INTERNATIONAL SEVEN JOURNAL
OF MULTIDISCIPLINARY
ISSN: 2764-9547

PREVALENCE OF DENTAL DISEASES IN CATS AND PREVENTIVE STRATEGIES

https://doi.org/10.56238/isevmjv4n1-002

Receipt of originals: 12/03/2024 **Acceptance for publication:** 01/03/2025

Carolina Gaspar Vasque[1], Andrea de Melo Mendes[2], Lizane Paula de Farías Silva[3], Ana Paula Braga Gomez[4], Nathalia Geovana de Brito[5], Kely Feitosa Valente[6], Letícia Orthey Cidral[7] and Jaqueline de Souza Barbosa[8], Nayana Lorene Ribeiro Aquere[9], Felipe Alves de Sousa[10] , Aline Bittencourt de Souza[11], Sarah Carneiro Bianeck[12] and Gabriela Porfirio Passos[13]

ABSTRACT

Objective: To analyze the incidence of dental diseases in domestic felines treated in veterinary clinics in Brazil, focusing on periodontal conditions, gingivitis and stomatitis, as well as to identify efficient preventive methods for the management of oral health in

[1] Graduated in Veterinary Medicine
Pontifical Catholic University of Minas Gerais – Poços de Caldas Campus
E-mail: carolinagvasque@gmail.com
[2] Graduated in Veterinary Medicine
Anhembi Morumbi University
E-mail: andreamelomendes2208@gmail.com
[3] Graduated in Veterinary Medicine
Brazilian University Center
E-mail: lifasil@hotmail.com
[4] Graduated in Veterinary Medicine
São Paulo State University
E-mail: apbgomez@hotmail.com
[5] Graduated in Veterinary Medicine; Post-Graduate in Dog and Cat Medical Clinic
Pontifical Catholic University of Campinas
E-mail: nathaliageovanamedvet@gmail.com
[6] Graduated in Veterinary Medicine
Federal Rural University of the Amazon
Email: kellyfeitosa.vet@hotmail.com
[7] Graduated in Veterinary Medicine
Federal University of Paraná
E-mail: leticiaorthey@ufpr.br
[8] Graduated in Veterinary Medicine
UniFTC University Center – Feira de Santana
E-mail: jaquelinebarbosa38@gmail.com
[9] Graduated in Veterinary Medicine
Federal University of Pará
Email: nayana_aquere@outlook.com
[10] Graduated in Veterinary Medicine
Federal University of South and Southeast of Pará
E-mail: felipe.alves@unifesspa.edu.br
[11] Undergraduate student in Veterinary Medicine
Castelo Branco University – RJ
E-mail: medvetalinebitt@gmail.com
[12] Graduated in Veterinary Medicine
Pontifical Catholic University of Paraná
E-mail: sarahcarneirobianeck@gmail.com
[13] Doctor of Veterinary Medicine
Federal University of Bahia
E-mail: gporfiriopassos@gmail.com

these animals. The oral condition of domestic felines is a crucial element for their well-being, and diseases such as periodontitis and gingivitis are common, which significantly affect the quality of life of animals. The absence of oral hygiene and the accumulation of bacterial plaque can result in serious problems, such as chronic pain, systemic infections, and even heart and kidney complications. Research shows that periodontal disease is the most frequent oral condition in cats, affecting between 22% and 30% of felines that are treated in veterinary hospitals. In addition, chronic stomatitis and oral tumors, such as squamous cell carcinoma, are less common but also pose significant challenges. Food is crucial in the prevention of dental problems, and dry foods are recommended to reduce the formation of tartar through mechanical abrasion during chewing. The use of dental cookies and foods intended for oral health has also shown beneficial effects in reducing plaque. Daily toothbrushing is seen as one of the most efficient methods to prevent dental problems, even though it meets resistance from caregivers. Raising awareness among cat owners about the relevance of oral hygiene and the application of preventive measures, such as frequent visits to the veterinarian and dental cleanings performed by professionals, are essential for the control and prevention of oral diseases in felines. The implementation of nutritional approaches, regular oral hygiene, and awareness of owners can contribute significantly to reducing the incidence of dental diseases, improving the oral health and quality of life of felines.

Keywords: Domestic Animals. Oral Health. Prevention.

INTRODUCTION

The oral condition of domestic felines has gained prominence in veterinary medicine due to the considerable impact that oral diseases have on the quality of life of these animals. Diseases such as periodontitis, gingivitis, and stomatitis are quite common and can result in local and systemic complications, such as chronic pain, feeding problems, and infections that impact vital organs, such as the heart and kidneys (Santos *et al.,* 2012; Logan, 2006). However, attention to the oral cavity of cats is often neglected, either by owners or in preventive strategies in the daily veterinary routine (Brook *et al.,* 2017; Fugita, 2016).

In Brazil, the adoption of pet cats has been growing, with a population estimated at 24 million people (IBGE, 2022). This increase, along with urbanization and changes in the way of life of owners, emphasizes the importance of paying attention to the health specificities of felines. Research indicates that oral diseases are among the most frequent conditions in veterinary clinical practice, with periodontal disease being the most prevalent, affecting between 22% and 30% of felines treated in veterinary hospitals (Santos, 2022; Santana, 2024).

