Toxoplasma gondii seroprevalence in extensively farmed wild boars (Sus scrofa) in Denmark - DTU Orbit (17/02/2019)

Toxoplasma gondii is a zoonotic parasite of worldwide importance. In this study, we estimated T. gondii seroprevalence in extensively farmed wild boars in Denmark, where little is known about T. gondii in animal hosts. Our study focused on wild boars because they are considered good indicator species for the presence of T. gondii, and wild boar meat is used for human consumption. Serum samples from 101 wild boars collected in 2016-2018 from five different locations from the continental part of Denmark, Jutland, were screened for anti-T. gondii antibodies. The samples were analysed using a commercial indirect enzyme-linked immunosorbent assay (ELISA). Samples from 28 (27.7%) of the 101 wild boars tested positive with the ELISA. The odds for a wild boar to test seropositive were higher if it was sampled during the hunting season 2017-2018 than during 2016-2017 and if it was reported to be at least 1 year old than if it was younger (logistic regression model with the two variables: odds ratios 17.5 and 3.9, respectively). A substantial proportion of the investigated extensively farmed wild boars had been exposed to T. gondii. Moreover, the parasite appeared widespread, at least in the continental part of Denmark, Jutland, as seropositive wild boars were found from all five sampled locations. Assuming seropositivity indicates hosting viable parasites, consumption of undercooked wild boar meat from Denmark is a potential source of T. gondii infections to other hosts, including humans.