

Survey on Prevalence of Different Infections in Pet Dogs of Mumbai City in Maharashtra

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ABSTRACT: The present investigation was carried out to study, different infections in dogs (*Canis lupus familiaris*) of Mumbai city in Maharashtra. The results indicated that most of the dogs had suffered with either Tick fever, Gastro infection, Kidney failure, Skin infection, Eye infection or Jaundice.

KEYWORDS: Different infections – Tick fever, Gastro infection, Kidney failure, Skin infections, Eye infections, Jaundice; Dogs, Mumbai.

I. INTRODUCTION

Dogs have been kept as pets for over 14 centuries. Many studies have confirmed the precious roles of pets in human life. Evidence has shown that owning a pet can increase the activity of pet owners and consequently reduce serum cholesterol, triglyceride levels, and fewer cardiovascular events. Also, some other studies demonstrated that pet owners suffer less from depression and mental stress and have a higher self esteem compared to others (Ghasemzadeh and SH Namazi, Journal of Medicine and Life, Carol Davila – University Press). The journey to lasting doggy happiness starts by choosing the right breed of dog for you, and you need to consider which dog breed suits your lifestyle and personality. It's a relationship that will last 10-15 years, after all. Throughout their lives, there are a number of contagious diseases which can seriously harm dog's health or even cause death. There are many internal as well as external parasites which causes certain infections and are very common for dogs. Among which Tick fever and Skin infections are most prevalent followed by Gastro infection, Eye infections, Kidney failure, Jaundice, etc.

II. LITERATURE SURVEY

India has a wide range of climatic zones which makes it suitable for a diverse range of vectors and pathogens of medical and veterinary importance, whose transmission and geographical distribution are closely linked to regional temperature, rainfall and humidity. Mumbai is the capital city of Maharashtra which lies on the Konkan coast on the West coast of India. The available literature on this subject, although limited, suggests that a number of infections which are most prevalent in dogs were surveyed through questionnaires asked to dog owners in Mumbai city of Maharashtra. Knowledge of infections in companion animals in the city (Mumbai) remains incomplete. Despite the combination of favorable climate for parasites and vectors, information concerning the prevalence of infections in dogs of Mumbai is limited. This review aims to provide an overview of the current state of knowledge of prevalence of different infections in dogs of Mumbai.

III. PROPOSED METHODOLOGY AND DISCUSSION

Total 53 dogs belonging to Mumbai city of Maharashtra State were surveyed in the form of questionnaires asked to their owners for any kind of infections in their dogs. The collected data were subjected to percentage analysis (Snedecor and Cochran, 1994) and Pie-chart diagram.

Following infections were discussed;

- **TICK FEVER :** It is a type of blood-borne disease that is transmitted to the dogs via bites from ticks (ectoparasite). The presence of ticks itself can trigger skin disease through irritation, and during the feeding mechanism the tick introduces microscopic organisms (endoparasite) into dog's blood which causes systemic disease.
- **GASTRO INFECTION :** It is also referred to as Gastroenteritis. It is a form of Stomach flu caused by viruses, bacteria, parasites, fungus or even new food. This is usually characterized by abdominal pain, vomiting and diarrhea,

though many other digestion-related symptoms may also occur. Most dogs become lethargic and shows decreased appetite along with dehydration.

