

Short communications

Occurrence of Canine Oral Disorder in and Around Ranchi

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ABSTRACT

A total of 97 dogs with various oral disorders were screened with respect to breed, age and sex on their prevalence. The highest prevalence was of stomatitis (47.42%) followed by gingivitis (15.46%), dental tartar (15.46%), glossitis (13.40%) and periodontitis (8.25%). Oral disorders were more in Pomeranian (32.99%) followed by German shepherd (15.46%), Mongrel (12.37%), Doberman (14.43%), crossbreed (13.40%) and others (11.34%). Maximum (53.60%) cases were recorded in dogs of 0-2 years followed by 3-5 years (20.62%), above 8 years (15.46%) and 6-8 years (10.30%) age group. Incidence of dental tartar increased with advancing age, being 53.34% in above 8 years old dogs. The incidence of glossitis, stomatitis and periodontitis was higher in males than the females, but stomatitis (52.38%) and dental tartar (21.42%) was more in females than the male.

Keywords

Dog, incidence,
dental disorder,
Ranchi

Introduction

Oral disorders of dog represent for veterinarians are a medical challenge and are important field of interest from the economical point of view.

They are mostly considered as dietary related disorders and lack of oral hygiene leading to different oral disorders. The persistent infection of the oral cavity does not only discomfort the affected animal, but may also cause disease of distant organs (DeBowes *et al.*, 1996). Literature on the incidence and magnitude of oral disorders and stomatitis in particular, in dogs is meagre.

Hence, present study on occurrence of different oral disorders in dog population and its epidemiological aspects was under taken in Ranchi Veterinary College, Ranchi.

Materials and Methods

The present study was conducted between March, 2016 to February, 2017 at Ranchi Veterinary College Clinical Complex, Ranchi. Information regarding breed, age and sex of dog and the clinical signs of different cases of oral disorders presented for treatment was recorded on the basis of detailed history and physical and clinical examinations. In all 97 dogs with different oral disorders were included in the study. Animals were grouped as per there age into four groups, viz. 0-2 years (52), 3-5 years (20), 6-8 years (10) and above 8 years (15) as well as according to breed, viz. Pomeranian (32), German Shepherd (15), crossbreed (13), local/mongrel (12), Doberman (14) and others (Labrador, Great Dane, Dachshunds, Cocher spaniel, Boxer etc. 11) and sex wise as male (55) and female (42). The % incidence was calculated

and data were analysed using chi-square test (Snedecor and Cochran, 1994).

Results and Discussion

Among different oral disorders, maximum cases were of stomatitis (47.42%) followed by gingivitis (15.46%). The prevalence of dental tartar, glossitis and periodontitis was 15.46, 13.40 and 8.25%, respectively. Among 46 cases of stomatitis, highest prevalence was of catarrhal or simple type of stomatitis (58.69%) and the lowest of papular, granulomatous and vesicular stomatitis (2.17% each). The prevalence of allergic and ulcerative stomatitis was 13.04 and 10.87% respectively, whereas necrotic and gangrenous stomatitis was recorded in 6.52 and 4.35 % cases.

Harvey and Emily, 1993 reported that 60 to 80% of dogs and cats have some type of periodontal diseases whereas Mahboob *et al.*, 1982 found 37.5% stomatitis cases with pyrexia and other maladies and present findings are in accordance with these observations. Court *et al.*, 1993 detected periodontal disease in 100%, dental erosion in 54% and dental tartar in 32% dogs anaesthetised for various surgical procedures.

Hoffmann and Gaengler, 1996 also mentioned that out of 123 Poodles examined, no dogs were free from periodontal disease, although there was no correlation between dietary condition and disease incidence. The present findings of gingivitis compared well with the report of Lund *et al.*, 1999, who recorded 30.5 and 19.5% prevalence of dental calculus and gingivitis. Periodontitis and gingivitis are associated with impaired salivary antioxidant status and increased oxidative damage within the oral cavity (Sculley and Langley, 2003). Primary stomatitis most

frequently results from extension of gingivitis, which accompanies periodontal diseases (Jerry, 1980).

The prevalence of oral disorder was highest in Pomeranian breed (32.99%), followed by German shepherd (15.46%), Mongrel (12.37%), Doberman (14.43%), crossbreed (13.40%) and others (11.34%). All types of oral disorders were highest (42.9 to 52.8%) in Pomeranian breed with more or less same trend in Doberman, while German shepherd breed had almost equal cases of all oral disorders. Stomatitis was the major disorders in all breed. Cross breed had high incidence of dental tartar (27.3%), while Mongrel showed more prevalence of glossitis and gingivitis (17.6% each). Labrador, Cocher spaniel, Great Dane, Dachshund and Boxer registered fewer cases of oral disorders. Highest prevalence of stomatitis in German shepherd and Pomeranian breeds might be due to higher population of these breed in this areas. The housing and feeding behaviour of these breed also pay significant role as most of the owners of these areas lived in the confined area or multi-storied flats/ buildings and most of the times they offer vegetarian diets to their pets, while dogs prefer non-vegetarian diets as their natural food.

