Polymerase chain reaction detection of C. pseudotuberculosis in the brain of mice following oral inoculation

ABSTRACT

The aim of present study was to detect the presence of C. pseudotuberculosis in the brain of the mice following oral inoculation as a model using PCR. Caseous lymphadenitis is a chronic and subclinical disease of sheep and goats which has universal distributions, presenting enormous animal and flock prevalence. Total of 16 mice were used for this study, 8 mice were inoculated orally with 1.0 mL sterile phosphate buffered saline pH 7, while another 8 mice were inoculated with 1.0 mL of 109 colony forming unit of C. pseudotuberculosis. Seven different organs were collected during post mortem for the detection of C. pseudotuberculosis The result indicated 3 positive samples in lymph nodes, 5 in the brain and 1 in the liver. The PCR used in the present study may successfully be applied for the detection and diagnosis of C. pseudotuberculosis in the brain of the mice following oral inoculation.

Keyword: Brain; C. pseudotuberculosis; Detection; Mice; Oral inoculation; PCR