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Pseudorabies virus-associated encephalitis in hunting dogs in Greece: The role of wild boars as a persistent reservoir in Greece

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Introduction: Pseudorabies, caused by Suid herpesvirus 1 (SuHV-1), primarily affects swine and accidentally other mammals. Although eradicated from domestic pigs in many European countries, SuHV-1 persists in wild boar populations. Hunting dogs are at particular risk due to direct exposure during wild boar hunts.

Methods: Between 2022–2024, seven cases of neurological disease and death in hunting dogs were investigated in the regions of Epirus and Thessaly, Greece. Postmortem brain tissues were tested by PCR targeting a part of the glycoprotein D gene of SuHV-1. Positive samples were subjected to sequencing and phylogenetic analysis.

Results: All seven cases tested PCR-positive for SuHV-1. Phylogenetic analysis of the gD gene sequences revealed genetic divergence among the isolates. The Epirus strains formed a separate clade, suggesting localized viral evolution. The Thessaly isolate showed greater divergence, clustering independently and indicating a potentially unique lineage within the Greek wild boar reservoir.

Conclusion: Our findings confirm the ongoing circulation of SuHV-1 strains in wild boar populations in Greece and demonstrate the fatal risk posed to hunting dogs. These data highlight the need to raise awareness among veterinary practitioners to include pseudorabies in the differential diagnosis of encephalitis in dogs.

Keywords

wild boar; pseudorabies; dog; encephalitis

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