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ZOONOTIC IMPORTANCE OF LEPTOSPIROSIS IN DOGS: A RESEARCH NOTE ON PERCENTAGE ANALYSIS OF KNOWLEDGE LEVEL OF DOG-OWNERS OF 3 URBAN CITIES IN GUJARAT

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ABSTRACT:

Present study was carried out from randomly selected population of 120 dog-owner respondents from 3 urban cities of Gujarat state (India), *viz.*, Ahmedabad, Anand and Vadodara to report percentage analysis of dog-owners on their knowledge level for prevention of leptospirosis in dogs. Highest percentage (29.17%) of respondents possessed knowledge about dog being off-fed in leptospirosis while lowest percentage of respondents (09.16%) were aware of the fact that leptospirosis can be transmitted by direct contact with infected dog or tissues. Details of the survey have been mentioned in this research note. The data would provide new insights to know present status and to create awareness in urban areas of Gujarat state regarding this potential zoonotic disease.

KEY WORDS: *Leptospirosis, Knowledge level, Dog-owners, Urban area, Gujarat.*

INTRODUCTION:

Leptospirosis, a potential zoonotic disease of dog with highest possibilities of transmission to human followed by rabies, is caused by a bacteria of *Leptospira* spp. The disease in human may be contracted through indirect contact with infected or contaminated sources. It is characterized by elevated

body temperature, depression, shrunken eyeballs attributed to dehydration, anorexia, vomiting, anaemia as well as extensive jaundice. It is also known as 'Rice paddy itch' as people working on rice fields get frequently exposed to contamination by urine of dogs. Little in literature has been available with special regards to knowledge level for dog-ownership (Bhadesiya and Raval, 2014). Present survey was undertaken to assess knowledge level of dog-owners of urban areas of Gujarat state with special reference to leptospirosis, a potential zoonotic diseases.

METHODS:

The present research was carried out in order to evaluate present status of knowledge level of dog-owners of 3 urban cities, *viz.*, Ahmedabad, Anand and Vadodara of Gujarat state (India) between August-2014 to March-2015. For this purpose, a total of 120 randomly selected dog-owners (respondents) were subjected to direct interview. Interview questionnaire included basic aspects of leptospirosis in dogs. The aim of the study was to report a baseline information of urban dog-owners' knowledge on potential zoonotic importance of leptospirosis which would be helpful in expansion of awareness campaigns.

RESULTS AND DISCUSSION:

Percentage analysis of dog-owners' knowledge has been shown in Table-01. Loss of appetite in dogs is a common clinical sign associate with a wide variety of infectious as well as non-infectious diseases. In the present study, it was reported that more than one-fourth (29.17%) of the dog owners had understanding that initial loss of appetite is also associated with leptospiro/sis. These findings are in correlation with criteria suggested by Fontaine and Schantz (1988). A common route for transmission of leptospirosis in humans is direct contact with pastures or tissues contaminated with dog's urine. However, an average population (20.83%) of the respondents knew that leptospirosis can be transmitted by taking bath in water bodies contaminated with dog's urine. In addition to this, 17.50% of dog-owners were aware of the fact that dog with leptospirosis has reddish discoloration of urine. Only 14.16% of dog-owners had understanding that leptospirosis can be transmitted by contact of skin with moist soil, water, vegetation contaminated with urine of infected dogs. Similar reasons were reported by Bingham *et al.* (2010) for reduced level of knowledge among dog-owners on potential zoonotic risks from diseases of dogs. Very few (09.16%) dog-owners had knowledge about transmission of leptospirosis by direct contact with infected dogs and tissues. Less numbers of respondents in this category can be due to low level of mass-media exposure for creating awareness against potential hazards of zoonotic diseases from dogs (Stull *et al.*, 2012; Bhadesiya and Raval, 2014). It is concluded that almost half of the dog owners had knowledge of leptospirosis.

A veterinarian also plays an important role in order to establish one health concept (Grant and Osten, 1999). Leptospirosis is equally harmful to humans as to dogs. Presently the disease control measures in human include maintenance of personal hygiene, protection from further contamination, use of disinfectants for hand wash, protection of food particles and utensils from contamination by carrier dogs' urine etc. The details on zoonotic importance of leptospirosis in terms of percentage analysis would provide new insights for research, therapeutic and preventive trials as well as implementation of awareness campaigns by both, human and veterinary medicine practitioners

CONCLUSION:

Highest percentage (29.17%) of respondents possessed knowledge about dog being off-fed in leptospirosis while lowest percentage of respondents (09.16%) were aware of the fact that leptospirosis can be transmitted by direct contact with infected dog or tissues. The data would provide new insights to know present status and to create awareness in urban areas of Gujarat state regarding this potential zoonotic disease.

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Table-01: Distribution of the dog owners according to their knowledge about leptospirosis (N=120)

Sr. No.	Awareness of dog-owners' about..	No. of Respondents	Percentage (%)
1	Leptospirosis can be transmitted by direct contact with infected dogs and tissues	11	09.16%
2	Leptospirosis can be transmitted by contact of skin with moist soil, water, vegetation contaminated with urine of infected dogs	17	14.16%
3	Leptospirosis can be transmitted by bathing in water bodies contaminated with dog's urine	25	20.83%
4	In leptospirosis urine becomes red	21	17.50%
5	In leptospirosis dog suffering from loss of appetite	35	29.17%