

## Retrospective study on Medical cases in bovines

A. M. Syed<sup>\*1</sup>, P. M. Mane<sup>1</sup>, T.A. Shafi<sup>2</sup>, M. F. M. F. Siddiqui<sup>2</sup> and M. P. Sakhare<sup>2</sup>

<sup>1</sup>Veterinary Clinical Complex, <sup>2</sup>Department of Veterinary Medicine, College of Veterinary and Animal Sciences, MAFSU, Parbhani-431402 (MS)

### Abstract

Retrospective study was conducted on bovine medicinal cases presented to the Veterinary Clinical Complex, COVAS, Parbhani, Maharashtra (India) from April 2015 to March 2022 (Seven years period). Out of the total 5457 bovines medicinal cases presented during this period prevalence was highest for anorexia of unknown etiology (20.39%) followed by respiratory system affection (pneumonia) (19.24%), enteritis (17.15%), miscellaneous (fever of unknown etiology, weakness) cases (10.02%), simple indigestion (9.82%), skin diseases (5.07%), tympany (4.34%), mastitis (3.99%), acidic indigestion (3.17%), endoparasite infection (2.47%), alkaline indigestion (2.18%), metabolic diseases (1.19%), snake bite cases (0.42%) and post parturient hemoglobinuria (0.38%) while the least prevalent condition was colic (0.12%). The high prevalence of these conditions may be due to poor management practices, improper health care, stress on pregnant animals, neglect of prophylactic measures for disease prevention and more cases presented to hospital may be due to increased awareness of the hospital location and good services provided by the hospital. Therefore, there is need for awareness and education of livestock farmers/owners on effective prevention and control measures through livestock extension services and proper management system.

**Key words:** Retrospective Study, Bovine, Medicinal cases.

Livestock is an integrated part of our farming system and plays an important role in the traditional economy. Among the various constraints to cattle, buffaloes and goats production, diseases are the most important which degrade the productivity of these animals (Sarker *et al.*, 1999). Disease is an abnormal condition or derangement that affects the normal body functions of an animal. The etiology may be infectious such as virus, bacteria, mycoplasma, parasite, rickettsia, protozoa, and some metabolic disorders caused by inappropriate feeding and poor standard of management. This affects productivity, income and profit of the animal's owner and sometimes death. Ruminant production is seriously hampered by tropical diseases. It increases cost of production by prolonging production time; stunted / reduced growth, reduces the quality and quantity of animal products and generally causes great loss to the farmer (Rabiu *et al.* 2013). It has also been observed that the high prevalence rate of livestock diseases in most developing countries is a major constraint to livestock production. Until the existence of diseases in a particular area is understood, it is difficult to plan systemic health program or formulate effective control strategies.

Retrospective evaluation of clinical case records helps to understand the predominant clinical problems

and also their demographic and seasonal distribution in a particular area. Retrospective study of animal diseases is a rapid and cheap means to identify the strategy for effective disease control when analysed properly. Therefore, the objectives of this study were to determine the most prevalent diseases of bovines and to analyse the data of bovine cases presented to the Veterinary Clinical Complex, College of Veterinary and Animal Sciences, MAFSU, Parbhani for effective disease management, prevention and control of the prevalent diseases.

### Materials and Methods

The seven years retrospective study on medicinal cases in bovines was conducted at Veterinary Clinical Complex, College of Veterinary and Animal Sciences, Parbhani, Maharashtra (India) from April 2015 to March 2022. The data collected from the clinical case record of VCC, COVAS, Parbhani contains information related to the patients and their owners, and also information such as clinical signs observed, clinical parameter recorded, laboratory investigation conducted, disease diagnosed and treatment instituted. Diagnoses were often made based on history, clinical signs and laboratory analysis. Data gathered were analyzed based on species and disease conditions using simple descriptive statistic.

\*Corresponding author: mujeebvvet@rediffmail.com

## Results and Discussion

The present retrospective study revealed that total 5457 bovine medicinal cases were presented to the Veterinary Clinical Complex, COVAS, Parbhani, Maharashtra (India) from April 2015 to March 2022 (Seven years period). Out of the total 5457 bovines medicinal cases presented during this period prevalence was highest for anorexia of unknown etiology (20.39%) followed by respiratory system affection (pneumonia) (19.24%), enteritis (17.15%), miscellaneous (fever of unknown etiology, weakness) cases (10.02%), simple indigestion (9.82%), skin diseases (5.07%), tympany (4.34%), mastitis (3.99%), acidic indigestion (3.17%), endoparasite infection (2.47%), alkaline indigestion (2.18%), metabolic diseases (1.19%), snake bite cases (0.42%) and post parturient hemoglobinuria (0.38%) while the least prevalent condition was colic (0.12%) (Table 1).

