

## 9. Summary

### ***CHANGES OF CHEEK TEETH OF OLD WARMBLOOD HORSES (15 YEARS AND OLDER) AND OTHER EQUIDS***

- A survey of patients being treated at the clinic of horses between 1997 and 2003-11-28

The purpose of the present work was to evaluate radiographs of the head taken from aged horses to assess the presence of physiological and pathological changes in the cheek teeth.

75 ambulatory and stationary patients were examined from 01 January 1997 until 15 July 2003 at the Clinic for Horses, General Surgery and Radiology of the Free University of Berlin.

The patients examined were presented at the clinic due to certain conditions and a total of 85 radiographs were taken. The age-range of the patients is between 15 and 41 years of age. A latero-lateral radiograph of the head of every horse was taken and they were evaluated looking for physiological and pathological changes in the cheek teeth.

The prevalence of the findings is as listed below:

Exsuperantia dentium, a total of	86, 7%
Divided into: -Ramps	9, 3%
-Rostral/Caudal hooks	85, 3%
Roots remnants of worn out cheek teeth	69, 3%
Wave mouth	52%
Debris of root remnants of worn out cheek teeth	34, 7%
Missing teeth	22, 7%
Irregular dental arcades	20%

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Step mouth	13, 3%
Tooth loss	9, 3%

(n=75 patients; the total is over 100% because more than one change was found in some of the horses.)

The evaluation of the radiographs taken from the same horse but at different ages shows an age-dependent worsening trend.

The physiological aging process of the cheek teeth is characterized by a shortening of its length. This attrition of the cheek teeth is responsible for a length loss of 4 mm every year.

The root remnants of worn out cheek teeth showed changes in their shape, because their root ending had become shorter and plumper or because only the debris of roots could be seen.

The wearing effect on the teeth and other findings like tooth loss, missing teeth and irregular dental arcades were often seen. The older the horse was, the higher the prevalence of these findings. The wave and the step mouths were typically observed in the transition between the youngest (P4) and the oldest (M1) cheek teeth. The wave mouth and the rostral and caudal hooks were not generally found in the cheek teeth of aged horses. Our result demonstrates that the radiological evaluation is an objective and reliable tool for the diagnosis of physiological changes of the cheek teeth in the horse.