

Seroprevalence to *Toxoplasma gondii* in Roma and non-Roma inhabitants of Eastern Slovakia

Daniela Antolová¹, Peter Jarčuška², Martin Janičko², Monika Halánová², Lenka Čechová², Lýdia Čisláková², HepaMeta team

¹Institute of Parasitology SAS, Hlinkova 3, 040 01 Košice, Slovakia

²Faculty of Medicine, P.J. Šafárik University in Košice, Trieda SNP 1 040 11 Košice, Slovakia

Corresponding Author: Daniela Antolová; e-mail: antolova@saske.sk

Toxoplasmosis is common zoonotic disease occurring worldwide that affects a large number of warm blooded vertebrates. The prevalence of human disease in different countries depends mainly on eating habits of the population. Manipulation and consumption of raw or undercooked meat are considered risk factors of infection and pose a health risk especially for pregnant women and immunosuppressed patients. Roma people belong to one of the largest minorities in Europe. In Slovakia estimated number of Roma inhabitants exceeds 400,000, with approximately one sixth of them living in segregated settlements. In general, socioeconomic conditions and health of the Roma minority are worse than that of the majority population. The aim of the study was to map the seroprevalence of toxoplasmosis in the population living in segregated Roma settlements in Eastern Slovakia and to compare it with the majority population. Anti-*Toxoplasma gondii* IgG antibodies were detected in 189 (45.0 %) out of 420 Roma people examined, while only 93 (24.9 %) people out of 386 non-Roma were found to be positive ($p < 0.0001$). The gender did not influence the prevalence of antibodies significantly, Roma women were positive slightly more often (45.6 %) than men (43.8 %), while the prevalence in non-Roma men was higher (26.1 %) than in women (22.3 %). The prevalence of antibodies in both populations increased with age. On the other hand, higher education seemed to correlate with the decrease of infection risk, as the seropositivity was lower in participants with higher education. Analysis of clinical symptoms revealed more frequent occurrence of headache, muscle pain and fatigue in persons with anti-*Toxoplasma* antibodies than in negative individuals. We can conclude that living conditions in segregated settlements, with large number of people and domestic animals concentrated on small areas and limited access to water resources, electricity and sewage system, significantly contribute to the spread of toxoplasmosis, and can also influence the prevalence rate of other parasitic and communicable diseases.

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