

SEROLOGICAL SURVEY OF CRIMEAN-CONGO HEMORRHAGIC FEVER VIRUS CCHFV IN CATTLE IN KUKES RRESHEN, AND GJIROKASTRA REGIONS OF ALBANIA

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Abstract

Crimean-Congo hemorrhagic fever virus (CCHFV) is a tick-borne virus with a negative-sense, singlestranded (ss) RNA genome containing S (small), M (medium), and L (large) segments. It belongs to the genus Nairovirus and the family Bunyaviridae. The virus causes a severe hemorrhagic syndrome in humans, with a fatality rate of up to 50%, while in animals, the virus causes subclinical infection. The CCHFV is transmitted to humans through the bite of Ixodid ticks (mostly Hyalomma genus) or by contact with blood or tissues from infected livestock. The disease is characterized by a sudden onset of high fever, chills, severe headache, dizziness, and back and abdominal pains; additional signs and symptoms include nausea, vomiting, diarrhea, and neuropsychiatric and cardiovascular changes. Crimean-Congo hemorrhagic fever can be diagnosed by isolating CCHFV from blood, plasma or tissues. This study is based on the prevalence and the presence of CCHFV among cattle in three regions of Albania such as Kukes, Rreshen and Gjirokastra. We collected sera from Kukes, Rreshen and Gjirokastra area where we had indication about the presence of CCHFV in humans, respectively 11 serum samples, 40 serum samples and 50 serum samples from cattle. The serum samples were conserved in -20°C and tested with immunological methods using indirect ELISA assay in Friedrich-Loeffler Institute (FLI), Greifswald Germany. Through this technique it was possible to identified IgG antibodies in infected serum samples. From these results we had an indication about the presence of IgG antibodies in 1 blood samples from 40 cattle with a prevalence of 2.6% in Rreshen, 0 positive blood samples from 11 cattle with a prevalence of 0% in Kukes and 1 positive blood samples from 50 cattle with a prevalence of 2.1% in Gjirokastra. These results can clearly proved the presence of CCHFV in livestock in Albania.

Keywords: *CCHFV, Bunyaviridae, Hyalomma, Indirect ELISA, FLI*