

Awareness about Oral Hygiene Habits in dogs among dog owners

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Abstract

Aim : To assess the awareness about oral healthcare in dogs and the status of current oral care provided to the dogs by their caretakers.

Materials and Methods : A questionnaire consisting of 9 closed ended questions were provided to 50 dog owners from various parts of Mumbai at random consisting of questions related to general health care, feeding patterns and type of oral hygiene practised. Results obtained from this data shall be subjected to statistical analysis. (Fig.1)

Results : More than half of the participants paid little to no attention about their dogs' oral hygiene and were unaware of the consequences of periodontal disease in their pets.

Conclusion : It is imperative that awareness must be raised about the need of oral hygiene in dogs and educate the owners about a proper diet and oral hygiene practices.

Key words : Dogs, Oral diseases, Pet dental care, Pet Oral Hygiene

Introduction

Periodontal disease has been identified as major oral disease in domestic pets for at least 70 years¹. It has been estimated, that by 2 years of age, 80% of dogs have some form of periodontal disease². Dr. Jan Bellows, a Diplomate of the American Veterinary Dental College, believes good dental hygiene can increase a dog's lifespan by as much as a third. "When a client asks me how long their puppy will live, I usually respond 15-17 years if you brush their teeth daily... 11-13 years if you don't," said Dr. Bellows.

As in humans, the disease often causes varying levels of discomfort to the affected animal¹. Moreover, there is strong circumstantial evidence that a focus of infection in the oral cavity may cause disease of distant organs (DeBowes et al. 1996). Consequently, preventing periodontal disease is important for the general health and well being of companion animals¹. As oral healthcare specialists, we should expand our horizons and take responsibility for the prevention of dental diseases in humans as well as their faithful

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companions. Many factors contribute towards the oral health status of a pet, and some of these may be influenced by the owner³. It is known that diet and level of oral home care are owner-controlled factors that play a role in determining the oral health status of dogs⁴.

Since the sole responsibility of the pet lies with the owners, they should be made aware and educated regarding basic oral hygiene aids and healthy feeding practices for their pets. There is variability in the awareness of health consequences of feeding and dental hygiene within the society; therefore, constant monitoring of the situation is required³. Only then can we call these animals our pets in the true sense. Hence the present survey was conducted to evaluate the current status of oral health care provided for the dogs by the pet owners.

Material and Method

A pre-validated questionnaire was used containing 9 close ended questions (Fig 1), regarding general healthcare provided, oral habits, feeding practices, and degree of awareness. Dog owners participating in the survey were selected at random, from different areas in Mumbai and of different backgrounds. A sample size of 50 dog owners was selected. All the data obtained was subjected to statistical analysis. An informed consent was taken from the dog

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owners before their participation in this study. The ethical certificate for conducting this survey was obtained from the ethics committee.

Results

Participant pet owners were asked about frequency of vet visits, 54% responded saying they only visited the vet as and when required, not following any routine or scheduled checkups. (Fig. II) 46% of participants fed their pets a mixture of home cooked and commercially available packed foods. (Table. I)

Figure I

Questionnaire:

- Name:
- Address:
- Contact:

Details of the pet:

- Name:
- Breed:
- Age:
- Sex: (M/F)
- General Appearance: (Healthy/Weak)

- How often does your pet visit the vet? (Annually, Bi-annually, Only when Required)
- What diet does your pet follow? (Kibble, Packed/Canned, Raw, Cooked)
- Have you ever felt the need to examine your pet's oral cavity? If yes, why? (Yes, No, Stuck bone/toy, etc)
- Do you take any measures to ensure your pet has good oral hygiene? If yes, what measures do you take? Describe. (Brushing, Gauze Cleansing, Chew Toys, etc)
- Has your Vet ever recommended professional teeth cleaning for your pet? (Yes, No)
- Does your pet often suffer from bad breath? If yes, what measures do you take? Describe. (Yes, No, Cleaning Oral Cavity, Veterinary Assistance)
- Have you ever noticed any signs of oral disease such as swollen gums, bleeding, discoloration of teeth, accumulation of plaque and calculus, loose teeth, etc in your pet's oral cavity? (Yes, No, Never Observed)
- Have you lost a dog in the past? What was the cause of death? Have you ever heard of death in dogs due to periodontal diseases? (Yes, No)
- Are you aware of the importance of good oral hygiene in dogs? (Yes, No)