- **KIDNEY FAILURE** : Also known as Renal failure. It occurs when the dog's kidneys are no longer able to remove waste and concentrated urine from their body.
- There are two types of Kidney failure :
 - 1) Acute Renal Failure (ARF) which comes on suddenly and can be caused by ingestion of certain poison.
 - 2) Chronic Renal failure (CRF) is a slower process and develops over months or even years.
- **JAUNDICE** : It is also known as Icterus or Yellow Jaundice. It is characterized by excessive building up of Yellow pigments in Blood and Tissues. Bilirubin, a pigment in Bile makes it yellow in color. It causes yellow discoloration in skin, gums and eyes. The excessive build up of Bilirubin in blood affects Liver, Kidney and Brain tissues and often shows some common symptoms like Discolored urine, lethargy, weakness, loss of appetite, vomiting, diarrhea, weight loss, fever etc.
- **SKIN INFECTION** : Just like humans, dogs do get allergies such as Food allergies, Environmental allergies and seasonal allergies like pollen, dust feathers, animal dander, grain and flea saliva which causes dry skin, itching, redness and inflammation of skin that may often lead to secondary skin infections. Skin infection in dogs can be Bacterial, Fungal or Parasitic. Among different skin infections, **Dry skin** is the most prevalent and commonest of all which includes symptoms like itchiness, dandruff, flaking, pimples, scaling, hair loss, inflammation, odor, increased oiliness, scabs, etc.
- **EYE INFECTION** : Eye infections are more common in dogs and can range from self limiting to terribly traumatic including the loss of an eye. It may be caused by bacteria, viruses or fungus. Symptoms of eye infection include redness, inflammation, squinting, etc. Many dogs produce green or yellow discharge or a watery discharge from eye which gives a clear indication of Conjunctivitis. Dogs also suffer from teary eyes, dry eye, cherry eye, etc. Some eye infections are more concerned with Dog breeds. For example; Flat faced dogs like Pugs or Boxers shows more prevalence of eye discharge infections whereas dogs with loose facial skin like Cocker spaniels, Beagles and St. Bernard shows more prevalence of Cherry eye infection.

IV. EXPERIMENTAL RESULT

The total number of dogs infected with specific infection was observed to be **19** out of 53 dogs surveyed of 44 owners; wherein, an individual dog suffered from multiple infections at same or different time. When specificity of Infections were checked it was observed that;

09 dogs had suffered from **Tick fever**

07 dogs had suffered from **Skin infection**

05 dogs had suffered from **Gastro infection**

04 dogs had suffered from **Eye infection**

03 dogs had suffered from **Jaundice**

02 dogs had suffered from **Kidney failure**

The most prevalent infections observed in dogs of Mumbai city in Maharashtra, India; were Tick fever and Skin infections. Mostly dogs between 1 to 2 years of age group had been infected with Tick fever, Skin infection and Gastro infection. Whereas dogs between 7 to 8 years of age group had suffered from Kidney failure. Dogs with flat face such as pugs were observed to have been suffered from Eye infections at any age of their lives. Most cases of Jaundice were seen in Stray dogs (Indian Pariah) who were adopted or rescued from streets.

Refer **Table No. 1** and **Table No. 2**.



Table.1: Following table depicts the total number of dogs surveyed for Presence or Absence of Infections.