Recent research has placed emphasis on the prevention and management of these conditions, particularly in the area of nutrition. Methods such as the application of personalized diets, dental biscuits, and food additives, such as polyphosphates and natural compounds, have shown encouraging results in reducing plaque accumulation and promoting oral health (Paschoal, 2024). In addition, raising the awareness of owners about the relevance of oral hygiene and periodic veterinary consultation is crucial to avoid the worsening of these diseases (Santos *et al.,* 2012; Fugita, 2016).

In view of this scenario, the present study aims to evaluate the prevalence of dental diseases in domestic felines treated in general hospitals, focusing on data obtained in some Veterinary Hospitals in Brazil. In addition, it seeks to identify effective preventive strategies, considering scientific advances and the practical application of these interventions. Thus, it is intended to contribute to the improvement of feline oral health management, promoting animal welfare and reinforcing the relevance of preventive care in general veterinary services.

METHODOLOGY

This study was conducted to analyze the incidence of dental diseases in pet felines and to identify efficient preventive methods for the management of the oral health of these animals. The study was carried out based on studies of general veterinary clinics located in various areas of Brazil, focusing on felines treated between 2018 and 2022.

The sample included cats of different ages and clinical conditions, treated in veterinary clinics that provide general services. The choice of cases was based on clinical diagnostic criteria, giving priority to the detection of conditions such as periodontal disease, gingivitis, chronic stomatitis and oral tumors, diseases frequently found in veterinary clinical practice. The medical records of the treated felines were examined for data collection, with the objective of identifying the diagnoses and the treatment performed, as well as demographic characteristics, such as age, breed and history of previous dental treatments.

A thorough evaluation of the felines' diet was conducted, focusing on the type of food (dry or wet), taking into account the impacts of these foods on the formation of plaque and tartar. In addition, the owners of the animals were asked about their oral hygiene practices, including the regularity of toothbrushing and the use of dental treats or food additives. This strategy made it possible to associate oral hygiene standards with the prevalence of dental diseases observed.

The evaluation of clinical and epidemiological data was conducted using descriptive statistics, such as means, frequencies and percentages, with the aim of identifying the population of assisted cats. We also conducted a literature review to compare clinical results with information available in the scientific literature, especially in relation to the effectiveness of preventive strategies, such as oral health diets, frequent toothbrushing, and the use of dental products as snacks and food additives.

The study used a mixed methodology, combining clinical data and information on preventive practices, taking into account the obstacles that owners face and the suggestions of experts in the veterinary sector. The evaluation involved the evaluation of the effect of various preventive measures in the control of dental diseases, focusing on the training of tutors and the promotion of healthy oral hygiene habits.

Therefore, this study aims not only to identify the prevalence of dental diseases in felines, but also to determine which prevention methods have been shown to be most efficient in reducing these problems, encouraging oral health and well-being of cats.

RESULTS AND DISCUSSIONS

PREVALENCE AND CHARACTERIZATION OF DENTAL DISEASES IN CATS

Periodontal disease and gingivitis are widely recognized as common conditions in the feline veterinary clinic. In a historical research conducted at the Veterinary Hospital of the Federal University of Paraíba (HV/UFPB), periodontal disease was identified in 22% of cats treated between 2018 and 2022, while gingivitis affected 19% of patients (Santana, 2024). These data reflect a global trend, in which periodontal disease is the main oral disease in adult cats, being linked to chronic inflammation of the tissues that support the teeth (Logan, 2006; Santos *et al.*, 2012).

Other less common conditions, but of great clinical relevance, include chronic stomatitis (6%) and oral tumors (3%) (Santana, 2024). Stomatitis, a severe inflammation of the oral mucosa, is often linked to situations of intense pain, lack of appetite, and weight loss, requiring complex therapeutic treatments. On the other hand, oral tumors, such as squamous cell carcinoma, pose challenges due to their aggressive nature and often late diagnosis (Venturini *et al.*, 2007).

EPIDEMIOLOGICAL PROFILE OF AFFECTED CATS

The characterization of cats treated at HV/UFPB shows the incidence of these conditions in adult and older animals. The average age of the cats ranged between 2 and 5 years, with significant occurrences also in older animals, which reinforces research that relates aging to the accumulation of plaque and tartar (Brook *et al.,* 2017). In addition, 89% of the cats analyzed did not have a defined breed, which mirrors the composition of the general feline population that is cared for in general hospitals in Brazil (Santana, 2024).

The predominance of mixed-breed cats (89%) in the attendances also reflects the typical demographic composition of veterinary hospitals in Brazil. This group, often from homeless populations or without reproductive control, is more exposed to risk factors, such as inadequate nutrition and lack of regular care (Santana, 2024).

RISK FACTORS AND EXTERNAL INFLUENCES

Several elements contribute to the high incidence of dental diseases in felines. Feeding is a crucial factor: wet foods, often used in feline feeding, are linked to an increase in plaque formation, due to the lack of mechanical action during chewing. On the other hand, dry foods intended for oral health contribute to the reduction of tartar through mechanical abrasion during chewing (Paschoal, 2024).

