Seroprevalence of Rift Valley Fever (RVF) in cattle, sheep and goats in four Districts in North west Somalia (Somaliland)

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Abstract:

This study was conducted in the period from July 2011 to February 2012 at Berbera veterinary quarantine station in North West Somalia (Somaliland) in livestock brought in for quarantine before export. A total of 544, 280 and 536 sera samples from cattle, sheep and goats, respectively, were collected and screened for anti- Rift Valley fever (RVF) IgG and IgM antibodies using IDvet ELISA. The overall seroprevalence of RVF (IgG) in sheep and goat was 20.96% while in cattle was 3.68%. Though not significantly (p>0.05) different, higher (25%) seroprevalence was found in sheep sera compared with seroprevalence of 18.85% in goats. The seroprevalence of RVF IgG in sheep and goat in Burao district was 35.51% while in Borma was 3.4%. The difference was however not significantly (p>0.05) different. In cattle, samples were obtained from cattle originating from Wagaale district only and the seroprevalence was 3.68%. Although not significantly (p>0.05) different, higher seroprevalence was observed in sheep (52%) and goat (24%) in 2-4 year age group, as compared to seroprevalence in 6 month 2 year age group of 18% and 10.53% for sheep and goats, respectively. In cattle, higher seroprevalence (13/300) 4.34% was recorded in >4 year age group compared to seroprevalence recorded in 6 month2year age group 1.93% (2/104). The difference, however, was not significantly (p>0.05) different. The seroprevalence of RVF IgM antibody in serum of cattle were (2/176) 1.14% indicating that the two animals had had recent exposure to the RVF virus. In conclusion, the absence of IgM in sheep coming from Burao and Borma shows that the animals had not had a recent exposure to RVF virus and that no RVF virus was circulating at the time. Given that some sheep coming from Burao and Borma markets also originate from Ethiopia there is need for regional harmonisation and coordination of RVF surveillance and control. The findings also point to the need to have inspection of animals at the border entry points supported by rapid tests for RVF in order to identify and remove suspect animals from entering the marketing chain to avoid contamination of animals at the quarantine station.

Keywords: RVF, ELISA

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