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High Seroprevalence of Crimean-Congo Hemorrhagic Fever Virus Among Dromedary Camels in Northern Nigeria: Implications for One Health Surveillance

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Crimean-Congo Hemorrhagic Fever (CCHF) is a tick-borne viral zoonotic disease that pose a growing public health concern. It is primarily maintained and transmitted by Hyalomma ticks, with livestock such as dromedary camels (Camelus dromedarius) acting as amplifying hosts. In Nigeria, human infections with CCHFV are rarely reported, reflecting limited surveillance and gaps in understanding its epidemiology at the human-animal interface. This study investigated CCHF seroprevalence in dromedary camels across three northern Nigerian states with high levels of human-animal interactions. Using a commercial ELISA kit, we screened 687 sera, with 655 (95.34%) testing positive for anti-CCHFV IgG antibodies. By location, Kano had a seroprevalence of 90.44% (246/272), in Borno 97.74% (259/265), and in Yobe 100% (150/150). These findings demonstrate widespread exposure to CCHFV among camels in these areas. Given the high seropositivity rate in a known amplifying host and the significant human-animal interactions, undetected human infection is plausible. Early clinical signs of CCHF often mimic other endemic febrile illnesses, which might be misdiagnosed. These results underscore the urgent need for integrated One Health surveillance to assess human exposure, improve clinical and diagnostic recognition, and guide evidence-based One Health interventions across Nigeria.

Keywords

Crimean-Congo Hemorrhagic Fever Virus (CCHFV); Dromedary camels; Zoonotic disease; One Health; Surveillance; Misdiagnosis

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