

Outbreaks of foot-and-mouth disease in Peninsular Malaysia from 2001 to 2007

ABSTRACT

This is a retrospective study of the outbreaks of foot-and-mouth disease (FMD) in Peninsular Malaysia between 2001 and May 2007. In total, 270 outbreaks of FMD were recorded. Serotype O virus (89.95 %) and serotype A (7.7 %) had caused the outbreaks. Significant differences on the occurrence of FMD were found between the years ($t=5.73$, $P=0.000$, $df=11$), months ($t=4.7$, $P=0.000$, $df=11$), monsoon season ($t=2.63$, $P=0.025$, $df=10$) and states ($t=4.84$, $P=0.001$, $df=10$). A peak of outbreaks observed in 2003 could be due to increased animal movement and the other peak in 2006 could be due to a compromised FMD control activities due to activities on the eradication of highly pathogenic avian influenza. Cattle (86 % of outbreaks) suffered the most. However, no difference in disease occurrence between species was observed. The populations of cattle ($r=0.672$, $P=0.023$) and sheep ($r=0.678$, $P=0.022$) were significantly correlated with occurrence of FMD. Movement of animals (66 % of outbreaks) was the main source for outbreaks. A combination of control measures were implemented during outbreaks. In conclusion, the findings of this study show that FMD is endemic in Peninsular Malaysia, and information gained could be used to improve the existing control strategy.

Keyword: Foot-and-mouth disease; Outbreaks; Epidemiology; Malaysia