

Abstract

Foot-and-Mouth disease (FMD) is an endemic disease in Kenya with five of the seven serotypes of the Foot-and-mouth disease virus (FMDV) causing outbreaks in different regions of Kenya namely O, A, C, SAT 1 and SAT 2. Serotype O and A have been encountered in Somali Ecosystem (SES) in the past¹ but current epidemiological maps on the disease have no indication of the occurrence of the disease in the area. The main objective of this study was to determine the circulating FMDV serotypes and strains in the SES in Kenya, to characterize the strains isolated and relate them to other strains from other areas in order to determine the pools of virus they belong to. Virus circulation in cattle population was recognized by suspected outbreaks with subsequent sampling, virus detection and/or isolation. In apparently healthy herds oro-pharyngeal fluids were collected and virus detection and isolation tests to determine carrier status and serotypes of the virus. Serotype O was isolated in the samples collected from clinical cases and sent to World Reference Laboratory, Pirbright for confirmatory diagnosis and sequencing to characterize the strain. Results obtained showed that it is closely related to the vaccine strain K„O“77/78 produced locally in the country by Kenya Veterinary Vaccines Production Institute (KEVEVAPI). Vaccination with this strain would likely protect the animals in the region from more outbreaks caused by this serotype O strain though further tests on vaccine matching need to be done to confirm this. The phylogenetic mapping² places this O strain of FMDV in the East African toptype 1. Five point five percent (5.5%) of the animals sampled for oro-pharyngeal fluid were found to be carriers of the serotype O FMDV.