

Further insights into Caprine Arthritis Encephalitis (CAE): the current status of seroprevalence among small ruminants in two selected states of Peninsular Malaysia

ABSTRACT

Caprine arthritis-encephalitis virus (CAEV) is a member of the genus lentivirus causing caprine arthritis-encephalitis (CAE), a chronic inflammatory condition affecting the lungs, joints, udder and central nervous system of small ruminants such as sheep and goats. CAE is distributed worldwide and is recognised as a significant cause of morbidity and decreased milk production in dairy goats. Earlier studies highlighted the clinicopathological features and supplied preliminary serological evidence for the existence of CAE among selected goat herds in Malaysia. Therefore, this study aims to provide further insights into the seroprevalence and contributing factors of CAE among sheep and goat herds in two states of Peninsular Malaysia. The blood samples and biodata were randomly collected from a total of 262 individual sheep (40) and goat (222) in seven smallholder farms. Blood sera were tested for specific anti-CAEV antibodies using Qayee-Bio CAEV sandwich-ELISA test kits according to standard procedures. Our results of the study revealed 21.4% (95% CI: 15.8–28.6) apparent and 20.6% (95% CI: 14.5–27.8) true seroprevalence with significant differences ($p < 0.05$) in seroconversion rates between the states, farms, production systems and breeds of small ruminants. The prevalence of CAE in the Malaysian Peninsular is a potential threat to the small ruminant industry and developing agricultural economy. Further studies are required to determine the genetic characteristics, distribution and risk factors of CAEV for effective prevention and control in Malaysia.

Keyword: CAEV; Goats; Sheep; Seroprevalence; Contributing factors; Peninsular Malaysia