Sr. No.	Name of Dog	Dog Breed	Infection PRESENT	Infection ABSENT
1.	Spatii	St.Bernard	PRESENT	***
2.	Guddu	Cocker Spaniel	***	ABSENT
3.	FeeFee	Cocker Spaniel	PRESENT	***
4.	Honey	Cocker spaniel	***	ABSENT
5.	Pusky	Miniature Lhasa	***	ABSENT
6.	Desi Girl	Indian Pariah	PRESENT	***
7.	Pluto	Indian Pariah	PRESENT	***
8.	Bubbly	Indian Pariah	PRESENT	***
9.	Chotu	Indian Pariah	***	ABSENT
10.	Chintu	Indian Pariah	***	ABSENT
11.	Sejar	Rottweiler	PRESENT	***
12.	Bizkit	Rottweiler	***	ABSENT
13.	Juicy	American Eskimo	***	ABSENT
14.	Pinky	Shih tzu	***	ABSENT
15.	Buddy	Dobermann	***	ABSENT
16.	Lisa	Pomeranian	***	ABSENT
17.	Jack	Tibetan Mastiff	***	ABSENT
18.	Ace	Siberian Husky	***	ABSENT
19.	Roksy	Siberian Husky	***	ABSENT
20.	Whisky	Boxer	***	ABSENT
21.	Boxer	Boxer	***	ABSENT
22.	Rosey	Pug	***	ABSENT
23.	Rusty	Pug	PRESENT	***
24.	Ross	Puggle (Mix breed of Pug & Beagle)	PRESENT	***
25.	Max	Golden Retriever	PRESENT	***
26.	Jimmy	Golden Retriever		ABSENT
27.	Daisy	Golden Retriever	PRESENT	***
28.	Sheru	German Shepherd	***	ABSENT
29.	Tyson	German Shepherd	***	ABSENT
30.	Daisy	German Shepherd	***	ABSENT
31.	Joro	German Shepherd	***	ABSENT
32.	Lara	German Shepherd	***	ABSENT
33.	Shadow	Labrador Retriever	***	ABSENT
34.	Laddu	Labrador Retriever	***	ABSENT
35.	Olive	Labrador Retriever	***	ABSENT
36.	Zoro	Labrador Retriever	PRESENT	***
37.	Loozy	Labrador Retriever	***	ABSENT
38.	Rocky	Labrador Retriever	***	ABSENT
39.	Magic	Labrador Retriever	***	ABSENT
40.	Bally	Labrador Retriever	***	ABSENT
41.	Sunny	Labrador Retriever	***	ABSENT
42.	Gabbar	Labrador Retriever	***	ABSENT
43.	Leo	Labrador Retriever	PRESENT	***
44.	Oscar	Labrador Retriever	PRESENT	***
45.	Astro	Labrador Retriever	PRESENT	***
46.	Keeper	Labrador Retriever	PRESENT	***
47.	Tiara	Labrador Retriever	***	ABSENT
48.	Tania	Labrador Retriever	PRESENT	***
49.	Samba	Labrador Retriever	PRESENT	***

