

O1051 Short period of anti-CCHF antibody circulation after mild course of Crimean-Congo haemorrhagic fever treated with ribavirin

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Background: Rostov region is located in the South of Russia and endemic for Crimean-Congo hemorrhagic fever (CCHF) since the 1960s. More than 630 cases of CCHF were diagnosed from 2000 to 2018. Seroprevalence of anti-CCHF IgG in endemic rural areas in the region is at the low level of 0,4-2,0%. The aim of the study was to evaluate the tension of immunity in CCHF convalescents

Materials/methods: We have observed 51 CCHF convalescents who suffered from the disease 1-5 years ago. CCHF was laboratory confirmed by PCR and ELISA anti-CCHF-IgM (Vector-Best). Serum samples from all convalescents were taken for anti-CCHF-IgG detection by ELISA.

Results: Serum samples taken from 47 out of 51 convalescents were positive for anti-CCHF-IgG. In 4 persons (7,8%) who suffered from CCHF 13, 15, 25 and 28 months ago ELISA test for anti-CCHF-IgG were negative.

The detailed investigation has revealed, that all 4 convalescents negative for anti-CCHF-IgG were hospitalized in the early stage of disease (first or second day from the onset of symptoms) without any hemorrhagic symptoms. All of them had contact with ticks or tick bites within 7-10 days before the onset of symptoms. Temperature was not higher than 37,7 Celsius during all course of disease Ribavirin (WHO recommended doses) was started just after admission to the hospital. Mild thrombocytopenia (PLTs of 100-130 x 10³ /L) was observed during the first week of disease in 3 patients and moderate (PLTs of 70-100 x 10³ /L). In all patients. CCHF was confirmed by PCR and ELISA (anti-CCHF virus IgM). No any hemorrhagic symptoms were observed during all course of disease. In all 4 patients the course of disease was estimated as mild.

Conclusions: In some mild CCHF cases and start of treatment with ribavirin within 1-2 days from the onset of symptoms can lead to low level and short time of viremia, low level of anti-CCHF antibodies and, sometimes, to short period of their circulation. Perhaps, the virus genotypes circulating in the region has reduced immunogenicity. These hypotheses are preliminary and require further study.

