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Hepatitis E virus in wild boars in Brandenburg, Germany, 2018 - 2022

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Infection with the hepatitis E virus (HEV) can cause liver inflammation in humans. The zoonotic HEV genotype 3 is endemic in Germany and can be transmitted by ingesting insufficiently cooked wild boar meat. To evaluate the risk associated with consumption of game meat, wild boar liver samples from 28 hunting areas in Brandenburg were collected between 2018 and 2022 within the framework of the BfR-Center for Land Use-Related Evaluation Methods and One Health Approaches. Samples were screened by RT-qPCR for the presence of HEV and detected strains were analyzed by whole genome sequencing. Overall, 14 of 275 samples tested HEV-positive, resulting in a mean detection rate of 5 %. However, detection rates and available sample numbers varied greatly between the hunting seasons, with 2 % (1/44) in 2018, 7 % (5/74) in 2019, 21 % (4/19) in 2020, 2 % (2/107) in 2021, and 7 % (2/31) in 2022. So far, three whole genome sequences were obtained, showing a high subtype diversity within the small investigated area of Brandenburg. Two genomes were assigned to subtypes 3e and 3h, while the third sequence showed highest similarity with a so far unclassified genotype 3 subtype. This study and continued surveillance of HEV in wild boars is important to gain an overarching understanding of the role of wild boar as animal reservoir and source for human HEV infections.

Keywords

Hepatitis E virus, wild boar, zoonoses

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Professional Status of the Speaker

Postdoc

Junior Scientist Status

No, I am not a Junior Scientist.

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