Figure II

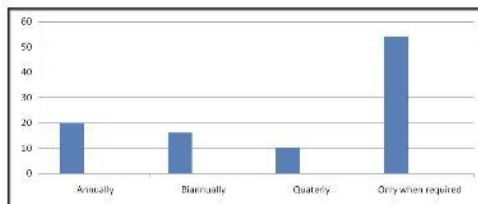


Table I

Diet followed	Mixed	Packed	Home cooked
	46%	24%	30%

80% of participants have never examined their pet's oral cavity. (Fig. III) About 1/4th of pet owners provided no form

of oral care for their pets, while 40% provided more than one of the following methods: chew toys, gauze cleaning, tooth brushing once a week. (Fig. V)

Figure III

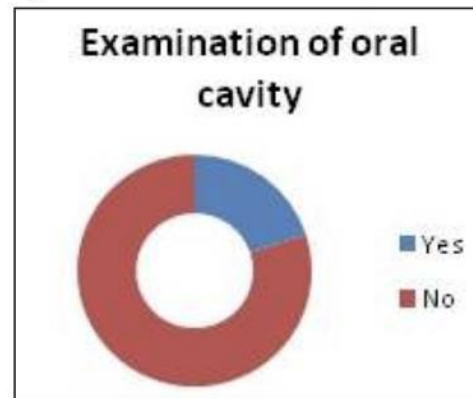
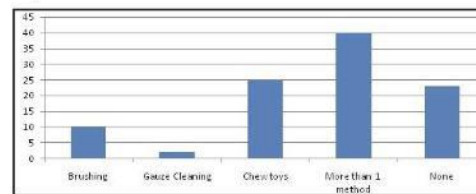
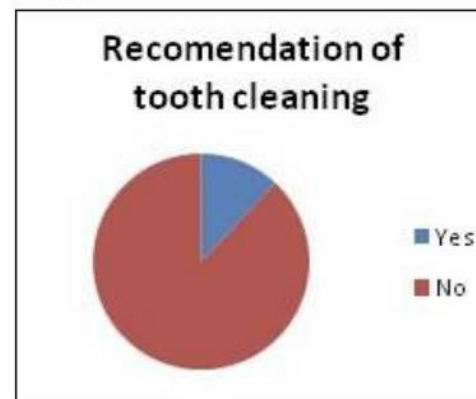


Figure V



Only a meagre 12% of the participants had been recommended professional tooth cleaning by their vets. (Fig. IV)

Figure IV



40% of the participants complained that their pets suffered from bad breath (halitosis) on a regular basis.

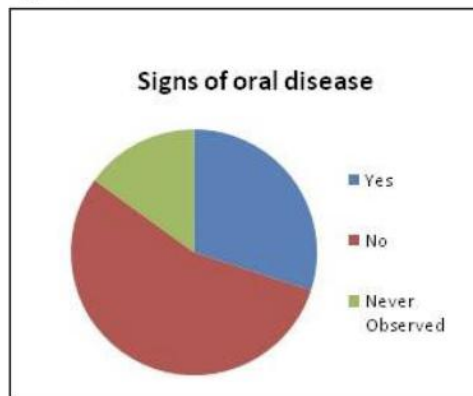
(Fig. VI)

Figure VI



15% of the participants confessed to having never bothered to observe for oral disease in their pet, while 30% reported deteriorating oral health. (Fig. VII)

Figure VII



More than half of the participants were not aware that periodontal disease can cause systemic disease leading to shortening of the lifespan and premature death of their most loyal companion animals. (Fig. VIII)

About half the participants confessed that they were not aware of the importance of oral hygiene in dogs. (Table. II)

Figure VIII

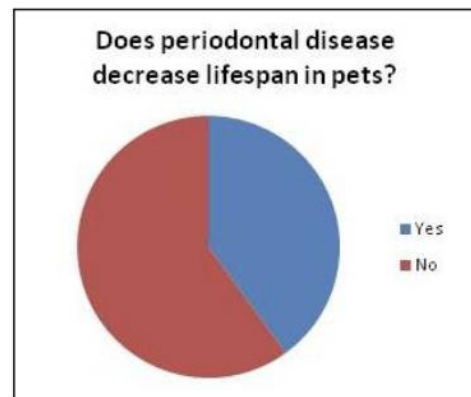


Table II

Would you say you are aware of oral hygiene importance in dogs?	Yes	No
	52%	48%

Discussion

It is fascinating to know that, like humans, dogs too have only 2 sets of teeth, i.e. they are diphyodonts, having primary and permanent dentition. The primary teeth exfoliate by the age of 6 months, followed by eruption of the permanent successors which last a lifetime. Unlike humans, dogs are not affected by aesthetics and phonetics. However, like humans, reduced masticatory efficiency adversely affects our pets too, along with causing a generalized feeling of discomfort to the animal. Our pets are unfortunate, as once the tooth is lost, there are no provisions for restorative or rehabilitative treatments for them, like dentures or implants for us humans. Hence, it is solely the responsibility of the owners to provide for the wellbeing of their pets. The first step to fulfilling this responsibility is education and creating awareness in the right direction.

