Comparison of ELISA and dot-EIA for the detection of *Theileria annulata* infection in suspected cattle and buffaloes

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Enzyme linked immunosorbent assay (ELISA) and dot-Enzyme immunoassay (dot-EIA) were used to detect *Theileria annulata* infection in suspected cattle and buffaloes. A total of 250 sera samples (188 Cattle and 62 buffaloes) were screened by both tests and the results were compared with piroplasm in the blood smears. ELISA test showed 66.4 per cent *T. annulata* seropositivity as against 22.8 per cent *T. annulata* piroplasm in blood smears of 188 cattle and 41.9 per cent of seropositivity as against 8 per cent of *T. annulata* piroplasm in blood smears of 62 buffaloes examined. Comparison of results were made with microscopical examination and ELISA with reference to species, breed and sex of animals. Local Hallikar and Kangayam having 81.8 and 100 per cent serotitres in ELISA compared to 63.4 and 68.8 per cent of Holstein-Friesian cross and Jersey crosses indicated that both cross and local breeds are equally susceptible. Dot-EIA showed 63.2 and 32.2 per cent positive reaction against *T. annulata* in cattle and buffaloes samples respectively and the percentage of positivity of cattle and buffaloes and also the percentage of positivity among different breeds of cattle were similar to that of ELISA. Majority of the sera samples which showed negative ELISA reaction also indicated negative dot-EIA reaction. However, few number of sera samples which were negative by ELISA were positive by dot-EIA. ELISA and dot-EIA were found to be useful diagnostic techniques for screening inapparent *T. annulata* infections in animals.