First report of Spirocerca sp. in Denmark – a tumor-inducing parasite in carnivores - DTU Orbit (16/12/2018)

First report of Spirocerca sp. in Denmark – a tumor-inducing parasite in carnivores
During routine health surveillance of wild carnivores in Denmark, several tumors, measuring up to 3.0 x 4.5 x 2.5 cm, were detected in the stomach and the omentum of an autopsied red fox (Vulpes vulpes). The fox was hunted in the Hanstholm Nature Reserve, which is 230 km from the closest mainland borders. The tumors had a thick layer of fibrous tissue in which adult worms of Spirocerca sp. were detected. Despite egg excretion by female worms (identified by histology and examination of female worms), no eggs were detected in feces by sedimentation, floatation with saturated sugar solution or sieving. Partial sequencing of two segments of the mitochondrial cox1 gene revealed unique sequences that were distinct from known isolates of S. lupi from Europe, Asia and Africa. Phylogenetic analysis supported the later finding by grouping Danish isolates in one separate node which was distant from other nodes including S. lupi from other countries. It is not known whether this case was an autochthonous infection or whether it was introduced by migrating paratenic or definitive hosts. This is the first report of Spirocerca sp. in Denmark. Additional molecular and/or biological studies are warranted to further characterize the isolated Spirocerca species.

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