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RESEARCH ARTICLE

KNOWLEDGE, ATTITUDE, PERCEPTION GENERAL VETERINARY PRACTITIONER TOWARDS REFERRING CASES TO VETERINARY DENTIST

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ABSTRACT

Aim: Veterinarian dentistry is one branch of the veterinary sciences that has grown substantially due to increasing dental issue and lack of ability of veterinarian doctors to handle every single dental issue that occurs in an animal. Veterinary dentistry includes intricate procedures in besides scaling and extractions. Managing animals presents a number of challenges, including possible risk factors and the need to complete all treatments in a single visit to avoid multiple Anesthesia and monitoring episodes. The aim of our study was to add literature addressing Veterinary dentistry in order to raise awareness and knowledge about the subject and to suggest that this intriguing issue be included. **Methodology:** A qualitative study including veterinarian practitioner, nurses, doctors was conducted all around Pune city was conducted. After Providing complete explanation of study objectives, the questionnaire was distributed to veterinarian Professionals in Pune. There were in total 30 questions on google form based on its response result is evaluated. **Result:** A total 178 responses were collected and analyse Out of which 81.7% were familiar with veterinary dental professionals while 18.3% were lack knowledge about dental professionals. With regard to knowledge about home care of pets 29.8% avoid feeding any treats 54.5% brush their pets teeth regularly and 15.5% limit water intake of Pets.

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INTRODUCTION

The practice of dentistry in the context of animal care has been termed as veterinary dentistry. It is the art and science of preventing, diagnosing, and treating diseases, disorders, and conditions affecting the animal oral cavity, craniofacial region, along with associated structures. Endodontics, oral and maxillofacial imaging, oral and maxillofacial surgeries, oral medicine, periodontics, Pedodontics are among the specialities within which veterinary dentists serve. They treat conditions such jaw fractures, malocclusions, oral cancer, periodontal disease, stomatitis, and other medical conditions that relate to veterinary medicine, similar to how human dentists do. (1) In the past, the majority of veterinary dentistry centred around the dentition of horses which help in their age determination, as a horse's age played a significant role in determining its value in trade. In Vienna, Joseph Bodingbauer established a leading role in small animal

dentistry in the 1930s, and the focus of veterinary dentistry eventually shifted from horses to pets such as cats, dogs, and other small animals. (2) Increase in Dental problem among animals recognised globally and the body of evidence regarding the relationship between oral health, general health and longevity in several species (3) It has been reported that oral disease adversely impacts the well-being and quality of life in a variety of species, and asserted that only veterinary dentists can provide them relief from oral pain and suffering. (4). In mammals, dental disease is one of the most common health issues in which Periodontal disease showing prevalence of 80% in Dogs over 3 years, 28% in cats, and 63.4% among breeds of Buffaloes (5,6,10). Calculus and gingivitis are other clinical conditions exhibited by cats and most of its breed. (6,7) The survey on equine oral pathology depicted most common oral pathologies are sharp edges, buccal abrasions, calculus, lingual ulcers, gingival recession, periodontal pockets, ramps, and waves.

The prevalence of periodontal pockets, gingival recession, and waves was highest in older horses (8). Caries seldom occur naturally in rodents due to a combination of oral pH, microflora and diet. Rats, they used in various clinical experimental studies specially albino strains due to their similar molar shape and caries progression compared to human (9). The major dental problem among Buffalo's is caries, Buffalo's peripheral caries (PC) was an increasingly recognized disorder that causes premature wear of teeth and dental fractures leading to poor health and lower milk production (10). Frequently patient owner presented in veterinarian clinic with general signs in their pets such as Decreased appetite, weight loss, halitosis, Preferential chewing on one side, Reluctance to open or close the mouth, Dropping food from the mouth Oral inflammation, Oral discharge (e.g., drooling saliva, bleeding, pus), Sneezing, nasal discharge, Ocular discharge, Facial, Vocalizing, pawing at the face, repetitive lower jaw motions etc., of which root cause is deteriorated oral health status and most of time owner and veterinarian itself are unaware of it (6,7,8,9,10,11,12).