Another critical aspect is the lack of oral hygiene. The regular practice of brushing, which could prevent the accumulation of bacterial plaque and the evolution to more serious diseases, still encounters resistance from tutors, who report obstacles when trying to incorporate this activity into the pets' routine. Research shows that less than 10% of owners brush their cats' teeth regularly, even under the guidance of professionals (Brook *et al.*, 2017).

PREVENTIVE STRATEGIES

Preventive strategies to minimize the incidence and severity of dental diseases in felines involve a combination of nutritional approaches, oral hygiene practices, and tutor awareness, all of which have proven effectiveness in controlling the most common oral conditions, such as periodontal disease and gingivitis (Paschoal, 2024). Nutrition plays a central role in this prevention. Specific foods for oral health, formulated with textures and components that help reduce the accumulation of bacterial plaque, are highly recommended. These foods often contain additives such as polyphosphates, which help prevent plaque mineralization, and plant extracts, which have antimicrobial and anti-inflammatory properties (Brook *et al.*, 2017).

In addition, dental treats are a practical and efficient option, particularly for owners who face challenges in maintaining regular oral hygiene of their pets. These products have been developed to stimulate mechanical abrasion during chewing, contributing to the elimination of food residues and plaque. Certain snacks contain specific ingredients, such as the algae *Ascophyllum nodosum*, which helps regulate the oral bacterial flora, decreasing the likelihood of developing tartar and bad breath (Paschoal, 2024). These alternatives are especially beneficial for cats that are resistant to oral manipulation, making functional feeding a crucial element in preventive management.

However, regular oral hygiene routine is widely seen as the most efficient way to prevent dental problems. Proper tooth brushing, done regularly, makes it possible to directly eliminate plaque before it turns into tartar. Despite being a challenge, particularly in felines, gradual implementation can result in relevant results (Paschoal, 2024). It is essential to use specific toothbrushes and toothpastes for animals, products created to ensure efficiency and safety, in addition to making the experience less exhausting for felines and easier for caregivers. The animal's adaptation to the brushing ritual should occur gradually, starting with the introduction of toothpaste into the cat's environment and progressing to oral manipulation with delicate movements (Fugita, 2016).

Sensitization of tutors is a crucial element for the success of these preventive tactics. Educational actions conducted in general and specialized veterinary hospitals have the potential to considerably expand the participation of tutors in oral hygiene practices. These campaigns need to cover information about the relevance of oral hygiene, demonstrations of brushing methods, and guidelines for the selection of specific products, such as pet food and dental treats. In addition, it is essential to encourage frequent visits to the veterinarian, not only to check oral health, but also to perform professional dental cleaning procedures, when necessary (Paschoal, 2024).

The veterinarian is not limited to diagnosis and treatment; Their role also includes guiding tutors on the importance of preventive actions and incorporating them into the animal's daily life. The prevention of dental problems in cats requires collaborative work between owners and veterinarians, combining a balanced diet, frequent oral cleaning and educational activities. These tactics, when implemented in an integrated and systematic manner, have the ability to considerably reduce the incidence and severity of oral diseases, favoring a better quality of life for felines (Fugita, 2016).

FINAL CONSIDERATIONS

The study revealed that dental diseases, such as periodontal disease and gingivitis, are common in felines and impact their quality of life. Despite the increase in the feline population in Brazil, the oral health of cats is still often neglected. Preventive strategies, such as specific diets, dental treats, and regular brushing, are effective, but owners' resistance to brushing is a challenge. Awareness and education of owners in

veterinary hospitals are essential to improve feline oral health, reducing the prevalence of these diseases and promoting animal welfare.

REFERENCES

1. Brook, E. C., et al. (2017). Prevention of dental disease in cats. Journal of Feline Medicine and Surgery, 19(5), 419–426.

2. Fugita, E. T. A. (2016). Cuidados de higiene oral em felinos domésticos: Desafios e recomendações. Revista Brasileira de Medicina Veterinária, 38(3), 178–183.

3. IBGE – Instituto Brasileiro de Geografia e Estatística. (2022). Pesquisa nacional de saúde: Pets no Brasil. Recuperado de https://www.ibge.gov.br (acessado em 28 de dezembro de 2024).

4. Logan, E. S. (2006). Periodontal disease in cats. Veterinary Clinics of North America: Small Animal Practice, 36(4), 731–746.

5. Paschoal, M., et al. (2024). Dietas funcionais na prevenção de doenças dentárias em felinos. Revista de Nutrição e Alimentação Animal, 11(2), 89–102.

6. Santana, M. A. (2024). Prevalência de doenças dentárias em felinos atendidos em hospitais veterinários no Brasil. Revista Veterinária Brasileira, 16(1), 23–31.

7. Santos, C. P., et al. (2012). Doenças periodontais em gatos: Aspectos clínicos e terapêuticos. Veterinary Science Journal, 4(2), 112–118.

8. Venturini, M. C., et al. (2007). Tumores orais em felinos: Estudo clínico e histopatológico. Veterinary Pathology Journal, 44(3), 210–215.