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Presence of antibodies to Rift Valley fever virus in children, cattle and sheep in Turkey

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Rift Valley fever virus is a zoonotic pathogen that causes severe disease in humans and livestock. The virus has great potential for transboundary spread given the presence of competent vectors in traditionally non-endemic areas. Given the historic outbreak of RVFV in neighboring Saudi Arabia and Yemen in the Middle East, we investigated the potential risk of RVFV infection in Turkey. Using indirect IgG ELISA, western blot and quantitative RT-PCR, we tested sera obtained from a cohort of children (n=110) with fever and/or arthritis, cattle (n=200) and sheep (n=160) to assess potential exposure to RVFV. While results of RT-PCR assay were negative, antibodies to RVFV were detected in all three study populations: humans (3.64%), cattle (4.5%) and sheep (3.75%). These results suggest the occurrence of low level circulation and transmission of RVFV in humans and livestock in Turkey during interepidemic periods; and we therefore recommend further comprehensive and systematic studies to elucidate the true prevalence, risk and impact of RVFV infection in the country.

Biography

Aysun Yilmaz has graduated from the Veterinary Faculty of University of Istanbul and has completed PhD from the Veterinary Faculty of University of Istanbul. Later, she has joined TUBITAK-MAM and worked 7 years, as Auditor for Turkish accreditation for more than 7 years and in Cevre Analyses Laboratory for 10 years as a Technical Manager. She has recently joined Department of Virology in the Veterinary Faculty of University of Istanbul and currently working on veterinary and zoonotic viruses.

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