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TITLE

DENTAL AND PERIODONTAL DISEASE IN SOWS EUTHANISED OR FOUND DEAD ON CONVENTIONAL FINNISH FARMS

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CONTENT

Background and Objectives

The impact of dental and periodontal disease (DPD) on health and welfare of pigs is poorly understood. DPD may cause significant and long-lasting pain and infectious disease in other parts of the body. This study describes DPD in involuntarily culled sows.

Material & Methods

We investigated DPD as a part of standardized post-mortem examinations in 65 sows euthanised or found dead on 15 commercial Finnish indoor farms. Parity range was 0-10. DPD was defined as at least moderate 1) Periodontal disease (PD, gingivitis, gingival retraction, periodontitis, loose or missing teeth), 2) Tooth erosion (TE), 3) Dental calculus (DC) or Tooth fracture (TF). Associations between DPD and (categorised) parity, and body condition score (BCS), were investigated using the chi-squared test and the T-test, respectively.

Results

74% (n=48) of the animals had at least one type of DPD. Findings were often multiple. TE was present in 71% (n=46) and PD in 26% (n=17) of the sows. The prevalence of TF was 25%, including five sows with one, and 11 with multiple fractured teeth. DC was present in 11% (n=7) of the sows. Animals with TE were significantly thinner than animals without TE (BCS 3.0 ± 0.61 [average \pm st.dev.] vs 2.5 ± 0.98 , $p=0.022$, $n=18/45$, respectively). Age tended to affect TE ($p=0.053$). According to the raw data young animals (parity 0-1) appeared less affected by DPD in general. Tooth wear and fractures showed numerical increases with parity.

Discussion & Conclusion

The study animals were unhealthy, leaving both the generalizability of our results and the causality of the significant BCS effect undisclosed. The fact that none of the animals were reported to have any symptoms indicative of DPD, despite significant pathology, raises concerns about dental and periodontal health in the general sow population.