Abstract

Toxoplasma gondii is cosmopolitly living parasite which prevalence in human extends to tens of percent. In its life cycle it uses any homoiothermic vertebrate as an intermediate host. The definitive host are felines from *Felidae* family. The acute phase of infection is medically important in immunocompromised pacients and by its risk of congenital toxoplasmosis in pregnant women who never suffered from this illness before. Infection could have serious and rarely even lethal consequences in both cases.

This thesis focuses on experimental verification of theory of sexual transmission of toxoplasmosis from male to female on laboratory mice. Possible transmission was tested in acute phase and latent phase of infection. The result was negative in both cases.

Moreover, we observed the parasite's affinity to tissue of organs in male mice by PCR technique. Particularly, our interest was in comparing genital organs with others. It was discovered that lungs and spleen are the most infected organs in acute phase of infection. Toxoplasma was also present in genital organs (especially in *epididymis*) but not more frequently than in others. We observed statistically significant difference between sexual and non-sexual organs in acute and latent toxoplasmosis – non-sexual organs were more infected in both phases.

Our results did not confirm hypothesis of sexual transmission of toxoplasmosis from males to females. Although it can not be proven on the base of our results that sexual transmission is entirely impossible, we can not confirm that it is so frequent to be important in epidemiology and epizootiology of toxoplasmosis.

Key words

Toxoplasma gondii, sexual transmission, mouse, genital organs, organ affinity, real-time PCR