Through the survey, it was found that most pet owners did only take their pets to the vet when they felt it was required, and did not follow any scheduled or routine checkups. By the time the owner realises their pet is sick, the animal is usually suffering from a certain serious degree of debilitating illness. The veterinarian prescribes and treats the chief complaint, often overlooking the oral cavity because of the state of distress the animal is in. It is recommended that

all dogs be evaluated at least annually by a veterinarian to assess the need for preventive dental care performed under anaesthesia⁵.

Periodontal disease shares the major burden of oral diseases in pets, and is mostly considered a diet related disorder⁶. A soft diet causes accumulation of bacterially colonized dental plaque¹. While feeding soft diets has recently become very popular with dog owners, proper oral hygiene, which is proven to prevent effectively periodontal and other oral diseases, is rarely provided¹. About 95% of the pet dogs fed either a homemade or commercial type diet showed heavy calculus deposition at the age of 26 months and the gingival inflammation became more severe with increasing age¹. Appropriate instructions concerning dental hygiene to the pet owners should be helpful to lower the incidence of dental disorders in a dog population¹.

As evidenced by numerous studies, daily tooth-brushing remains the single most effective way of maintaining clinically healthy gingivae¹. Daily tooth-brushing should be the recommendation to the dog owner irrespective of dietary regimen⁴. However, reduction of plaque by dietary texture is a useful adjunctive measure and should be recommended¹. Food with greater kibble size and hard, dry texture is recommended. The use of chew toys should be encouraged as chewing mechanically disrupts the accumulating plaque, and is therefore a self-cleaning action (Hennet, 1995). Chewing also stimulates the flow of saliva, which contain antibacterial agents that help clean the mouth⁷.

Canine periodontal disease unquestionably leads to halitosis⁸. The association of oral malodour with periodontal disease in dogs is an important issue, as this may be the first clinical sign of oral disease noticed by the owner⁹. When asked about oral malodour, significant percentage of participants confessed their pets suffer from halitosis, contrary to the percentage of participants actually knowing halitosis as an important indicator of oral disease, and also to the percentage of participants who actually get doctor's consultation.

An additional concern with periodontal disease is its association with an increased risk of developing systemic disease resulting from the release of inflammatory cells and by-products in response to bacteraemia. The most commonly cited secondary organ system affected by periodontal disease is the cardiovascular system⁵. Cross sectional, case control and longitudinal studies have shown this association is humans, while observational studies have

pointed to the same association in dogs. The authors therefore concluded that greater awareness of the importance of canine dental health and routine preventive care would improve overall health¹⁰.

The American Veterinary Dental Society cautions pet guardians that, "Oral bacteria will be filtered out by the kidney and liver, and can cause micro abscess within these organs. This leads to a decrease in function of these vital organs over time. In addition, it has been suggested that these bacteria can become attached to the heart valves and cause a disease called endocarditis."¹⁰

The gold standard of preventive care is daily tooth brushing of the dogs teeth but this is not always practical and caretaker compliance is typically low. The second best option for preventive care is to feed approved dental diets and treats³. Dental snacks provide a convenient and enjoyable way of maintaining pet oral hygiene, while also helping to strengthen the pet-owner bond³.

Another coincidental, but amusing finding of this study was that a few pet owners, who strictly adhere to a vegetarian diet, provided only plant sourced foods for their pets, thus compelling these canines to live like herbivores.

In other countries, major steps are being taken to address the problem of lack of awareness of oral hygiene in pets among pet owners. Some such measures are, the "Pet Smile Campaign" conducted in the United Kingdom, and the celebration of National Pet Dental Health Month, according to American Veterinary Medical Association, in February every year. Nowadays, such campaigns are starting to get the much required notice and encouragement in India.

We, the most evolved animal species, started with the domestication and adoption of dogs over 15,000 years ago. Therefore, it is solely up to us to make sure we aren't doing more harm to our most faithful companions, than good.

Conclusion:

It is apparent from the study that there is still a need to raise awareness of oral health problems in dogs and to educate owners in the benefits of a daily oral care regimen and an appropriate diet. This will, in the true sense, make us human beings the best friends of our beloved pets.

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Conflicts of interest

There are no conflicts of interest.

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