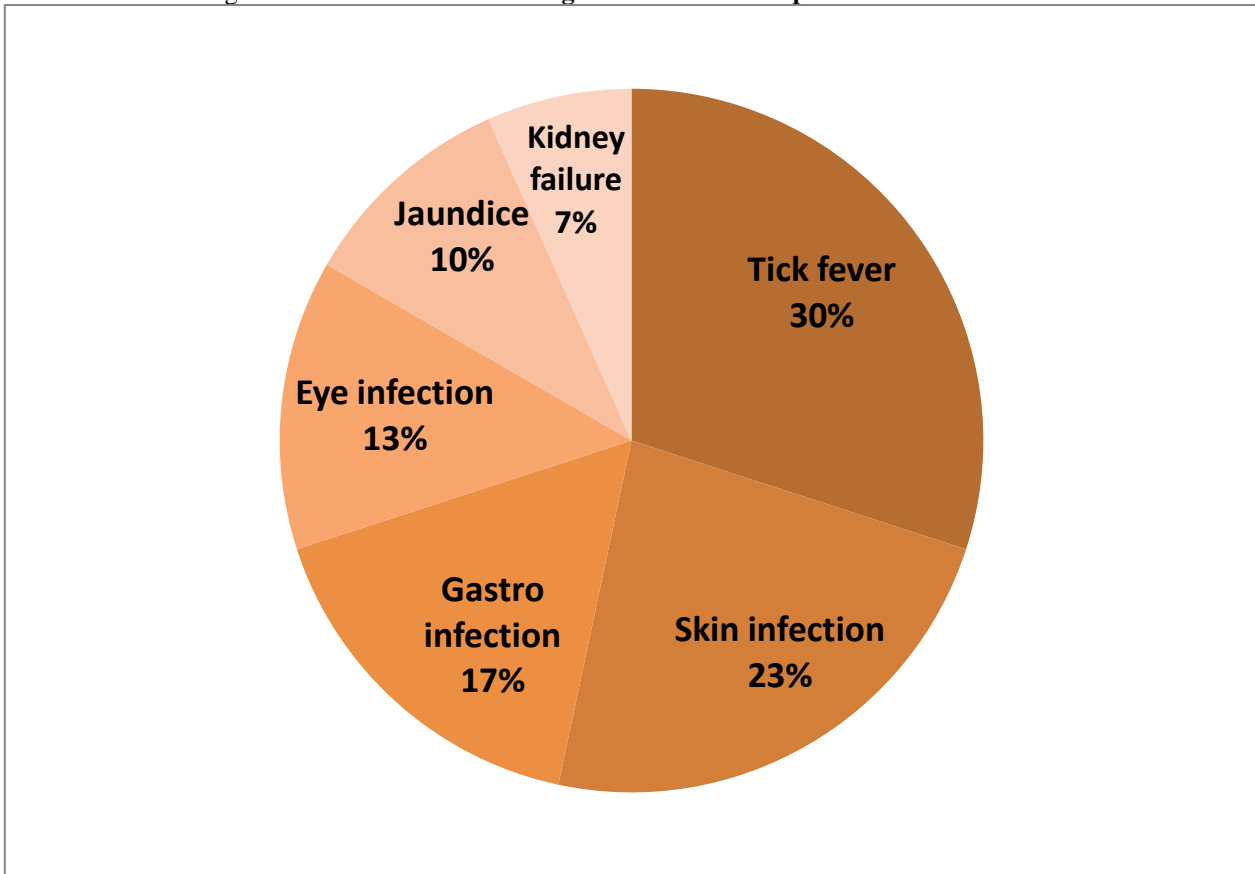


50.	Spike	Labrador Retriever	PRESENT	***
51.	Casper	Labrador Retriever	PRESENT	***
52.	Ruby	Labrador Retriever	***	ABSENT
53.	Bruno	Labrador Retriever	***	ABSENT
	TOTAL	53	19	34

Table.2: Following table depicts the Number and Percentage of dogs with specific infections.

Sr. No.	Name of Dog	Dog Breed	TICK FEVER	GASTRO INFECTION	KIDNEY FAILURE	SKIN INFECTION	EYE INFECTION	JAUNDICE
1.	Spatii	St.Bernard		+				
2.	FeeFee	Cocker Spaniel			+			
3.	Desi Girl	Indian Pariah						
4.	Pluto	Indian Pariah						+
5.	Bubbly	Indian Pariah	+					+
6.	Sejar	Rottweiler	+			+		
7.	Rusty	Pug					+	
8.	Ross	Puggle (Mix breed of Pug & Beagle)		+		+	+	
9.	Max	Golden Retriever	+					+
10.	Daisy	Golden Retriever	+			+		
11.	Zoro	Labrador Retriever				+		
12.	Leo	Labrador Retriever	+	+		+	+	
13.	Oscar	Labrador Retriever	+		+			
14.	Astro	Labrador Retriever	+			+		
15.	Keeper	Labrador Retriever		+				
16.	Tania	Labrador Retriever	+			+		
17.	Samba	Labrador Retriever	+					
18.	Spike	Labrador Retriever					+	
19.	Casper	Labrador Retriever		+				
Total no. of dogs infected by specific infection			09	05	02	07	04	03
Percentage of dogs infected by specific infection			30%	23%	17%	13%	10%	7%

- The following Pie-chart shows the **Percentage of Prevalence of specific Infections.**



V. CONCLUSION

The information regarding the prevalence of infections in Mumbai city of Maharashtra is very far from clear. Available literatures and the survey conducted for dog owners through questionnaires for any kind of infections in their pet dogs suggest that most of the pet dogs had suffered from Tick fever and Skin infections. Thus, a more comprehensive review of the prevalence of these infections are still required. A greater understanding of these infections are also needed in order to better inform Pet owners about the risk, prevalence, treatments, control and the right routine for maintaining hygiene of their beloved pet dogs. Future studies engaging in investigation of different infections in dogs and their control measures will hopefully help Pet owners in taking good care of their pets as well as choosing a dog of specific breed.

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