Examination of the oral cavity should form part of every physical examination given by the veterinarian. Optimal oral health which should be performed by a professional having proper knowledge of veterinary dentistry. However, regarding the dentofacial study of animals, it is clear that knowledge is limited among General Veterinary Practitioner. Due to lack of clinical & laboratory knowledge most of animal oral status during initial stage got ignored by veterinarian. Thus our study aim to demonstrate the importance of a dialogue between General Veterinary doctor and Veterinary Dentist and motivating the discussion about the formation of an interdisciplinary team in treatment unit.

MATERIALS AND METHODS

The following study is a cross sectional study primarily focused on understanding the attitude and perception of general veterinary practitioner towards referring cases to veterinary dentist. In the following study an in-depth research was done by reading various articles and research papers related to the dental status and impact of poor oral hygiene on various animals. To properly assess the knowledge and attitude of general veterinary practitioner. The preparation of this questionnaire was based on material already published on the subject: books, scientific articles, periodicals, master's dissertations and materials available on the Internet in the following databases: PUBMED, DEDALUS, SCOPUS and the Ministry of Education. A questionnaire of 31 questions close ended questions was prepared with various questions focused on the perception general practitioner questions were based on awareness regarding knowledge as well as oral hygiene and also questions were focused on disease prevention. The inclusion criteria was general veterinary practitioners and the exclusion criteria are those not veterinarians. The website of the Ministry of Education was visited in order to use the e.mec system. This access had the objective of obtaining the information about the public higher education institutions that exist in India and the number of courses of veterinary medicine available. After this stage, the 48 courses of veterinary medicine had their disciplinary grades analysed to understand how many offer the discipline of dentistry as a compulsory or optional part of the training

and in how many presents an oral health aspect throughout the text of its curricular guideline. All the data was entered into excel and subjected to statistical analysis; the software used was SPSS 29.

RESULTS

Table 1 depicts the knowledge of respondent about veterinary dentistry, 81.7% of respondent were familiar with field of veterinary dentistry while only 18.3% have no knowledge regarding this field.

Table 1.

| Question | Frequency (n) Total=218 | Percentage(%) |
|--|----------------------------|---------------|
| Have you heard about veterinary Dentistry? | | |
| Yes | 178 | 81.7% |
| No | 40 | 18.3% |

Table 2 shows the awareness regarding vaccination of common pets like cats and dogs. Regarding cat vaccination 87.2% answered calcivirus vaccination while 12.8% chosen Rabies as cat vaccination which is not cat vaccine. On questioning about dog vaccination 41.3% answered canine hepatitis as dog vaccination, 22.9% chosen distemper vaccine, 17.4% answer rabies vaccine and 18.3% correctly answer all the above option.

Table 2

| Questions | Frequency (n) total =218 | Percentage (%) |
|--|-----------------------------|----------------|
| Which vaccine do cat commonly need? | 28 | 12.8% |
| A) Rabies | 190 | 87.2% |
| B) calcivirus | 50 | 22.9% |
| Which Vaccines commonly need for dogs? | 38 | 17.4% |
| A) Distemper | 90 | 41.3% |
| B) Rabies | 40 | 18.3% |
| C) Canine hepatitis | | |
| D) All of above | | |

Table 3 depicts the knowledge of pets common Dental problem among common practitioners. On asking question regarding dental issue in pets 54.1% answered dental trauma is the common cause while 22.9% answer dental calculus and developmental issues as origin of dental problem in pets. Another question was asked on symptoms of dental pain 81.7% correctly answer drooling as commonest symptom of dental pain in animal while 18.3% answer bad breath as symptom of dental issue.

