Coccidia infections in Danish farmed mink - DTU Orbit (29/09/2019)

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Although Danish farmed mink are frequently infected with Coccidia, knowledge of factors affecting the infection is scarce. Thus, we studied age, geographical and season-related factors affecting coccidia prevalence. Unsporulated oocysts excretion was quantified microscopically (n=4142) every 7-14th day (April-October 2016) from bitches and cups on 30 farms (n=335 mink) from South- or North Jutland, or Zealand. Minimum once, 60.9% (n=204) mink excreted *Eimeria*, 56.7% (n=190) *Isospora* and 20.9% (n=70) excreted both coccidia. Positive mink were identified on all farms. *Eimeria* prevalence was higher on the Zealand farms (25.4±2.2%, P<0.0001) compared to South- and North Jutland farms (5.4±2.9%; 7.5±4.1%). *Isospora* prevalence was similar regardless of farm locality (12.2±2.9%, 11.8±3.5%, 9.2±7.1%). *Eimeria* prevalence peaked in June-July (12.6%-24.9%), while *Isospora* prevalence peaked in July-August (12.1%-27.6%). More cups (19.5%) than bitches (4.6%) were *Isospora* positive, while *Eimeria* prevalence was similar for cups (15.7%) and bitches (10.5%). For cups, *Eimeria* prevalence peaked when cups were 7-11 weeks old and again when 18-24 weeks old. *Isospora* prevalence peaked in cups 13-15 weeks old. Three *Eimeria* types were characterized by size and wall thickness (unverified by PCR); A, B and C. Types B and C (40.9%, 39.8%) were more prevalent than A (19.3%). Bitches were primarily infected with type B (50.4%), while type C (48.0%) predominated in cups. Type B infections dominated in mink from Zealand (56.5±13.7%), while mink from Jutland were primarily infected with type C (55.6±28.6%; 81.9±19.4%). Farmed mink showed high coccidia prevalence with seasonal- and age-related *Isospora* prevalence, and seasonal- and geographical-related *Eimeria* prevalence.

**General information**

Publication status: Published
Organisations: National Veterinary Institute, Bacteriology & Parasitology, Diagnostic & Development, Pathology
Contributors: Petersen, H. H., Chriél, M., Hansen, M. S.
Publication date: 2017
Peer-reviewed: Yes
Event: Abstract from 26th International Conference of World Association for the Advancement of Veterinary Parasitology (WAAVP), Kuala Lumpur, Malaysia.
Electronic versions:
WAAVP_2017_Coccidiose_in_Danish_farmed_mink.pdf
Source: PublicationPreSubmission
Source ID: 136854741
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2017 › Research › peer-review