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Main topic : Animal Health

A Clinical, Pathological, Epidemiological, and Molecular Investigation of Recent Outbreaks of Peste des Petits Ruminants Virus in Domestic and Wild Small Ruminants infection

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Abstract:

(1) Background: Peste des petits ruminants (PPR) is a highly contagious animal disease affecting small ruminants, leading to significant economic losses. There has been little published data on PPR virus (PPRV) infection in the United Arab Emirates (UAE).

(2) Methods: Four outbreaks reported in goats and Dama gazelle in 2021 were investigated using pathological (clinical, necropsy, and histology) and molecular testing (real-time PCR and sequencing).

(3) Results: The infected animals showed symptoms of dyspnea, oculo-nasal secretions, cough, and diarrhea. Necropsy findings were almost similar in all examined animals and compliant to the classical forms of the disease. Phylogenetic analysis based on nucleocapsid (N) gene and fusion (F) gene partial sequences revealed a circulation of PPRV Asian lineage IV in the UAE, and these sequences clustered close to the sequences of PPRV from the United Arab Emirates, Pakistan, Tajikistan, and Iran.

(4) Conclusions: PPRV Asian lineage IV is currently circulating in the UAE. To the best of our knowledge, this is the first study describing PPRV in domestic small ruminants in the UAE. The report is crucial in making sequence data from the Middle East available to enhance the PPR control program in the region and globally.

Keywords: peste des petits ruminants; PPRV; goats; dama gazelle; lineage IV.