Radiographic evaluation of destructive periodontal disease in blue mink in relation to age and blood morphology - DTU Orbit (13/12/2018)

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In this study, blood samples and jaws were collected from 2 genotypes of blue mink (n = 289) in order to examine phenotypic expression of specific characteristics of Chediak-Higashi Syndrome (C-HS). Blood samples were subjected to differential counts to assess the proportion of abnormal polymorphonuclear leukocytes characteristic for CH-S (C-HS-leukocytes). Abnormal leukocytes with characteristic signs of C-HS were found in blood smears from all mink included in this study. Four teeth in one half of the mandible (P3, P4, M1, M2) were subjected to quantitative radiographic evaluation of alveolar bone loss and tooth loss. There was a high prevalence of destructive periodontal disease among blue mink included in this study. Mild to moderate periodontal disease (defined by less than 50% alveolar bone loss related to 1 or more teeth) affected 73.7% of young mink (age = 7 mo) and 67.9% of older animals (age ≥ 19 mo). Severe periodontal disease (defined by more than 50% bone loss related to one or more teeth) was not detected in mink aged 7 mo, but affected 15.3% of mink aged 19 mo and 39.6% of mink aged 31 mo. The positive relationship between age and periodontal disease was statistically significant (P &LT; 0.01). The prevalence of tooth loss was found to be high among blue mink aged &GT; 19 mo (21.6%) and was also significantly related to age (P &LT; 0.01). A significant positive interaction between alveolar bone loss and tooth loss (P &LT; 0.01), implies that the highly prevalent tooth loss in the mink was related to and possibly caused by destructive periodontal disease. There was no significant difference in the prevalence of periodontal disease between the 2 genotypes and age was found to be the only statistical predictor of poor production results (P &LT; 0.01) in blue mink.

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