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### Outlining Ethno Veterinary Medicine with special reference to Pashu Ayurveda.

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#### ABSTRACT

**Introduction:** Livestock plays an important role in the Indian economy. According to the latest census, cattle and buffalos account for more than 50% of the livestock population in India. Rapid socio economic and outward rural migrations and paucity of research on ethno veterinary uses of medicinal plants in treating livestock diseases undermines its relevance of the study. This study is conducted to explicate the concept of Ethno Veterinary Practices in treatment of animals using Ayurvedic formulations.

**Methods:** A narrative review of *Pashu Ayurveda* is done using classical books, authoritative commentaries and other relevant books.

**Results:** Different formulations such as combination of herbal medicines and herbo - mineral medicines which are being used in curing various compound ailments were found in various studies. Ethno veterinary practices are found to be successful in managing ulcers, reducing itching, removing vermines, managing mastitis in cattles.

**Conclusions:** Ethno veterinary medicine is cost effective and also dynamic. Such remedies are accessible, easy to prepare and administer, at little or no cost at all to the farmer. There is a need for documentation, preservation and protection of ethno-veterinary practices and medicinal plant resources for future generations.

**Keywords:** Pashu Ayurveda, Ethno Veterinary Practices.

#### INTRODUCTION

Cattle are considered as the wealth and backbone of Indian society. Role of cattle in agriculture is immensely known. The livestock population has shown an increasing number of cattle in recent years. Cattle and buffalos account for more than 50% of the livestock population in India, according to the latest census.

Livestock diseases are a major threat to sustainable livelihoods of rural communities. This impact is in the form of loss of income, reduction of the herd number and loss of high milk yielding cows. Antimicrobial resistance has also become a major concern due to indiscriminate use of antibiotics to treat animal diseases.

The solution to this problem lies in alternative treatment strategies like Pashu Ayurveda. These unique medical remedies can address disease conditions that do not respond well enough with conventional medicines. This

upsurge of interest in medicines from other cultures, or *ethno medicine*, is shared by the general populace as well. It is perceived as simple, cost effective, environment friendly, contextually appropriate and culture based.

Ethno veterinary medicine, the scientific term for traditional animal health care, provides low-cost alternatives to allopathic drugs. Ethno veterinary practices cover people's knowledge, skills, methods, practices and belief about the care of their animals.

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The term is defined as the holistic, interdisciplinary study of local knowledge and its associated skills, practices, beliefs, practices, and social structures pertaining to the healthcare and healthful husbandry of food, work, and other income-producing animals, always with an eye to practical development of applications within livestock production and livelihood systems, and with the ultimate goal of increasing human well-being via increased benefits from stock raising.<sup>1</sup>

The use of herbs in therapy is just one aspect of ethnoveterinary medicine. It contains more elements, including knowledge of the pastures and details about illness signs and seasonal fluctuations in disease incidence. They also possessed knowledge of skills in bone setting, and equipment and technologies for animal habitation that could be adjusted to local conditions.<sup>2</sup>

Ancient civilizations were focussed on their understanding of veterinary medicine. We can observe several nonWestern veterinary medical traditions, including acupuncture, herbal therapy, Tibetan veterinary medicine, Ayurveda, etc. These traditions have written records that go back thousands of years. Since colonial times, scientists had always taken note of indigenous knowledge of animal health and diagnostic skills before implementing their Western-technology projects. This review is conducted to explicate the concept of Ethno Veterinary Practices, use of Ayurvedic formulations. in treatment of animals.

## METHODS

A narrative review of *Pashu Ayurveda* is done using classical books, authoritative commentaries and other relevant books. Historical aspects related to the topic were outlined and discussed in the study.

Detailed review of *Pashu Ayurveda* is done using classical books, authoritative commentaries and other relevant books.

## RESULTS

### **Ethno-Veterinary Medicine in Ayurveda**

The Indian Medicine, Ayurveda has been flourishing from the time immemorial. Before its origin as an independent science, its roots can be seen in Veda and other ancient texts. Along with its well-known eight branches, it has also been flourishing with many other branches of medicine like Medicine of Plants (Vrikshayurveda), and animals (*Pashu Ayurveda*)

.Medicine of animals was developed in various branches like Medicine of Horse (*Ashva Ayurveda*), Medicine of Elephant (*Gajayurveda*) etc.<sup>3</sup> *Pashu Ayurveda* or ancient veterinary science enjoyed an equal status in the medical science because the animals are useful to the human beings in various aspects like agriculture, supply of food and milk, transportation, sacrificial rituals, warfare etc.<sup>4</sup> *Agnipurana* also describes the ways to attend to the needs and comforts of animals. This text book mentions the greatness of cows. The various medicinal preparations using products of cow such as milk, ghee, dung etc. is also explained.<sup>9</sup>

