Abstract

Toxocara canis and *Toxocara cati* are parasitic roundworms. Their definite hosts are canines or felines. Human infection is also possible and in that case these parasites cause human toxocariasis. Larvae of *Toxocara* spp. in the host release proteins called TES (Toxocara Excretory-Secretory antigens). The main role of these proteins is to ensure long-term survival of the parasite in the body of the host. The surface of the larvae is covered by coat made of some of those proteins, which increases the parasite's chances of survival. Other proteins secreted by *Toxocara* spp affect production of cytokines of the infected organism and parasite modulates the immune response to infection by that. