COMPARISON BETWEEN COMPLEMENT FIXATION TEST AND FLUORESCENCE POLARIZATION ASSAY IN THE SERODIAGNOSIS OF BRUCELLOSIS IN TABAPUÃ HEIFERS 30 DAYS AFTER VACCINATION WITH B19 STRAIN

(COMPARAÇÃO ENTRE A REAÇÃO DE FIXAÇÃO DE COMPLEMENTO E O TESTE DE POLARIZAÇÃO FLUORESCENTE NO DIAGNÓSTICO SOROLÓGICO DA BRUCELOSE EM BEZERRAS TABAPUÃ 30 DIAS APÓS A APLICAÇÃO DA VACINA B19)

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Vaccination with *Brucella abortus* B19 is critical for the control programs of this infection. However, the vaccine induces decreasing antibodies titers, which can cause false-positive results. Many serological techniques have been evaluated to discriminate vaccine antibodies, and there are studies showing that the fluorescence polarization assay (FPA) has high discrimination ability even in animals recently vaccinated. The study aimed to compare the results obtained by FPA with those obtained by the complement fixation test (CFT) 30 days after standard vaccination with B19 of 71 Tabapuã heifers. Before vaccination, none of the calves showed antibody titers. The FPA was performed and interpreted according to the manufacturer's recommendations (Diachemix, USA). The CFT used the micro-technique with 50% haemolytic units as recommended by Alton et al. (1988). The results obtained with the two techniques were compared using regression analysis, after the titers observed for CFT were transformed into base-2 logarithm. The data, classified into positive and negative, were compared using the kappa index and the binomial test. Data analyses were performed using the software R. Only 6 animals tested negative according to CFT while the titers observed in this test reached 1:128 (3 animals). The most common titer was 1:16. The highest result was 127.3 mP observed by FPA. There was a positive association between the results of the two tests, with regression coefficient 9.375 (95% CI: 6.762 to 11.988, $P = 1.149 \times 10^{-9}$) and adjusted R^2 0.4092. In CFT, 8.45% of the animals were negative, whereas the proportion of negative results according to FPA was double (16.9%). The difference between these results was statistically significant by the binomial test (P = 0.03125), and the agreement between the results was good, with kappa 0.62 (95% CI: 0.41 to 0.84). The data obtained indicate that the FPA was more efficient that CFT to discriminate B19 vaccine-induced antibodies, but this capability was not as high as that reported by other authors.

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