

ISOLATION AND IDENTIFICATION OF CAPRINE LENTIVIRUS IN SYNOVIAL FLUID AND BLOOD USING Nested PCR AND WESTERN BLOTTING

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Abstract / Resumo:

The caprine arthritis-encephalitis (CAE) is an infectious, multisystem disease, caused by a retrovirus belongs to the Lentivirus genus, which affects all ages goats and breed types. This study aimed to investigate the caprine arthritis-encephalitis virus (CAEV) through the isolation of native strains and identification with polymerase chain reaction (nested PCR) and western blotting (WB). Six female Saanen crossbred with no definitive breed animals were used for the isolation of native caprine lentivirus. All animals belong to the Embrapa Goats and Sheep herd seropositive by agar immunodiffusion test for CAE. From each animal was collected the synovial fluid (SF) through arthrocentesis and blood from jugular venipuncture. The collected material was sent to the laboratory where it was performed the co-cultivation and the laboratorial tests. It was verified in the wells from the plates of leukocytes co-cultures and SF from the animals formation of syncytia between seven to fifteen days after the second transition which confirming the presence of the virus in cells of monocytic-phagocyte system in cytopathic effect. All six samples isolates was observed viral reaction in moderate lytic effect. The proof of the isolation was made by Nested PCR and the WB in all six samples. In WB. the samples showed a similar pattern where it was observed the presence of the bands antigen-antibody molecular weight of 145, 70, 45, 28 and 14 KDa. We can conclude that blood leukocytes or the LS from goats can be used for the isolation by co-cultivation; native samples of CAEV in Ceara State present cytopathic moderate lytic viral effect and the WB and Nested PCR tests can be used to confirm the CAEV isolation.