Harvey *et al.*, 1994 reported that periodontal disease was more common in small size breed and in older ones. The higher prevalence of all oral disorder observed in Pomeranian breed and even in young category of dogs was closely correlated with this report. Ulcerative glossitis attributes to UV radiation in 28 Sledge dogs in the colony of 32 was detected by Arnold *et al.*, 1998. Among Pomeranian breed, cases of catarrhal, allergic, necrotic, ulcerative and granulomatous stomatitis were found but in other breed, all types of stomatitis were not evident equally probably due to small

population of dogs presented from these breed. Chakrabarti, 2001 also recorded different forms of stomatitis in dogs, but there relative prevalence has not been reported by any worker.

Overall prevalence of oral disorders was significantly higher in the younger age group of dogs compared with older one. Among younger age group (0-2), stomatitis was prevalent more (55.76%) followed by gingivitis (17.30%), glossitis (13.46%), dental tartar (9.61%) and periodontitis (3.85%). The prevalence of dental tartar was highest in older dogs (22.23%). Thus younger animals (0-2 years) were more susceptible to oral disorders while case of dental tartar increased with advancing age, being 53.34% in above 8 years dogs.

The reason for high prevalence of oral disorders particularly stomatitis, glossitis and gingivitis in younger dogs might be due to more population of that category apart from their poor immune status, change in feeding behaviour with growing age and joyous habit of grasping and catching many unusual objects that may be harmful to the buckle mucosae.

Occurrence of dental tartar is age associated phenomenon and hence high prevalence in older dogs was observed. Emily, 1990 and Pavlica *et al.*, 2003 reported that 90% of small dogs breed beyond 3 years of age have some measurable periodontal disease.

It has been found that more than 80% of dogs older than 2 years are commonly affected by periodontal diseases, and that primary anatomical concern is the crowding of the dentition due to jaw abnormalities. Pavlica *et al.*, 2003 examined 42 dogs aged 3- 13 years and found that the prevalence and severity of periodontal disease increased with the age.

The prevalence of oral disorders was higher in males (56.70%) than the females (43.30%). Among males the highest prevalence rate was of stomatitis (43.63%) followed by gingivitis (18.19%) where as in females stomatitis (52.38%) and dental tartar (21.42%) was more. The cases of gingivitis (18.19%), glossitis (16.36%) and periodontitis (10.90%) were higher in males than the females.

References

- Arnold, P., Arnold, S., Hauser, B., Staehelin, B. and Lohrer, A. 1998. Solar glossitis in sledge dogs. *Schweizer-Archiv-fur-Tierheikunde*. 140: 328-332.
- Chakrabarti, A. 2001. *Disease of the digestive system*. In: Text book of clinical veterinary medicine. 6thedn.Kalyani publisher, Ludhiana, pp. 172-181.
- Court, L. A., Gimpel, R. J. and Rivera, L. S. 1993. Dental abnormalities in dogs. *Advances-in-ciencias vet*. 8: 69-71. (CAB Abstract 1993-1994).
- DeBowes, L. J., Mosier, D., Logan, E., Harvey, C. E., Lowry, S. and Richardson, D. C. 1996. Association of periodontal disease and histologic lesion in multiple organs from 45 dogs. *Journal of veterinary dentistry*. 13: 57-60.
- Emily, P. 1990. Clinical periodontology diagnosis and prophylaxis (Dogs). *Veterinary focus*. 2: 23-24 (CAB Abstract 1990-1991)
- Harvey, C. E. and Emily, P. 1993. *Veterinary dentistry*. 1stedn.W.B.Saunders, Philadelphia, pp.-89-144.
- Harvey, C. E., Shofter, F. S. and Later, L. 1994. Correlation of age and body weight with periodontal disease in North American dogs. *J.Vet. Dentistry*. 11:94-105.

- Hoffmann, T and Gaengler, P. 1996. Epidemiology of periodontal disease in Poodles. *J. Small Anim. Pract.* 37:309-316.
- Jerry, H. J. 1980. *The Mouth. In: Veterinary Gastroenterology.* Lea and Febiger, Philadelphia, pp.343-345.
- Lund, E. M., Armstrong, J. P. and Krik, C. A. 1999. Health status and popular characteristics of dogs and cats examined at private veterinary practices in the United States. *J. American vet. Med. Assoc.* 214: 1336-1341.
- Mahboob, B., Abdul, Khadar, T.G., Rao, R. J. and Raghvan, N. 1982. Survey of leptospirosis in man and animals by microagglutinationlysis test. *Cheiron.* 19: 114-116.
- Pavlica, Z., Eijavec, V., Erzen, D. and Petelin, M. 2003. A full mouth radiographic survey of periodontal bone loss in dogs. *Acta vet. Brano.* 72: 391-398.
- Sculley, D.V. and Langley, E.S.C. 2003. Periodontal disease is associated with lower antioxidant capacity in whole saliva and evidence of increased protein oxidation. *Clin. Sci.* 105: 167-172.
- Snedecor, G. W. and Cochran, W. G. 1994. *Statistical methods.* 8thedn. Oxford and IBH publishing Co., New Delhi, India.
- Varshney, J. P. 2001. Aberrant canine behaviour an overview. *Indian J. Vet. Med.* 21: 1-9.