### **Ancient Methods as an Ethno-Veterinary Medicine**

The significance of herbs in ancient Indian veterinary care is underlined by the edict of King Ashoka, which stated that two kinds of hospitals have been established; hospitals for men and hospitals for animals. Surgical methods such as application of cautery, removal of foreign bodies and obstructions, surgical grafting, treatment of fractures, dislocations, and fistula were also used by Vedic people for management of human and animal diseases.<sup>5</sup>

*Sushruta Samhita*, a classical textbook dealing with surgical procedures mention about the hands on procedure for surgeons. It has been mentioned that the surgeons has to practice surgery on dead animals and various plants parts. This represents the knowledge of anatomy of animals during olden days<sup>6</sup>. References pertaining to *Vasti Chikitsa* (*Enema Therapy*) for goats, cows, horses, camels and elephants are available in *Charaka Samhita*, an oldest *Ayurveda* treatise<sup>7</sup>.

Description of characteristics and treatment of elephants and horses is well briefed in an ancient classical text called *Agni Purana*.

### **Herbal Use in Ethno-Veterinary Medicine:**

Administration of various herbs for removing vermin from cattle is explained in *Garuda Purana*. It also describes various remedies for healing ulcers and reducing itching.<sup>8</sup>

Ethno veterinary medicine practiced by farmers or common people have indigenous methods to treat diseases using medicinal plant compounds, manipulative techniques and herd management socio-cultural procedures. The references of healing the ailments of animals using various compound medicines has been mentioned in various textbooks of *Pashu Ayurveda*. It includes a combination of herbal medicines and herbo mineral medicines. In the condition of bovine mastitis, using *Jatyadi Ghrita* for external application after proper washing *Triphala*

kwatha has been mentioned. One of the common ailments in cattle is bovine mastitis.

## DISCUSSION

Livestock diseases impact negatively on the households of farmers since livestock farming is their major livelihood activity. This impact is in the form of loss of income, reduction of the herd number and loss of high milk yielding cows. The efficacy of ethno veterinary knowledge for treating livestock diseases and range management strategies need to be fully investigated and integrated in veterinary extension services.

In many developing countries, farmers and herders interface indigenous ethno veterinary knowledge and modern veterinary health care systems to treat their livestock. It is perceived as simple, cost effective, environment friendly, contextually appropriate and culture based. Notwithstanding, there are several threats undermining its relevance in contemporary Indian societies.

These include ecological and technological changes, access to modern health facilities, anthropogenic and natural factors, and threaten the existence of many plant species of veterinary importance. Because the mode of transfer and documentation of indigenous veterinary knowledge has been, and still is, oral and apprenticeship specific, partial or total loss of accumulated medical heritage is likely. Rapid socio economic and outward rural migrations and paucity of research on ethno veterinary uses of medicinal plants in treating livestock diseases further undermines its relevance. There is, thus, an urgent need for documentation, preservation and protection of ethno veterinary practices and medicinal plant resources for future generations.

Bovine mastitis is the inflammation of the mammary gland associated with inflammatory infection in dairy cattle. Bacteria are the most common etiological agent followed by yeast or molds, algae, and viruses. Teet end injuries are common in bovine when the calf sucks the teet end for milk. Physical trauma or chemical irritation also causes mastitis.<sup>10</sup> Mastitis alters the composition and properties of milk, reduction of shelf life of manufactured dairy products. One of the studies conducted gave remarks that Jatyadi Ghrita possesses potent anti-bacterial activity against Gram (+) and, to a lesser extent, Gram (-) bacteria. It also plays an

essential role in anti - inflammatory responses. Thus, it can be used in non-healing wounds.<sup>11</sup>

There are immense opportunities for the development of the drugs on the basis of the ethno botanical leads. These drugs can be used for effective animal health care at affordable cost to the peasantry of the country. Besides, the development of the ethno veterinary practices would also provide income generation to the marginal farmers of the country. Parallels between medicinal practices in human and animal ethno medicine not only include the types of resources used and the prevalence of use of those wildlife resources, but also in the modes of administration of these remedies and the ethno medical techniques employed. However, there is an urgent need of the amalgamation of the modern veterinary medicine, modern science and the ethno veterinary practices so as to derive synergy in the animal health care.

## CONCLUSIONS

The concept of Pashu Ayurveda or the ancient veterinary science points towards a 'comprehensive man – animal relation' which existed in olden days. Veterinary Ayurvedic Medicine has been enriching till the recent past of modern times. There is a need for search, documentation, preservation, protection and critical analysis of ethno-veterinary practices and medicinal plant resources for future generations.

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