



Prevalence of dental problems in pet dogs in Shiraz, Iran

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Abstract

Dental hygiene is considered as a health indices in companion animals. The purpose of this study was to evaluate prevalence of dental problems in pet dogs in Shiraz, Iran. One hundred and fifteen pet dogs were chosen and classified into four age groups. Analyzed results showed that except for malocclusion all other dental problems increased with increasing age. It was also observed that some of the dental problems were more common in young dogs while other in old dogs. The current data may help veterinarians and pet owners to understand the dental problems in dogs.

Key words: Dental Fractures Dental Plaques, Dental Problems, Periodontal Disease, Pet Dogs

Introduction

Incidences of dental problems in dogs are frequent. A study in USA revealed that only seven percent of pet dogs have healthy teeth (Lund et al., 1999). A number of studies have shown that periodontal disease and tartar are the most prevalent dental problems in dogs (Hoffmann and Gaengler, 1996; Harvey, 1998; Lund et al., 1999). Other dental problems such as tooth lost, attrition, dental caries and tumors are less prevalent (Hale, 1998; Lund et al., 1999). According to some authors, dental problems usually originate from nutritional habits (Genco et al., 1998; Gorrel, 1998; Harvey, 1998). Lack of mouth hygiene results in deposition of dental plaques and tartar and leading to gingivitis (Page and Schroeder, 1982). Gingivitis may lead to separation of collagen junctions to alveolus which results in unstable tooth or even tooth loss (Loesche and Grossman, 2001). Aging, periodontal disease and trauma are some important causes of tooth loss (Hoffmann and Gaengler, 1996). Dental caries are less frequent compared to other problems, however, most of the time, the last premolars and the first molars suffer attrition (Hale, 1998). Dental tumors are rare in dogs. Approximately 20% of oral tumors are squamous cell carcinomas (Ramos-Vara et al., 2000). Paying attention to oral problems, especially dental problems in dogs, is both ethically and economically significant. On the other hand, determining the prevalence of such

problems may be profitable for veterinary dentistry treatments & teaching programs. Regular examinations and alternative studies are seldom performed in Iran. The purpose of this study is to find prevalence of dental problems in dogs in Shiraz city of Iran.

Materials and Methods

One thousand fifteen pet dogs aged 3 months to 5 years were examined for dental problems regardless of breed and gender at Shiraz Veterinary Clinic, Shiraz, Iran. They were classified into four age groups: 3-6 months, 7-12 months, 13-24 months and 25-60 months. Information on the number of teeth and location, periodontal disease (all diagnosed grades), dental plaques, fractures, malocclusion and all diagnosable clinical lesions were recorded. Data were shown in simple percentage.

Results

Prevalence of different dental problems in each age category is presented in Table 1. Dental plaques, periodontal disease, malocclusion and fracture were seen in young puppies (3-6 months). Dogs aged two years had higher periodontal disease, dental plaques, tartar and cavities and fracture than younger dogs. Malocclusion was higher from 3 to 6 months.

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Table1: Age-wise prevalence (%) of different dental problems in dogs in Shiraz, Iran

Age (month)	Dental plaque	Periodontal disease	Persistent deciduous teeth	Malocclusion	Spots and cavities	Fractures
3-6	28.6	33.3	0	19	0	5
7-12	33.3	43.33	6.6	16.66	10	10
13-24	54.54	61.4	0	13.6	11.4	9.1
25-60	75	80	0	15	70	25

Discussion

In the present study, the prevalence of dental lesions in pet dogs in different ages was evaluated. According to Kyllar and Witter (2005), prevalence of dental problems in this study are more than in the past just for paying more attention to oral hygiene by veterinarians and owners. Periodontal disease is the most prevalent dental problem in dogs of all ages (Genco et al., 1998; Harvey, 1998; Lund et al., 1999; Kyllar and Witter, 2005). According to Gorrel (1998) and Hamp (2005), periodontal disease is the most prevalent dental disease in dogs and the possibility of incidence increases with age (Hoffmann and Gaengler, 1996; Kyllar and Witter, 2005). Kyllar and Witter (2005) ascribed dental problems in dogs arise mainly to nutrition habits. They also found that periodontal disease begins earlier in small breeds than bigger ones because of their genetic predisposing factor and growing teeth in a non-direct side that affects gingiva intensively. However, other studies claim that all dogs aged above two years suffer from periodontal disease (Hamp and Loe, 1973; Hoffmann and Gaengler, 1996). In humans, periodontal disease occurs more often around molars as they may not be brushed well (Loesche and Grossman, 2001; Newmann et al., 2002).

In this study, the possibility of most of the dental problems increased with age. Tartar and plaques deposition are problems of permanent teeth. Malocclusion and persistence of deciduous teeth increase the possibility of plaques deposition in small breeds (Kyllar and Witter, 2005). More than 95% of dogs which were fed fast foods, had tartar deposition at the age of 26 months and the possibility of gingivitis increases in such condition (Rosenberg et al., 1966). Although tartar is not irritant, it may pass to gingival epithelial tissue. In the present study, thick plaques and mild gingivitis were seen together which is cosmetically important (Lang et al., 1997). Moreover, effect of plaques on other systems of the body has been reported (Bascones et al., 2004). According to Kyllar and Witter (2005) and the results of the present study, as dogs become older, dental cavities with spotted dental surface are more likely to happen. None of the above studies showed prevalent dental spots and cavities which may be affected by traditional pet keeping methods and incorrect nutrition. All animals that had spots and cavities suffered from periodontal

disease too. On the other hand, dogs that suffer from periodontal disease are susceptible to dental cavities because dogs' oral bacterial floor is more capable of periodontal disease than dental caries Hale (1998).

Abnormal dental attrition usually occurs in dogs fed hard food, working dogs and dogs which get used to playing with stones and tough things (Van Foreest and Roeters, 1998). Furthermore, dental fractures often happen resulting in biting of hard things, eating hard food and trauma. Due to low enamel resistance in puppies and old dogs, dental fractures are more prevalent in these ages.

Although veterinarians are not skillful enough to diagnose and manage diseases, prevalence of dental problems in pets are numerous (De Meijer et al., 1991). Conclusively, regular oral examinations for prevention and cure via encouraging veterinarians learning the basics of pet dental diseases, applying mouth wash and teaching the owners how to brush pets' teeth is highly recommended.

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