewives etc. It was found that rural inhabitants of study villages still had a traditional way of living though the impact of urbanization was also visible in material culture and other aspects of life. Villagers invariably resorted to ethno-veterinary practices to get rid of common ailments of their livestock at the first by themselves followed by fellow villagers having better knowledge in those practices. Few well recognized ethno-veterinarians were found across the study villages. An inventory of 17 ethno-veterinary practices was prepared in 8 different ailments. These practices were followed in an-estrous, prolapse, retained placenta, wounds, maggot wound, fracture, shoulder joint dislocation, tail gangrene (Kaasbi) etc. in cattle, buffalo and goat of the study area.*

**Key words:** Tribes, Ethno-veterinary practices, Gynecological, surgical ailments and Rajasthan

According to an estimate of World Health Organization, approximately 80 per cent of the world's people in developing countries depend on traditional medicines for their primary health care needs (*WHO, IUCN & WWF, 1993*). They use traditional medicines not only for human beings but also for their domestic animals. Since some of traditional knowledge is vanishing very rapidly, such ancient practices need to be documented. Recently research on indigenous practices/indigenous technical knowledge has got momentum. The tribes of remote areas of southern Rajasthan are totally dependent on herbs for healthcare of owns and for their animals. The tribes dominated southern part of Rajasthan harbours vast diversity of vegetation. The surrounding plants for these people form an integral part of their culture and the information about plants gets passed on from generation to generation only through oral folklore, although many times kept secret. The majority of the treatment procedures are based on

traditional wisdom and belief of the local people and such practices exists for many centuries. Thus, ethno-veterinary research and development is a holistic and interdisciplinary study of indigenous knowledge and associated skills, practices, belief and social structures pertaining to the healthcare and husbandry of income producing animals, has emerged as a fertile field for generation and transfer appropriate and sustainable veterinary alternatives to the stock raisers. Keeping in view of these facts, a study has been undertaken to identify and document the ethno-veterinary practices of tribal livestock owners associated with animal husbandry in eight villages of Banswara district of Rajasthan.

### METHODOLOGY

The present study was conducted in Banswara districts of Rajasthan. Out of total five tehsils in the district, Bagidora and Kushalgarh were selected purposively due to the existence of large number of

tribals. The district is predominantly inhabited by tribes mainly Bhils, Bhil Meenas, Damor, Charpotas, Ninamas etc. A village wise comprehensive list of number of tribal families residing in different villages was prepared with help of panchayat samities, villages patwari and local tribes. Four villages selected from Bagidora tehsil namely Rangniya, Ummedgarhi, Ratanpura and Vanellapara and another four villages from Kushalgarh tehsil viz. Chunrada, Jari, Potaliya and Vasuni. Thus, a total of eight villages have been selected from two identified selected tehsils of district. Total fifteen tribal families residing in selected village, owning large number of livestock were select randomly from each village. Thus, a total of 120 tribal families were selected randomly from eight selected villages. Information were obtained through personal observation, consultation with traditional healers, tribal family members having ethno knowledge and engaged with animal treatment, detailed discussion with key informants, aged persons and housewives etc.

In the present study, an attempt has been made to document ethno-veterinary practices followed by tribes for gynecological & surgical affections in their livestock and their rationale behind each practice.

The study highlighted that most of the tribal livestock owners preferred to make use of ethno-veterinary for the treatment of common ailments found in animals. An inventory of 17 practices was prepared in 8 different ailments. The maximum number of indigenous practices was documented in the treatment of anestrus followed by wound and retention of placenta.

## RESULTS AND DISCUSSION

An overview of ethno-veterinary treatments followed by tribes and the local healers in the different gynecological & surgical ailments of their animals are as following-

### *Gynecological Disorders*

**Anestrus:** For treatment of an anestrus, affected animals are fed 1 kg germinated wheat (*Triticum aestivum*) grains for one week. Tribes perceived that germinated wheat grains provide warmth and strength to body that will help to induce heat in animals. This treatment was perceived as very effective and economical also by majority of tribes.

