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Incidence of hepatobiliary disorders in dogs

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Abstract

A study on incidence of hepatobiliary disorders in dogs was conducted among the cases that were presented to Veterinary Hospital, Bhoiguda, Hyderabad, Telangana state. A total of 45,368 dogs were screened, of which 254 dogs were suspected to be suffering from hepatobiliary disorders based on history which were further screened. Out of which 140 dogs were diagnosed with hepatobiliary disorders forming an incidence of 55.12%. Breed - wise incidence showed highest incidence in Labrador (22.86 %) and the lowest in Doberman and Rottweiler (0.71 %) each. Among different age groups, 4 to 8 years age group was found to be more affected (45%) followed by more than 8 years age group (32.14%) and less than 4 years age group (22.86%). Sex - wise incidence of hepatobiliary disorders showed highest incidence in males (58.57%).

Keywords: Hepatobiliary disorders, Incidence, Sex, Age, Breed, Dogs

1. Introduction

In view of urbanization, there is increasing number of pet owners owing to growing concern for sufferings of their beloved pets. In an attempt for better health care, many a times there is an overzealous medication by the owner which adversely affects the functioning of the liver [7]. The incidence of hepatobiliary disorders in dogs was consistently increasing over time since 1970 to till date in older dogs compared to young dogs, with an incidence of 1-2% [7]. Incidence of hepatobiliary disorders in dogs is increasing day by day with the changing life style. Hence, the present study was taken up with an objective to study the incidence of hepatobiliary disorders in dogs in relation to breed, age and sex.

2. Materials and Methods

The present study was carried out in the Department of Veterinary Medicine, College of Veterinary Science, Rajendranagar, Hyderabad (Telangana state), for a period of two years from December 2014 to December 2016. The dogs presented to Veterinary Hospital, Bhoiguda with signs such as inappetance, anorexia, diarrhea and melena, ascites, jaundice, pale mucous membranes, vomition, lethargy, polyuria and polydipsia or other manifestations suggestive of hepatobiliary disorders were included in the study. These affected dogs were clinically examined and were subjected to diagnostic imaging and haemato biochemical tests for confirmation. However, dogs suffering with hepatobiliary disorders of infectious origin were excluded from the study.

3. Results and Discussion

Out of 45,368 dogs that were presented to Veterinary Hospital, Bhoiguda, during December 2014 to December 2016, 254 dogs were suspected to be suffering from hepatobiliary disorders based on history and clinical signs were screened by diagnostic imaging and various hematobiochemical tests. 140 dogs were diagnosed with hepatobiliary disorders forming an incidence of 55.12 %. (Table.1). the findings were in agreement with the study that reported an incidence of 54.--% (---). However, a lower incidence rate of 1-2, 3.01 and 12 %, respectively was reported [7], [14] and [15]. The variation in the incidence rates of hepatobiliary diseases in dogs might be due to the different populations being screened and geographical location. The incidence in the present study could be attributed to relatively large number of clinical cases that were presented.

Breed -wise incidence

The incidence of hepatobiliary disorders in dogs was high in Labrador retriever (22.86%)

followed by German Shepherd (19.29%), Pomeranian (17.14%), Mongrel (12.86%), Spitz (6.43%), Daschund (5.71%), Pug (4.29%), Boxer (3.57%), Cocker spaniel (2.86%), Dalmatian (2.14%), Great Dane (1.43%), Doberman (0.71%) and Rottweiler (0.71%) (Table 2). Hereditary factor could be attributed to the high incidence of hepatobiliary disorders in Labrador retriever [12]. Among the breeds, Labrador retriever was at greater risk for developing chronic hepatitis (8 and 13). In contrary, highest incidence of liver diseases was recorded among Cocker Spaniel and Terrier breed of dogs [5]. This difference in incidence among the breeds could be attributed to high population of Labrador and German shepherd dogs in the area where the present study was carried out.

Age - wise incidence

The incidence of hepatobiliary disorders in dogs was high in the age group between 4 to 8 years (45.00%) followed by

more than 8 years (32.14%) and less than 4 years (22.86%) of age (Table 3). The mean age of the dogs diagnosed with chronic liver disorders was 5, 7 and 8 years, respectively [9, 12, 6]. The onset of ascites due to hepatic origin was reported to be in the age group of more than 5 years (10). Whereas, chronic cholecystitis was diagnosed in 3 and 9 year old dogs, respectively (1 and 4).

Sex - wise incidence

The incidence of hepatobiliary disorders in dogs in relation to sex revealed a higher rate in males (58.57%) as compared to females (41.43%) (Table 4). These findings are in accordance with the reports of [4] and [10], who observed however, liver diseases were more common among females, than males as documented by [5] and [12]. The reason for higher incidence of hepatobiliary disorders in males could be the interest of the people of the area under study towards having male dogs than females.

Table 1: Incidence of hepatobiliary disorders in dogs

S. No	Total no. of cases	Suspected hepatobiliary disorders	Hepatobiliary disorders	Incidence (%)
1.	45,368	254	140	0.31

Table 2: Breed wise incidence of hepatobiliary disorders in dogs

S. No	Breed	No. of dogs	Percentage
1	Labrador retriever	32	22.86
2	German Shepherd	27	19.29
3	Pomeranian	24	17.14
4	Mongrel	18	12.86
5	Spitz	9	6.43
6	Daschund	8	5.71
7	Pug	6	4.29
8	Boxer	5	3.57
9	Cocker spaniel	4	2.86
10	Dalmatian	3	2.14
11	Great Dane	2	1.43
12	Doberman	1	0.71
13	Rottweiler	1	0.71
	Total	140	100

Table 3: Age wise incidence of hepatobiliary disorders in dogs.

S. No	Age of the dog	No. of dogs	Percentage
1	Less than 4 years	32	22.86
2	4-8 yrs	63	45.00
3	More than 8 yrs	45	32.14
	Total	140	100

Table 4: Sex wise incidence of hepatobiliary disorders in dogs.

S. No	Sex of the dog	No. of dogs	Percentage
1	Male	82	58.57
2	Female	58	41.43
	Total	140	100

4. Conclusion

The incidence of hepatobiliary disorders in dogs reported in the present study was 55.12 %. Breed-wise higher incidence was recorded in Labrador retriever, Age -wise incidence was higher between 4- 8 years and Sex-wise incidence was high in male dogs.

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