THE DETECTION OF EQUINE ARTERITIS VIRUS (EAV) ANTIGENES IN CELL CULTURES USING THE INDIRECT IMMUNOFLUORESCENCE ANTIBODY TEST

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Equine viral arteritis (EVA) causes significant loses in horse breeding and horse trade. Mass abortions and resorptions of foetuses by pregnant mares can be observed in the course of the infection. Furthermore, the infection can also be found in foals, and it quite often turns out to be fatal. The infection occurs via the respiratory tract, as well as via the urogenital tract by the semen. The identification and elimination of EAV virus shedders is the essential method of preventing and eliminating the disease. For this, the stallions used in breeding should be checked serologically for the presence of the anti-EAV antibody in their sera. If the stallion is serologically positive in the second part of the study, semen samples are collected and checked for the virus using the method recommended by Office International des Epizooties [Manual of Standards for Diagnostic Tests and Vaccines, 4th Ed., Paris 2000]. The material for our study consisted of 390 stallions of different breeds. The presence of the anti-EAV antibody was shown in the sera of 153 stallions. The semen from the seropositive stallions was used for virus isolations in continuous cell (RK-13) culture of rabbit kidney and green monkey kidney (VERO). To adapt the virus to the cell cultures, the samples were passaged 5 times in 4-day intervals. The cytopathic effect in both cell cultures was noticed in the case of 19 investigated semen samples. 19 cytopathic agents were identified with the use of indirect immunofluorescence tests. The test was performed in in vitro cell culture with the use of anti-horse rabbit FITC-conjugated Ig. The cell cultures were studied under a fluorescent microscope. The light green fluorescence of the cells showing CPE was considered a positive result. Uninfected cell cultures showed no immunofluorescence staining.