Table 3

| Questions | Frequency(n) Total =128 | Percentage (%) |
|--|----------------------------|----------------|
| What is the common dental issues in cats and dogs? | | |
| A) Dental trauma | 118 | 54.1% |
| B) Calculus build up | 50 | 22.9% |
| C) Developmental diseases | 50 | 22.9% |
| Signs of dental pain in cats and dogs? | | |
| A) Drooling | 178 | 81.7% |
| B) Bad Breath | 40 | 18.3% |

Table 4 showcase the questions that were related to dental treatment and procedures of pets. On questioning regarding the pain management in animals 54.1% correctly said anesthetic premedication while remaining answered oral sedation and conscious sedation as pain subsiding methods. Another question asked regarding commonest dental disease in cats in which 41.3% answer gingivitis as commonly occurring dental condition in cats while 22.9% answer fenileodontoclasticresorptive lesion and 35.8% answer as tartar buildup.

Table 4

| Questions | Frequency (n) Total =218 | Percentage % |
|---|-----------------------------|--------------|
| How do you handle and manage pain in animals undergoing dental treatment? | 118 | 54.1% |
| A)Anesthetic premedication | 50 | 22.9% |
| B)Oral sedation | 50 | 22.9% |
| C)Conscious sedation | | |
| What is the most common dental diseases in cats? | | |
| A) Gingivitis | 90 | 41.3% |
| B) fenileodontoclasticresorptive lesion | 50 | 22.9% |
| C) Tartar Buildup | 78 | 35.8% |

Table 5

| Question | Frequency (n) Total=218 | Percentage % |
|--|----------------------------|--------------|
| Did you come across any complication while performing dental extraction without referring to veterinary dentist? | 178 | 81.7% |
| A) Yes | 40 | 18.3% |
| B) No | | |
| Have you ever faced complications if yes, what kind of complications you observed ? | | |
| A)Root breakage | 28 | 12.8% |
| B)Damage to jaw bones | 190 | 87.2% |

Table 6 regard with the age at which we should start dental care in puppies and kittens. On questioning about age 34.8% answer 6 month should be correct age at which we should begin dental care of pets while 29.81% recommend 1 year 18.8% said 2year and 16.51% answered 3year at which one start dental care of pets.

Table 6

| Questions | Frequency (n) Total =218 | Percentage (%) |
|--|-----------------------------|----------------|
| What is the recommended age for starting regular dental care in puppies and kittens? | 76 | |
| A)6 months | 65 | 34.8% |
| B)1 year | 41 | 29.81% |
| C)2year | 36 | 18.8% |
| D)3year | | 16.51% |

Table 7 showcase the attitude based questions, 22.9% strongly agree that there is a less invasive treatment than extraction while 38% agree 41.3% given neutral response and 18.3% strongly disagree. Another question were asked on consulting to veterinary dentist 54.1% strongly agree with this while 22.9% agree 20.6% show there neutral response while 2.29% given there disagreement.

Table 7

| Questions | Frequency(n) Total=218 | Percentage% |
|---|---------------------------|-------------|
| Do you think there should be less invasive treatment other than extraction for decayed teeth? | | |
| A)Strongly Agree | 50 | 22.9% |
| B)Agree | 38 | 17.4% |
| C)Neutral | 90 | 41.3% |
| D)Strongly Disagree | 40 | 18.3% |
| Do you think veterinary Doctor should consult specialist before extraction of Decayed tooth? | | |
| A) Strongly Agree | 118 | 54.1% |
| B) Agree | 50 | 22.9% |
| C)Neutral | 45 | 20.6% |
| D)Disagree | 5 | 2.29% |

Table 8 depict the question that were related to pet owner what they should do to maintain pet oral health 29.8% answered that we should avoid feeding treats and toys 54.5% recommend brushing pets teeth while 15.5% said limit water intake of pets.

