

P0025 Emerging of West Nile virus in BulgariaIva Christova*¹, Iva Trifonova¹, Elitsa Panayotova¹, Vladislava Ivanova¹, Teodora Gladnishka¹, Evgenia Taseva¹¹ National Center of Infectious and Parasitic Diseases, Sofia, Bulgaria

Background: West Nile virus (WNV) re-emerged in Europe in 2018, when number of WNV infections exceeded the total number in the previous five years, according to ECDC. Bulgaria neighbouring countries were heavily affected: Serbia, Romania and Greece reported more than 200 cases each. Little is known about WNV in Bulgaria. A seroprevalence study, conducted in 2015, has shown overall seroprevalence rate of 1.5%.

Materials/methods: Real-time RT-PCR was applied to detect WNV in patients and commercial ELISA kits were used to detect specific IgM and IgG antibodies in serum and CSF samples. In addition, a total of 950 serum samples from persons visiting laboratories for prophylactic check-up in the regional healthcare centers were collected in 2018. The samples were tested for presence of specific IgG antibodies against WNV using ELISA commercial kits. All positive samples were further tested by avidity tests.

Results: A total of 15 WNV cases were detected in National reference laboratory in 2018. Six of them were confirmed by RT-PCR, specific IgM antibodies were found in the CSF samples of two patients and in seven additional patients specific IgM and IgG antibodies were detected in serum samples. All except one patient were detected in August and September. The patients originated mainly from southern Bulgarian districts. Overall seroprevalence rate was 2.3%. The mean IgG avidity index was 48%.

Conclusions: Number of detected WNV cases in Bulgaria in 2018 exceeded the total number in the previous five years, following the same trend in the other affected EU countries. All 15 WNV patients were with neuroinvasive disease. Results of the seroprevalence study showed increase and expansion of WNV circulation in the country as compared with the results of the first similar study 3 years earlier.

