

**Chapter 1 : A Chromosomal Region on ECA13 Is Associated with Maxillary Prognathism in Horses**

October Á. *Equine Veterinary Journal* There is minimal published information on equine oromaxillary fistulae that are unrelated to cheek teeth (CT) repulsion or on the conservative treatment.

Cephalometric studies are important to quantify abnormalities of jaw length and positioning. Results were analyzed in relation to age, sex, and lineage. Another aim of this study was to develop a simple field technique for measuring incisor malocclusion and physiological diastemata dimensions that could be used to monitor the growth of the rostral components of maxilla, incisive bone, and mandible. Females were overrepresented. Significant differences were found between maxillary and mandibular physiological diastemata lengths in foals of all ages and, as expected, there was a positive statistical correlation between age and maxillary and mandibular physiological diastemata measurements. Incisor overjet was present in . There was a weak positive correlation between age and the presence of incisor overjet. It was concluded that incisor overjet was common among Quarter horse foals, especially those from show and race lineages. The field technique for physiological diastema measurements was considered effective. *J Vet Dent* 32 3 , Introduction Equine dentistry has attracted increased attention from veterinarians, dental technicians, owners, and trainers over the past two decades. The importance of a routine oral examination in young foals has been emphasized since severe malocclusions may be corrected if diagnosed early. The objectives of this study were to evaluate the prevalence of incisor malocclusions in Quarter horse foals of different ages and lineages. Additionally, we sought to test and validate a simple field technique to quantify incisor malocclusions and measure the dimensions of the physiological diastemata in foals. Foals were grouped by age: These foals and their dams had constant access to pasture ad libitum and received commercial feed twice daily in their stable. Four of the 4-month-old and all older foals were weaned. Twenty-five of the 51 foals were from racing lineages, 18 were from show lineages animals with an excellent conformation but unsuitable for racing or non-racing work and 8 were from non-racing work lineages animals used for routine work such as ranch horses. Figure 1 Photograph showing measurement of the right mandibular physiological diastema. A metric tape with an attached paper clip marker is used. Measurements of the physiological diastemata between the maxillary and mandibular second incisor teeth , , , and the first cheek teeth , , , 17 were obtained in unsedated foals using a metric tape with an attached marker paperclip [Fig. The 02 was chosen because it was erupted in each foal. The front of the tape was placed on the gingival margin at the mesial aspect of 06 and the marker was dragged to the gingival margin of the distal aspect of 02 in each quadrant. The tape with attached marker was then placed on a flat surface and measured with digital calipers from the beginning of the tape to the marker. Measurement of the distance between rostral labial surfaces of the maxillary and mandibular incisor teeth was done interproximally between the first incisor teeth 01s using a caliper ruler Fig. The head was in a natural neutral position during measurement to avoid erroneous data related to caudal mandibular movement when the head is elevated and rostral movement when the poll is flexed. Statistical analyses of measurements were performed using statistics software. Variables were analyzed for normality using Kolmogorov-Smirnov test. Comparisons between mean maxillary and mandibular physiological diastemata measurements were made using Wilcoxon test. A Spearman test was performed to evaluate possible correlations between age and diastemata values, and age and the presence of overjet. Results There were significant differences in length between maxillary and mandibular physiological diastemata in all age groups Table 1. Measurements from different groups indicated that maximum uniform growth of rostral components of the maxilla and mandible occurs in foals between 4 and 5-months of age. Less mandibular growth occurs between 5 and 6-months, and even less between 6 and 7-months of age Table 1.

**Chapter 2 : Routine Dentistry in Juvenile Performance Horses | VetFolio**

*A compilation of a wide range of topics discussed by world-renowned experts in the field of equine dentistry. The new edition of this popular resource represents a total revision of previous content and provides the reader with state-of-the-art knowledge of the field.*