In similar practice, some tribes also provide 1-2 kg

maize (*Zea mays*) floor with roughage for one week to induce heat in animals. Tribes reported that this treatment provide warmth to their animals and induce heat quickly.

Some of the traditional healers also reported that, they recommended 1-2 kg grounded seed of datura (*Datura stromonium*) to anestrus animals for inducing heat within 2-3 days. Medicinally, the ingredients of datura seed have action on central nervous system.

In an another interesting practice, some tribes fed one fruit daily of *bhilama* (*Semecarpus anacardium*) tree for 4 days. According to them, this practice was very effective for inducing the heat in an-estrous animals. Scientifically also, *bhilama* fruit have antioxidant, antimicrobial and CNS stimulants.

Some traditional healers, insert his hand in vagina of an-estrous animal and make small abrasion on the external part of cervix with the help of small thorn and then they apply a semi-solid paste of opium (*Papevar somniferum*) on abraded cervix part. According to them, this practice helps to induce heat in animal after 3-5 days. Medicinally, opium acts as CNS stimulant.

**Prolapse:** For treatment of prolapse, first of all tribes thoroughly wash the prolapsed portion with alcohol prepared from mahua (*Madhuca indica*). Then, they manually insert the prolapsed portion in the animal body. After repositioning, they apply finely powder of coat of tortoise/turtle (*Geochelone elegans*) on external part of cervix. According to them, this treatment is highly effective and it prevents re-occurrence of prolapse. Scientifically also, antiseptic property of alcohol prevent the infection in prolapsed part.

**Retention of placenta:** For treatment of retained placenta, tribes prepared a mixture of 5-10 kg chaffed leaves of sugarcane (*Saccharum officinarum*) mixed with 1-2 kg of grounded rice (*Oryza sativa*) and about 500 gm grounded seed of mahua (*Madhuca indica*) and fed to affected animals. After 6 hour interval they fed 4-5 kg rice (*Oryza sativa*) grasses to animals. Tribes reported that, these ingredients provide warmth and strength to animal body and its help to expel out retained placenta within 1-2 hours. Medicinally also, astringents and sedative action of mahua seed oil and excellent and immediate source of energy from sugarcane leaves and rice seed provide strength to the animal. Dried sprouted rice grains also gives tone to the muscles helps in expulsion of the retained placenta.

In another practice, some traditional healers also provide 5-10 kg crushed leaves and stems of bamboo (*Bombax ceiba*) to the affected animal and reported that, retained placenta will expel out within one hour. Medicinally, bamboo leaves acts as stimulants, astringents, echbolic, diuretic and tonic for animal body while crushed stem of bamboo help in preventing excessive blood loss.

In another practice, tribes also fed 1 kg *gur* (jaggery), 500 ml sweet oil and 4-5 pieces of *laung*/clove (*Syzygium aromaticum*) mixed with 2-3 litres of luke warm water for easy expulsion of placenta. Medicinally, *gur*/jaggery and sweet oil provides warmth and strength to the animal body.

Feeding of luke warm water and sugar cane leaves helps in expulsion of placenta in cows (*Das and Tripathi, 2009*). Leaves of bamboo boiled in water and given orally for expulsion of placenta (*Takhar and Choudhary, 2004*). Feeding of flowers and leaves of bamboo (*Bombax ceiba*) helps in early removal of retained placenta (*Nag et al., 2007*). Tribes of Tadgarh-Raoli are feeding flowers of bamboo (*Bombax ceiba*) for easy removal of placenta after delivery (*Galav et al., 2013*). Feeding of sufficient quantity of mustard cake and feeding of mixture made from *Jayphal* and mustard oil or mustard oil and black pepper as well as sprouted wheat grain also given to milch animals for anoestrus condition. They also stated that dry fodder only given to animal's upto 22 days after service to prevent repeat breeding in animals in Banka district of Bihar (*Kumar et al., 2010*). The traditional healers of Kathua district of Jammu & Kashmir are fed infected seeds of *kala dhaan* (*Oryza sativa*) to the animals for expulsion of placenta after abortion (*Sharma et al., 2012*). Livestock owners of Rajasthan used decoction of whole plant of *Spermacoce stricta* and grinded seeds of *ber/pala* (*Ziziphus mauritiana*) for prevention of vulvo-vaginal-uterine prolapse in animals (*Galav et al., 2013*).

