

Toxoplasma gondii infection in native village chickens (*Gallus domesticus*) in Selangor and Melaka, Malaysia

ABSTRACT

Toxoplasmosis is a worldwide zoonosis caused by the protozoa *Toxoplasma gondii* which affects human and animals. Village chickens (*Gallus domesticus*) most commonly known as Ayam Kampung or free-range chickens, have been suggested to play a role in the epidemiology of toxoplasmosis. This study determines the presence of *T. gondii* in the village chicken populations in two states of Malaysia. A total of 50 serum samples from the chickens from Selangor (n=20) and Melaka (n=30) were collected and analysed using commercial serological kits. *T. gondii* antigen was detected in 20% (Selangor 30%; Melaka 13%) samples using ELISA test and anti-*T. gondii* antibody was detected in all positive ELISA samples using the indirect haemagglutination test (IHAT). Histopathological examination revealed tissue changes such as inflammation and degeneration in brain and liver of seropositive chickens. This is the first report of *T. gondii* infection in the village chickens in Malaysia.

Keyword: Antibodies; Blood serum; Disease prevalence; ELISA; Epidemiology; Genes; Human diseases; Infections; Liver; Parasites; Parasitoses; Poultry; Protozoal infections; Serological surveys; Seroprevalence; Toxoplasmosis