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Letter to the Editor

Current State of Veterinary Dentistry in Turkey and Abroad

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Domesticated animals have certain numbers of teeth which are classified as brachyodont (short crowned) and hypsodont (long crowned) teeth (1, 2) according to their crown: root ratio, configuration of calcified dental tissues and eruption processes (2). Dogs and cats possess brachyodont teeth while large animals including cattle and horses have hypsodont teeth (3). Teeth are accommodated in the mouth to carry out a number of functions, i.e., prehension and preparation of food for digestion, defense and capture of prey and excavation. They are also used for grooming, serve in sexual dimorphism and mate selection (1, 2).

Teeth can play important roles on both productivity and longevity of animals, as proper prehension of food and its preparation for digestion are largely dependent on health and proper conformation of teeth. The recognition of importance of these functions of teeth in domesticated animals is not a new phenomenon, in fact, ancient Chinese literature showed that people used to examine various characteristics of teeth in particular incisors pre-purchase to determine ages and values of the animals (1).

As noted, dogs and cats have simple brachyodont teeth which show great similarity to human teeth in crown: root ratio and configuration of calcified dental tissues. Therefore, dental studies in these animals have also been well appraised, primarily as experimental models for human dental studies (4). In addition, this animals used to be kept outdoors for either guarding or hunting purposes, while it is currently kept indoors due to being considered as companion animals in many Western society. Therefore, there has been great public awareness toward general health, especially dental health of these animals as dental diseases cause severe disturbance as a result of release of a malodor. All these developments have let to enormous advance in both basic and applied studies of small animal dentistry in Europe and the USA (5, 6). Nevertheless, small animal clinical dentistry is currently carried out to much higher standards than is the case for equine dentistry in Europe (4).

Despite the long history of dental inspection, little advance was made on equine dentistry until this century. This can be exemplified by a statement from an eminent 19th century veterinarian William Dick who in 1862 wrote "of the disease of the teeth in the horse we know little" (7).

In the past 2 or 3 decades a major upheaval has occurred in public sense of Western society society toward the purpose of use and housing of the horse. They were commonly used as a draft or transport animal, which let them lose their values in their early ages and be destroyed before currently-well-known dental diseases occur. However, as these animals are now generally kept as recreational or pleasure animals such as racing and show jumping, a strong financial and moral link has been established between them and their owners. As a result, those developments have brought a major revival in equine veterinary research and advance in equine clinical practice, particularly in the fields of orthopaedics, respiratory studies, cardiology, reproduction and gastroenterology (7). The moral attraction allows horse to be kept until very end of its age, which is coupled with change of the types of rations and regular physical and dental examination brought clearly the importance of examination of dental structure and related dental diseases into attention.

A survey by BEVA (8) showed that 10% of time in equine practice involves dental related work including dental rasping and chiseling, aging of horses, assessing dental conformation and health during pre-purchase examination and occasionally dental extraction. The reason for the selection of simple routine prophylactic dental work was due to the presence of limited knowledge on basic research including anatomical, historical, ultrastructural, physiological or pathological dental studies. In order to complete the paucity with regard to these characteristics of equine teeth there has been a steady increase toward various aspects of equine dental work including gross anatomy, pathology, histology and ultrastructure (1, 2, 9, 10), clinic (11, 12, 13) and radiological studies (14, 15) of tooth and its supporting tissues. As
a result, both increase of public awareness to their animal teeth and increase demand to true understanding to clinical dental practice have facilitated the establishment of veterinary dental association and veterinary dentistry in Europe and the USA. Even many books (e.g. 1, 5, 16) have recently been published only in veterinary dentistry and those books published in chapters (e.g. 6, 18) have allocated decent place to veterinary dentistry.

Dental work on food animals is not as much high as those of cats, dogs, and horses, since treatment of individual cases of the former animals, unlike later ones have little or no value. For example, treatment of some dental diseases such as periapical and gingival abscesses in food animals may improve following surgery, but such treatments are not economical proposition for the animal owners (18).

Despite all these developments in abroad, with a few exceptional works in different aspects of dental abnormalities (19) and restorative dentistry of canine teeth (20) and superficial information in some textbooks (21, 22) no tangible progress has been made in the field of both basic and clinical dentistry in Turkey. The author believes that recent increase in number of recreational horses and companion animals in this country will eventually affect all aspects of traditional veterinary education which may allow veterinary dentistry to find its deserving place in veterinary profession. Several studies on different aspects of dental disease in horse and dog and additionally a PhD study on periodontal disease of the sheep is currently underway at Firat University, Faculty of Veterinary Medicine, Department of Surgery. If these studies are successfully brought in press they will then hopefully encourage others to put more effort on different aspects, particularly clinical and pathological aspects of veterinary dental studies.

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