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Molecular Detection of Crimean-Congo Hemorrhagic Fever in Ticks of Golestan Province, Iran

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Abstract : Introduction: Crimean-Congo hemorrhagic fever virus (CCHFV) causes severe disease with fatality rates of 30%. The virus is transmitted to humans through the bite of an infected tick, direct contact with the products of infected livestock and nosocomially. The disease occurs sporadically throughout many of African, Asian, and European countries. Different species of ticks serve either as vector or reservoir for CCHFV. Materials and Methods: A molecular survey was conducted on hard ticks (Ixodidae) in Golestan province, north of Iran during 2014-2015. Samples were sent to National Reference Laboratory of Arboviruses (Pasteur Institute of Iran) and viral RNA was detected by RT-PCR. Results: Result revealed the presence of CCHFV in 5.3% of the selected ticks. The infected ticks belonged to Hy. dromedarii, Hy. anatolicum, Hy. marginatum, and Rh. sanguineus. Conclusions: These data demonstrates that Hyalomma ticks are the main vectors of CCHFV in Golestan province. Thus, preventive strategies such as using acaricides and repellents in order to avoid contact with Hyalomma ticks are proposed. Also, personal protective equipment (PPE) must be utilized at abattoirs.

Keywords : tick, CCHFV, surveillance, vector diversity
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