

Clinical and Serological Monitoring of Goats Experimentally Infected by Virus Arthritis-Encephalitis Caprine  
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Abstract / Resumo:

The objective of this study was to evaluate which diagnostic test, agar gel immunodiffusion (AGID) or Western Blot (WB), would detect early seroconversion of goats experimentally infected by Caprine Arthritis-Encephalitis Virus (CAEV) via artificial insemination and relate seroconversion with clinical signs of disease. Thirty goats were used, with no defined breed, inseminated with semen contaminated with the standard virus strain CAEV-Cork, with infective titles of 106TCID<sub>50</sub>/mL and another 102TCID<sub>50</sub>/mL. The goats were then serologically and clinically followed for a year. The experiment was conducted in accordance to the ethical principles of animal experimentation. Statistical analysis was performed using the chi-square test ( $P < 0.05$ ). At 30 days after insemination, there were found the first seroconversions. In two, out of 20 goats inoculated, antibodies were detected for the CAE virus using the technique of AGID, and 12 by a WB. After 60 days of the AIs, all inoculated goats showed reaction of antibodies to antigens of CAEV in WB and in one year in both tests, indicating that they were infected. All the 10 goats in the control group remained seronegative throughout the experiment. The AGID presented, during the study period, eight false-negative results among 60 tests (13.3%), while the WB showed only one false-negative among 132 tests performed (0.76%) ( $P < 0.001$ ). As the clinical symptoms of CAE noted that only two (10%) of the infected females showed a slight increase in the articular index clinical, are considered clinically suspected joint problems. It was concluded that due to CAE remains asymptomatic for long periods, and the AGID test does not detect early infected animals, and the high occurrence of false-negative, there should be used more sensitive diagnostic tests, such as WB, periodically, to monitor the CAE in the national herd.