

Epidemiological study of pestiviruses in South American camelids in Switzerland

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Key words

Alpaca; Llama; Pestivirus; Infectious diseases; Eradication

Aim of the study

In the context of the ongoing eradication campaign for bovine viral diarrhoea virus (BVDV) in cattle in Switzerland, the role of South American camelids (SAC) as a possible virus reservoir needed to be evaluated. To assess and characterize the prevalence of pestivirus infections in SAC in Switzerland.

Material and methods

Serum samples collected from 348 animals (40 herds) in 2008 and from 248 animals (39 herds) in 2000 were examined for antibodies against pestiviruses and for the presence of BVDV viral RNA. Cross-sectional study using stratified, representative herd sampling. An indirect BVDV-ELISA was used to analyze serum samples for pestivirus antibodies and positive samples underwent a serum neutralisation test (SNT). Real-time RT-PCR to detect pestiviral RNA was carried out in all animals from herds with at least 1 seropositive animal.

Results and significance

In 2008, the overall prevalence of animals positive for antibodies (ELISA) and pestiviral RNA or was 5.75% and 0%, respectively. In 2000, the corresponding prevalences were 3.63% and 0%, respectively. The seroprevalences (SNT) for BVDV, border disease virus or undetermined pestiviruses were estimated to be 0%, 1.73% and 4.02% in 2008, and 0.40%, 1.21% and 2.02% in 2000, respectively. At the present time, SAC appear to represent a negligible risk of re-infection for the BVDV eradication program in cattle in Switzerland.

Publications, posters and presentations

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