#### *Surgical Disorders:*

**Wound:** Wounds are cured by applying the paste prepared with 50 gm finely grounded onion (*Allium cepa*), 20 gm turmeric (*Curcuma longa*) powder and 10 gm common salt with 250 ml mustard (*Brassica campestris*) oil twice a day. This practice was used for 3-4 days. Medicinally, above ingredients have antiseptic, antibacterial and

astringent properties thus help in fast healing of wound.

Some traditional healers prepared a paste from ash of neem (*Azadirachta indica*) leaves mixed with ghee (clarified butter) and applied on wounds for 3-5 days. Tribes reported that, this practice is highly effective in wound healing. The leaves of neem have antibacterial, antiseptic, antifungal and fly repellent properties thus help in fast healing of wound.

Tribes make ash from stem of *aak* (*Calotropis spp.*) plant and mixed with *desi ghee*. This preparation is apply on wound for 2 to 3 days. This preparation act as repulsive for flies and thus prevent them to sit on wound that lead to quick healing.

**Maggot wound:** Traditional healers apply *til* (*Sesamum indicum*) oil on maggot wounds. According to them, *til* oil kill the maggots and expel out from the wounds.

**Fracture:** Some of the tribal livestock owners prepare a paste from sand collect around various snake holes with boiled water and apply on the fractured part of animal body. This practice was repeated for 5-7 days. They reported that, this practice absorb the pain from affected part.

Majority of the traditional healers immobilized the fractured limb with bamboo (*Bombax ceiba*) sticks and mud for at least one month. This practice was found common and highly effective.

**Shoulder joint dislocation:** The traditional healers apply "Dam" (hot iron branding) at shoulder joint region. They reported that, it creates the swelling and re-fixed the joint. This treatment was considered highly effective by majority of tribes.

**Tail gangrene (Kaasbi):** In case of tail gangrene in cattle and buffalo, the end portion of affected part of tail is pierce with *bilpatra* (*Aegle marmelos*) thorn and dipped into boiled soya bean (*Glycine max*) or mustard (*Brassica campestris*) oil for 15-30 seconds. This practice was repeated for twice or thrice in 24 hours interval. Tribes reported that, this practice will check the further spreading of gangrene and it is very effective and economical also. Medicinally antibacterial and antifungal property of mustard oil check the further spread of infection in affected part of tail.

*Butea monosperma* seed powder used to kill the maggots, *Cedrus deodara* oil is applied to foul ulcers and wounds, young shoots of *Grewia oppositifolia* are used as splints for bandaging fractured limbs and fresh

green bark is used as bandage, paste of *Bombax ceiba* bark and turmeric is applied on dislocated bones in goats by the farmers in Chamba district of Himachal Pradesh (Singh and Misri, 2006). Ash of leaves of neem (*Azadirachta indica*) mixed with ghee is applied on swellings and inflammations of cattle (Takhar and Choudhary, 2004). Seed oil of neem (*Azadirachta indica*) is applied over wounds to heal soon in cow and goat (Selvaraju et al., 2011). Mixture of mustard oil, rhizome of *haldi* (*Curcuma longa*) and potash alum is given to the animal orally to cure internal wounds (Galav et al., 2013). Paste made from onion and ghee is used in wound in animals by dairy farmers in Banka district of Bihar (Kumar et al., 2010).

## CONCLUSION

Thus, it can be concluded that the villagers of the study villages invariably resort to ethno-veterinary practices to get rid of common ailments of their livestock at the first place by themselves and followed by fellow villagers having better knowledge in those practices. Few well recognized occupational ethno-veterinarians were found across the study villages. A study on documentation and validation of some of the major livestock ailments/diseases and ethno-veterinary practices used in managing and treating them is needed.

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