

A study on prevalence of canine chronic enteropathy in hospitals of Mizoram

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Abstract

The objective of this study was to determine the prevalence of chronic enteropathy in canines using different diagnostic techniques based on body weight, age, sex, and breed distribution. The study period was nine months extending January 2023 to September 2023 that included a total of 618 dogs. These dogs were presented to TVCC, Selesih, Mizoram for different clinical disease conditions. Chronic gastroenteritis is characterized by various clinical signs such as diarrhoea, vomition with or without blood, inappetence, lethargy, anaemia and dehydration. In this study a total of 121 dogs had gastrointestinal disorders of which 12 were positive for chronic enteropathy.

Keywords: Dog, Enteropathy, Mizoram, Prevalence

Highlights

- Prevalence of chronic enteropathy in 618 dogs on the basis of body weight, age, sex, and breed was studied during the period from January 2023 to September 2023.
- 121 cases had gastrointestinal disorders and 12 cases were positive for CE

In veterinary medicine, a condition that was once known as inflammatory bowel disease (IBD) is now more frequently referred to as chronic enteropathy (CE). CE term is used for diseases of intestines regardless of etiology and pathogenesis. The term is widely used to describe the disease in canines with chronic gastrointestinal complaints, and when the intestinal inflammation is suspected but not confirmed or when no biopsies have been taken. CE is preferred to IBD because it recognizes the differences between these disorders in humans, and in animals (Dandrieux, 2016). The term “chronic enteropathy” refers to a set of complexes, non-specific gastrointestinal (GI) disorders in dogs lasting three weeks or more, and are unrelated to any other conditions (Dandrieux & Mansfield, 2019). CE is characterised by persistent or recurring GI tract inflammation. It is widely accepted that CE is caused by a complex interaction between the host genetics, the intestinal microenvironment including primarily the bacteria, dietary constituents, immune system, and environmental triggers of intestinal inflammation (Kopper et al., 2021)

The study was conducted in the College of Veterinary Sciences, and Animal Husbandry, Central Agricultural University, Selesih, Aizawl, Mizoram, and Veterinary dispensaries of Mizoram state.

A total of 618 dogs were registered during January 2023 to September 2023, of which 121 dogs showed signs of gastrointestinal disorder. Collection of data with respect to bodyweight, age, sex, breed, duration of illness, activity of the animal, appetite, frequency of vomition and diarrhoea, stool consistency, stool frequency, weight loss, deworming and vaccination status of dogs suffering from gastroenteritis was done in a prepared case sheet. Vital clinical parameters *i.e.* rectal temperature (°F), pulse rate (per minute), respiration rate (per minute), body condition score was precisely measured and recorded. Out of 121 cases, 12 dogs were diagnosed positive for CE.

In Mizoram the prevalence of GI affections was found to be 19.6% (121/618) and that of canine CE was 1.9% (12/618). The body weight-wise prevalence of canine CE was found to be highest in large (>25 kg) size dogs (4.68%), followed by medium (>10-25 kg) size dogs (2.78%) and small (1-10 kg) size dogs (0.66%) (Table 1).

Table 1. Body weight-wise prevalence of canine chronic enteropathy in Mizoram

Body weight	No. of dogs examined	No. of dogs positive for CE	Prevalence %
Small (1-10 kg)	302	2	0.66
Medium (>10-25 kg)	252	7	2.78
Large (>25 kg)	64	3	4.68

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Table 2. Age-wise prevalence of canine chronic enteropathy in Mizoram

Age Group	No. of dogs examined	No. of dogs positive for CE	Prevalence %
Below 6 months	173	0	0
Between 6-12 months	186	1	0.54
Between 1-5 years	145	4	2.76
Above 5 years	114	7	6.14

Table 3. Breed-wise prevalence of canine chronic enteropathy in Mizoram

Breed	No. of dogs examined	No. of dogs positive for CE	Prevalence (%)
Non-descript	133	0	0
Mixed	223	2	0.89
Pug	33	4	12.12
St. Bernard	11	3	27.27
German Shepherd	36	1	2.78
Pitbull	10	2	20
Others	172	0	0

Age-wise prevalence of canine CE was highest in age group above five years (6.14%), then between 1-5 years (2.76%), and between 6- 12 months (0.54%) (Table 2).

More number of males (8/12) had CE than females (4/12). Breed-wise chronic enteropathy in decreasing order included St. Bernard (27.27%), pit bull (20%), pug (12.12%), German Shepherd (2.78%) and mixed (0.89) (Table 3).

Majority of the studies recorded earlier focused on overall gastrointestinal symptoms *i.e.*, the sum of acute and chronic causes of various aetiologies. The present findings reports on the prevalence of canine CE (Suchodolski, 2022). Researchers reported that large dog is prone to enteropathy and this can be due to antibiotic treatments (Mabry, 2024). Studies showed that older dogs are more prone to enteropathy and this may be due to inadvertent use of different drugs (Priya et al., 2017). It was found that prevalence was more in males than females. This was in agreement with the findings of earlier researcher (Rakha et al., 2015). It could be due to a greater number of male dogs in

households and more exposure to risk factors in the environment (Rakha et al., 2015).

However, according to another study conducted by Skotnitzki et al. (2022) it was found that enteropathies might be due to breed variation and that there was no proven evidence of a sex predisposition for the development of CE in dogs. Breed disposition to CE does exist and has supported the important role of genetic predisposition in the pathogenesis of CE. German Shepherd dogs are more predisposed to CE. Border Collies, Boxers, Golden Retrievers, Labrador Retrievers, Rottweilers, Weimaraners, and West Highland

White Terriers are also at risk (Bota et al., 2016).

Conflict of interest: The authors declare that there is no conflict of interest to this research work.

Author's contribution: SCM: Conducting research and manuscript writing; JBR: Concept of research, guiding and editing the manuscript; KS, KhTR: Helping in research and manuscript writing; PK: Editing the manuscript; SKB: Supporting the research and lab assistance; TCT: Statistical analysis.

Data availability statement: All the data supporting the research findings have been presented in this paper. The corresponding author is willing to provide the raw data upon reasonable request.

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