

## TULAREMIA IN SOUTH-EASTERN SERBIA IN TWELVE-YEAR FOLLOW-UP

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Tularemia is a serious bacterial zoonosis caused by the highly infectious agent *Francisella tularensis*. Microbiological diagnosis of tularemia mainly relies on serology. The occurrence of a tularemia epidemic in the Southeast of Serbia in 1998/999 initiated an epidemiological as well as a clinical and microbiological research in this area.

Objective was establishing the correlation between the clinical-epidemiological and serological diagnosis of tularemia as well as the clinical and serological follow-up of patients in the period from 1 to 12 years since the disease onset.

From the beginning of 1999 until the end of 2011, 113 patients diagnosed with tularemia were examined. The control group was formed of 111 patients with lymphadenopathy of different origins. The following serological methods were used: microagglutination test (MAT), immunoenzyme assays: ELISA (VMA, Belgrade), Serion ELISA IgG i IgM, Serazym ELISA and ELISA in house and immunochromatographic test (ICT).

Clinical-epidemiological diagnosis of tularemia was confirmed serologically in all 113 patients. The high sensitivity and specificity were found for all the examined tests. IgG Virion ELISA demonstrated the highest sensitivity (97.4%) and specificity (93.1%). IgG and IgM class of antibodies remained positive in the serum in a high percentage, even as long as 12 years from the infection. Oropharyngeal form (93.8%), with predominant unilateral cervical lymphadenopathy (91.5%), was the most common clinical form. Complications, such as suppurative lymphadenitis and recurrent lymphadenitis, were seen in 41.6% of patients.

A positive correlation between clinical-epidemiological and serological diagnosis of tularemia has been established. Serological findings must be interpreted only within the clinical picture of tularemia. A finding of IgM and IgG class antibodies or total antibodies of *F. tularensis* in the sera of patients without clinical disease manifestations, from one to 12 years from the disease onset, does not indicate an acute but a past infection. *Acta Medica Medianae* 2017;56(1):31-38.

**Key words:** tularemia, *Francisella tularensis*, diagnosis, microagglutination test, ELISA, immunochromatographic test