The authors have declared that no competing interests exist. Conceived and designed the experiments: In charge of sample collection and contributed phenotypic information: Received Aug 22; Accepted Dec This article has been cited by other articles in PMC. Abstract Hereditary variations in head morphology and head malformations are known in many species. The most common variation encountered in horses is maxillary prognathism. Prognathism and brachygnathism are syndromes of the upper and lower jaw, respectively. The resulting malocclusion can negatively affect teeth wear, and is considered a non-desirable trait in breeding programs. We performed a case-control analysis for maxillary prognathism in horses using 96 cases and controls. All horses had been previously genotyped with a commercially available 50 k SNP array. We analyzed the data with a mixed-model considering the genomic relationships in order to account for population stratification. There is no known prognathism candidate gene located within this region. Therefore, our findings in the horse offer the possibility of identifying a novel gene involved in the complex genetics of prognathism that might also be relevant for humans and other livestock species. Introduction Advances in genotyping, sequence analysis, and data-mining technology have enhanced genetic research in livestock species during the last decade. Genomic research in equids has also benefited from these developments [1] , [2]. Several spectacular findings, such as the discovery of selection signatures [3] , the description of diverse genes responsible for different coat color phenotypes [4] , [5] , diagonal and lateral locomotion patterns [6] , racing performance [7] – [9] , height and conformation traits [10] – [12] , and hereditary disorders [13] , [14] , highlight the potential of these new technologies. Breed diversity studies, including population structure analyses represent another important research field that has significantly advanced during the last few years [15]. In addition to the identification of causative variants for a variety of phenotypes, the livestock industry is particularly interested in using genomic information for the estimation of breeding values [16] – [18]. Variations in skull morphology, such as an incompatible length of the upper jaw maxilla and lower jaw mandible may result in malocclusion of incisors as well as cheek teeth. Jaw malformations are widely known in mammalian species, including humans, and in vertebrates in general. It is usually hypothesized that environmental and genetic factors contribute to this syndrome. Although the exact etiology is unknown, the descriptive terminology referring to these variations often implies that one jaw is too long, prognathism, or the other too short, brachygnathism [19]. Consequently, terms describing the same phenomenon are often used interchangeably and inconsistently in the medical literature. The resulting malocclusion can negatively affect teeth wear and correct chewing movement, with the potential for diverse clinical consequences [19]. Furthermore, the syndromes may also have negative implications on the designated use riding, driving of an affected horse, as horses with malocclusion might be particularly uncomfortable with their bit. Thus, jaw malformations are considered non-desirable traits in domestic animal breeding programs, also relatively little is known about the hereditary background of the trait so far [14]. However, performing a clinical examination on three year old Franches-Montagnes horses and three year old Warmblood horses, the prevalence of maxillary prognathism was found 3.

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## Chapter 3 : Advances in Equine Dentistry - [PDF Document]

*CHAPTER 19 - Basic equine orthodontics and maxillofacial surgery. Jack Easley and James Schumacher. Pages Select  
CHAPTER 20 - Exodontia.*

Because juvenile horses in work can develop undesirable behaviors due to oral pain, veterinarians frequently perform oral examinations to identify dental conditions that may be problematic. In juvenile horses, dental concerns include the presence of wolf teeth, sharp dental points, mucosal erosions, abnormalities of eruption, and facial The Viscera of Domestic Mammals. Sisson S, Grossman JD. Anatomy of Domestic Animals. The modified Triadan system nomenclature for veterinary dentistry. *J Vet Dent* ;8 4: Guide for Determining the Age of the Horse. Baker GJ, Easley J, eds. Equine canine and first premolar wolf teeth. Dixon PM, Dacre I. A review of equine dental disorders. Occlusal angles of cheek teeth in normal horses and horses with dental disease. Scrutchfield L, Schumacher J. Examination of the oral cavity and routine dental care. *Vet Clin North Am* ;9 1: The use of power equipment in equine dentistry. Glossary of equine dental terminology. Common disorders of incisor teeth and treatment. *Equine dental disease part 1: Equine Vet J* ;31 5: Canine teeth in the equine patient. Incidence and severity of abrasions on the buccal mucosa adjacent to the cheek teeth in horses. The prevalence of oral ulceration in Swedish horses when ridden with bit and bridle and when unriden. *Vet J* ; 3: *Equine Comp Exerc Physiol* ;3: An overview of bits and biting. Dentistry of equine cheek teeth. *Equine dental disease part 2: Equine Vet J* ;31 6: *Vet Clin Equine* ; Dental conditions affecting juvenile performance horses. Infections of the head and ocular structures in the horse. *Equine dental disease part 4: Equine Vet J* ;32 3:

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## Chapter 4 : Animal Health International Announces Equine Dentistry Lecture and Lab Events | calendrierde

*in: J. Easley, P.M. Dixon, J. Schumacher (Eds.) Equine dentistry. Elsevier, Edinburgh (United Kingdom) ; Google Scholar See all References This article focuses on several new and innovative techniques that have not been well disseminated in popular veterinary publications.*

Only recently has veterinary medicine come the dramatic differences in development, anatomy, physiology, en the brachydont omnivore and carnivore dentition and that of es. Equine dentistry is a rich area for xt century. Evidence-based dentistry is still the goal, but much Advances in Equine Dentistry Vet Clin Equine 29 xiâ€™xii vetequine. Much of th progress in hyposod diagnostic and thera to better understand and pathology betwe hyposodont herbivor more about other d research over the ne Advances in Equine Dentistry Jack Easley, DVM, MS Editor By the early 20th century, at least 3 American textbooks had been published on veter- inary dentistry using the horse as the main focus. Merillat in his text, Veterinary Surgery, Vol. So too, has veterinary dentistry progressed from rasping enamel points from teeth. Ironically, one hundred years later, several current textbooks written about equine dentistry contain much of the same information and described techniques of the past without any scientific basis whatso- ever for the recommendations of therapy. Such practices are often harmful to the animal and costly to owners. As editor of this issue of Veterinary Clinics of North America: Equine Practice, I would like to thank friends and mentors. Simon Turner petitioned Elsevier to allow me to gather current equine dentistry information from colleagues and researchers. Equine dentistry brought a special person into my life years ago and we have been friends ever sinceâ€™Paddy Dixon. His group at the Royal Dick School of Veter- inary Studies, Edinburgh, Scotland, has been the frontrunner in performing valuable research for many years, setting the benchmark for evaluation, scientific studies, and published materials. It is my hope that the information contained in this issue will not only stimulate but also drive our profession toward the goal of practicing evidence-based equine dentistry. What are the implications of current equine dental research on the future of equine health? I have attempted to recruit as authors the very best investigators and clinicians in the field of equine dentistry. Each author was asked not only to review the current knowledge on their topic but also to offer opinions on contentious issues and identify areas for future research. Thank you, authors, for your excellent contributions con- tained herein. Special thanks to my friends and mentors, Eugene Schneider, Gordon Baker, Leon Scrutchfield, Jim Schumacher, Paddy Dixon, and many others, for keeping me on track as I reached each crossroad of my career. Finally, my heartfelt gratitude to my wife, Sydney, and our 3 children, who have allowed me to pursue this career as an equine practitioner and cultivate this often time-consuming and expensive hobbyâ€™â€™ equine dentistry.

## Chapter 5 : - NLM Catalog Result

*Recent clinical and post-mortem studies documented a high prevalence of dental disorders in donkeys, but less information appears to be available specifically about incisor disorders in donkeys.*

## Chapter 6 : Equine Dentistry - E-bok - Jack Easley, Padraic M Dixon, James Schumacher () | Bokus

*Cephalometric studies are important to quantify abnormalities of jaw length and positioning. In this study, 4 to 7-month-old Quarter horse foals (n = 51) were examined to determine overjet (horizontal overlap) prevalence and measure the size of the physiological diastemata.*

## Chapter 7 : Equine Dentistry : Jack Easley :

*Jack Easley and James Schumacher, Basic equine orthodontics and maxillofacial surgery, Equine J. EASLEY, S. Z.*

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## Chapter 8 : Adquisiciones by BIBLIOTECA CCBA - Issuu

*Measurement of Incisor Overjet and Physiological Diastemata Parameters in Quarter Horse Foals Easley J, Schumacher J. Basic equine orthodontics and maxillofacial.*

## Chapter 9 : American Veterinary Dental College | NCSU Libraries

*Common indications for cheek tooth extraction in the horse include dental fracture, periodontal disease, severe decay/caries, mandibular fracture with alveolar/tooth involvement, and periapical abscess.*