Abstract

A monoclonal antibody-based antigen-ELISA (Ag-ELISA) was studied in Kenyan cattle with the objective of evaluating its reliability in diagnosing bovine cysticercosis. A total of 55 cattle divided into artificially ($n = 30$) and naturally ($n = 25$) infested animals, were utilized. Total dissection was used as a gold standard of validity at autopsy. In natural infestations, the assay identified 16 cases as true seropositives, 2 cases as false seropositives, 3 cases as true seronegatives and 4 cases as false seronegatives. While in artificial infestations, the assay identified 9 cases as true seropositives, 14 cases as true seronegatives and 7 cases as false seronegatives. There weren't any false seropositive cases identified with artificial infestations. The assay showed good precision level and kappa level in quantifying the relative quality of the amount of agreement in natural ($n = 25$; $k = 0.482$; $p > 0.05$) and artificial ($n = 24$; $k = 0.374$; $p > 0.05$) infestations. The study showed that, besides other advantages, the Ag-ELISA with its sensitivity of 60.00–80.00%, specificity of 60.00–100%, predictive value of 88.89–100%, apparent prevalence of 37.50–72.00% and accuracy of 75.00–76.00% may be recommended for use in combination with other control measures, viz chemotherapy, post-mortem diagnosis and or vaccination.