Table 8.

| Question | Frequency (n) Total =218 | Percentage% |
|--|-----------------------------|-------------|
| What can pet owner do to help maintain their pets Dental Health at home? | 65 | 29.8% |
| A)Avoid feeding any treats or toys | 119 | 54.5% |
| B)Brush their pet teeth regularly | 34 | 15.5% |
| C)Limit water intake | | |

DISCUSSION

In this study, we present knowledge, attitudes, opinions and practices of veterinarians doctors, and veterinary nurses and other veterinary healthcare staffs regarding preventative dental care in animals, offering a foundational understanding in diagnosing oral health problems and directing them to a veterinarian dentist for further treatment. To our knowledge, there is no previous peer-reviewed study reporting the understandings and familiarity of dental problem in general veterinary practice. From our survey we found 81.7% of general veterinarian doctor were familiar with the specialist of pet oral care and only 18.3% of veterinarian were not known about veterinary dental specialist.

In our study, we found that 54.1% of pets faced dental trauma is the common dental issue while 22.9% have heavy calculus build up on their teeth and 22.9% of pets had developmental dental disorders. Enlund et al stated that majority of veterinarians and veterinary nurses perceived common dental problems and estimate three out of five dogs present with periodontal problem over age of 5year. Demeijer LM studied among veterinarians of Dutch, found 97% of the respondents regularly observed periodontal problems in their canine patients. R Bilyard et al in his survey stated that traumatic dentoalveolar injuries among dogs occurred frequently in the incisor teeth entail 54.8% of total studied population he had also concluded injuries are common in maxilla when compare with mandible(13,14). From our survey we found 54.5% of pets show reduction in dental problems when they got regular tooth brushing care while 29.8% pet of shows improvement in their oral health when surgery feeding were

deducted from their diet. Lindhe et al in his study on beagle dogs found that dogs whose teeth was brushed, flossed atleast once a day found no presence of plaque when he compared with other control group. The Results of Buckley et al survey also support the fact that daily tooth brushing in dogs is an effective way of maintaining oral care proven by reduction in OHI index 2.23 of dogs who were receiving daily tooth brushing when compare to control groups who showed 3.50 value of their OHI index. Harvey C et al study stated that Despite daily brushing being the gold standard for prevention of dental problems, regretfully, less than 4% of dog owners brushed daily. Furthermore, finding different methods of tooth cleaning of pets we found 25.7% uses dental wipes 58.9% uses chew toys and remaining 15.4% uses coconut oil as cleaning method (15,16,17).

According to the responses to our questionnaire, we identified 17.4% of pet owner vaccinated their dogs with Rabies vaccine while 41.3% had given canine hepatitis injections while 22.9% given Distemper vaccine to their dogs. Eschle et al on his survey on UK pets found that 78% of dogs had been vaccinated in the country. Day MJ et al stated canine leptospirosis vaccines have demonstrated to significantly reduce the incidence of leptospirosis cases in dogs in Germany, Llewellyn et al in support to canine vaccine said not only canine vaccine prevent disease but also shedding of *Leptospira* spp. and therefore reduce the zoonotic risk (18,19). In our study, we specifically enrolled veterinarian general practitioner, nurses and ones who aid to pets so that we get a precise number of veterinary care person who faced impediment while dealing with pet oral health problems, their proper diagnosing and conclude to the treatment. Majority of studies were done in context to pets care with respect to their owner, thus we intend to enlighten focus towards professional doctor through our study who properly direct pet owner to dental specialist who treat underlying oral issues without making any damage which of tenly made by no specialist in dental care field.

CONCLUSION

The foremost purpose of our survey was to apprise veterinarian care person with oral conditions affecting animal liveliness. In order to accomplish this, we conducted a questionnaire survey through google form among veterinarian personal interrogating comprehensive questions regarding oral anatomy, pathologies, preventive vaccinations and medical care of pet oral disorder, based on responses we acknowledged there is lot ignorance of pet oral health despite accounting patients consistently with affected oral health, as a consequence. The insights of our distinctive study conclude for the need of further more education on regard with pets oral health among veterinarian staff, for early detection of dental problems and development of preventive strategies, this ultimate objective will led us in enhancement of animals dental health and, consequently, the well-being of pets.

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