In this study, it is evident that the most predominant general and systemic disorders of bovine were anorexia, fever, weakness, respiratory diseases, gastrointestinal diseases, skin diseases, mastitis, endo-ectoparasitic infestations, metabolic disorders and snake bite that devastate health of bovine ruminants. Therefore, there is need to educate animal owners regarding proper

feeding and rearing management practices to be followed that will help in alleviating problems such as anorexia, pneumonia, gastrointestinal (GIT) disorders, mastitis, metabolic disorders and skin problems. Animal owners are unaware about nutrition and feeding of animals which results in GIT problems like tympany, indigestions, colic and enteritis. Respiratory diseases, skin problems and endo-ectoparasitic infestations are result of poor managerial practices, unawareness about parasitic and vector control. Low prevalence of certain disease conditions might be due to their low severity that does not require animals to be presented to the clinics for diagnosis and treatment purpose or due to high transportation charges, instead animal owners use ethno-veterinary medicine to treat their animals at their place.

Parasitism in ruminants in developing countries has been reported as one of the major problems especially where nutrition and sanitation are poor (Odoi *et al.*, 2007), although it has been reported as a major health problem in domestic ruminants throughout the world (Swarnakar *et al.*, 2015). Helminthoses has been implicated as one among the health problems constraining the well-being and productivity of cattle in terms of decreased growth rate, weight loss, diarrhea, anorexia, gastroenteritis, abdominal distention, emaciation and sometimes anaemia

**Table 1: Disease wise Medicinal Cases in Bovine Presented to VCC, COVAS, MAFSU, Parbhani, Maharashtra (India) from 2015-2022**

Sr. No.	Disease/ Condition	Total	Percent
1.	Anorexia of unknown origin	1113	20.39
2.	Pneumonia	1050	19.24
3.	Enteritis	936	17.15
4.	Simple Indigestion	536	9.82
5.	Skin Diseases	277	5.07
6.	Tympany	237	4.34
7.	Mastitis	218	3.99
8.	Acidic Indigestion	173	3.17
9.	Endoparasite infection	135	2.47
10.	Alkaline Indigestion	119	2.18
11.	Metabolic Diseases	65	1.19
12.	Snake Bite	23	0.42
13.	PPH	21	0.38
14.	Colic	7	0.12
15.	Miscellaneous	547	10.02
Total		5457	100

(Nahed-Toral *et al.*, 2003; Swai *et al.*, 2006; Keyyu *et al.*, 2005; Hesterberg *et al.*, 2007; Ogudo *et al.*, 2015). High prevalence of endoparasitism in ruminants has been reported by various researchers around the world (Osakwe and Anyigor, 2007; Ahid *et al.*, 2008; Nath *et al.*, 2011; Tesfaheywet, 2012; Elele *et al.*, 2013; Vanessa *et al.*, 2014). Ectoparasitism has also been reported in ruminant animals that has been attributed to environmental conditions, irregular animal movement control, availability of vectors, poor managerial practices, irregular ectoparasite control and possible development of resistance to ectoparasiticides as well as high temperature and sunlight favoring ectoparasitic infestations ((Cunha,2000; Van-den-Broek *et al.*, 2003). Haemoparasitism a main cause of red blood cells destruction results in anaemia, jaundice, anorexia, weight loss and infertility, although its effect on cattle production is difficult to quantify (Samdi *et al.*, 2010), has been main attributing factor for losses in traction power, milk and meat production and costs of control programs (ILIR, 1997). Haemoparasites and their vectors (ticks and blood-sucking flies) have worldwide distribution (Okorafor and Nzeako, 2014).

The least prevalent conditions in this study were gastrointestinal conditions (indigestions, colic), snake bite, metabolic diseases and minerals deficiency an finding also reported of Abiola *et al.*, (2016) and low prevalence of such conditions might be due to their low severity that does not require animals to be presented to the clinics for diagnosis and treatment purpose or due to high transportation charges, or use of ethno-veterinary medicine to treat their animals at their place (Sandabe *et al.*, 2006). Moreover, extension services aimed at disease awareness and better managerial practices for feeding, rearing and housing to the farmers will help in the reduction of occurrence of the diseases in animals.

## Conclusions

This retrospective study on bovine medicinal cases highlighted the prevalence of various disease conditions that may be due to poor management practices, improper health care, stress on pregnant animals and neglect of prophylactic measures for disease prevention therefore, there is need for awareness, education of livestock farmers/owners regarding proper feeding, vaccination, deworming, spraying ectoparasiticide, first aid in emergency, record keeping, effective prevention and control measures to be followed that will help in

alleviating such problems. The information generated in this study will be valuable for the clinicians, researchers, and academicians for planning and taking necessary action to strengthened veterinary services, accessible, affordable for low-income livestock farmers and to create facility for doorstep services in less accessible areas to reduce losses to farmers and increasing profitability.

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