

Common equine dental disorders at Brooke Alexandria

Moustafa MSEA Mahgoub

Brooke Hospital for animals Egypt

2 Bayram El-Tonsi Street Zein El-Abdeen 11441

Cairo, Egypt

Email: mahgoub@thebrookeegypt.org



Summary:

There are few studies examining the frequency of dental diseases in working equid populations. However, oral pathology can compromise welfare: dental disease can cause oral pain, colic, gastrointestinal impaction, weight loss and poor performance. A study of working equines in Mexico reported a high prevalence of dental disease (Fernando-Martinez et al., 2006). The aim of this study was to conduct a prospective survey of dental abnormalities in working horses examined at Brooke Alexandria

Introduction

Before 1st January 2011 oral examination was restricted on the cases showing drooling saliva or food from mouth with weight loss. It was assumed that tongue and gingival affections play an important role in doing this or even slight increase in body temperature. After taking an equine dentistry training course, it was clear that teeth share the biggest proportion. A study of working equines at Mexico said that 98% had sharp enamel points while 62% had dental diseases from the total sample. So it was initially investigating a sample of horses admitted to Brooke Alexandria to see how most we sure about the prevalence of dental abnormalities affecting their welfare . 10% of equine practice time was spent on dental related work¹, following ingestion of coarse forage and grinding down causes a high degree of wear on the equines cheek teeth², hypsodont's teeth erupt over most of a horse's life at a rate of 2-3 mm/year^{3,4}. The horse fed on grass diet will reduce rate of occlusal wear and also restrict the range of lateral chewing actions⁵. Diet digestibility in equines is reduced when dental abnormalities occur⁶. Dental abnormalities may have a substantial impact on the welfare of these horses⁷. This research is trying to answer How common are dental disorders in working horses at Brooke Alexandria



Figure 1 represents traumatic absence of lower incisors. Figure 2 represents congenital missing teeth. Figure 3 represents sharp enamel points. Figure 4 represents step teeth. Figure 5 represents mandibular fracture. Figure 6 represents Maxillary fracture.

Methods

A random sample of 594 horses was selected by examining every fifth horse presented at Brooke Alexandria clinic between 1st January 2011 and 31st January 2013. An oral examination was undertaken on each horse using a speculum, light source, manual exploration and oral lavage with antiseptic (diluted bovine iodine). Sedation was achieved when required using xylazine hydrochloride (4mg/kg slow IV). For each horse clinical observations alongside age and sex were recorded using standardised dental charts.

Oral abnormality	Sex		Age (yrs)		
	Male horses	Female horses	Below 5	From 5 to 15	Above 15
Sharp enamel points	371	65	4	271	161
Step teeth	73	13	0	0	86
Traumatic injury					
Mandibular fractures	2	0	0	1	1
Maxillary fractures	1	0	1	0	0
Absence of lower incisors	1	0	1	0	0
Congenital					
Extra teeth	1	0	1	0	0
Missing teeth	0	1	1	0	0
Total	449	79	8	272	248

Table 1: Sex and age distribution of horses with oral abnormalities

Results

As shown in table (1);

Of 594 horses, 528 horses (88.8%, 95% confidence interval (CI) 86.2%, 92.1%) were found to have dental abnormalities. These included sharp enamel points (n=436, 82.6%; CI 79.3%, 85.8%), step teeth (n=86, 16.3%; CI 13.1%, 19.4%), abnormalities due to trauma (n=4, 0.8%; CI 0%, 1.5%) and congenital abnormalities (n=2, 0.4%; CI 0%, 0.9%). Sharp enamel points were seen in all age groups, however step mouth was only seen in horses over 15 year.

Sharp enamel points for male horses were 371, for females were 65, below 5 years were 4, from 5 to 15 years were 271, while above 15 years were 161. the total number of horses having sharp enamel points were 436

Step teeth for male horses were 73, for females were 13. Neither cases were recorded below 5 years nor from 5 to 15 years, while 86 cases were above 15 years. The total number of horses having step teeth were 86.

Traumatic injuries were 4 recorded horses; Mandibular fractures were 2 males; one is from 5 to 15 years and the other was above 15 years. Maxillary fracture was one male case below 5 years. Absence of lower incisors was one male horse below 5 years

Congenital diseases were 2 recorded cases; an extra teeth (supranummary teeth) in a male horse and a missing teeth of a female horse below 5 years

Total dental pathologies were 449 males, 79 females, 8 cases below 5 years, 272 cases from 5 to 15 years and 248 cases above 15 years

Conclusions and Interpretations:

The prevalence of dental disease seen in this study was high. Sharp enamel points were common in all age groups while step mouth was most common in older animals. Previously, dental disorders have been reported most often in older animals (Fernando-Martinez, 2006). These differences may be due to the types of food offered in our population, awareness of local vets (shortage of skills, knowledge and equipment needed in equine medicine) and shortage of owners' awareness.

Although dental disorders are more likely to occur in middle-aged horses, care must be taken of both young and adult horses' teeth. There are opportunities for the Brooke to raise the owners' awareness in prevention of dental disease and increase their treatment-seeking behaviour. Educational sessions that use pictures and videos and discuss the importance in all equine age groups have been designed for communities. Additionally, equine dentistry training to local vets has been implemented in this area.

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