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Pseudorabies virus in wild boar (*Sus scrofa*) from Maremma Area (Grosseto District, Central Italy)

Abstract -

The presence of pseudorabies virus (PRV) antigen and specific antibodies in wild boars (*Sus scrofa*) shot during the hunting in Maremma area (Grosseto district, Central Italy), between November 2002 and January 2003, was investigated. The presence of viral antigen was detected by immunohistochemistry using specific mouse anti-PRV monoclonal antibodies, while antibodies to PRV were identified by ELISA. To confirm the presence of the virus in tonsil tissues of animals that were positive by immunohistochemistry, the presence of PRV gene products was investigated by PCR in ten subjects. Of the 152 subjects tested, 63 (41%) were positive for viral antigens in the tonsil tissue. Only 80 of the 152 sera collected were suitable for serological studies. Of these, 41 (51%) were positive for specific anti-PRV antibodies. PCR analysis allowed to detect the PRV gene products in tonsils of immunohistochemically positive subjects and this confirms the results of immunohistochemical investigations. Analysis of host age and sex and spatial factors showed a significantly higher presence of PRV antigen and seroprevalence in older animals than in younger animals. No differences were detected between males and females or for animals coming from different areas. The results of our study confirm that PRV infection is endemic in wild boar population with a high prevalence. The results of immunohistochemical investigations demonstrate that a large part of the examined wild boar population harbour PRV in tonsil tissues and that the virus can replicate in this site. These data confirm that wild boars should be considered an important reservoir of PRV.

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