Abstract

The introduction of the antigen detection enzyme linked immunosorbent assay (ELISA) for routine serotyping at the foot-and-mouth disease laboratory, Embakasi, identified the existence of multiple serotype infections in some recent FMD outbreaks in Kenya. The study set out to reserotype using the ELISA some of the isolates from the collection at Embakasi previously serotypes by the complement fixation test (CFT) as single serotype isolates to identify any previous multiple serotype outbreaks in districts most affected by FMD. Seventy five (75%) foot-and-mouth diseases virus (FMDV) isolates stored at the laboratory were reserotyped. The isolates were obtained from the African buffalo (Syncerus caffer) eland (Taurotragus orynx), pigs and cattle during the period from 1971- to 2001. Serotypes O, A, SAT1 and SAT2 were identified from the cattle isolates. Serotypes O, SAT1 and SAT2 were found in buffalo isolates but not serotype A. Serotype SAT2 was identified in the eland isolate. The pig isolates were all serotype O. Five isolates (6.7%) had mixed infections of two serotypes each as follows; A and SAT 2(1), O and SAT 2(2) and SAT 1 and SAT2(2). The existence of multiple serotypes in infections among livestock and wildlife in Kenya presents challenges in FMD diagnosis requiring the use of more sensitive techniques. The inability of the CFT to identify the existence of an extra serotype in the sample could have led to ineffective, prolonged and costly control measures to contain the outbreaks. It is therefore desirable that the FMD laboratory at Embakasi applies more sensitive techniques such as ELISA and Polymerase Chain Reaction (PCR) for routine diagnosis.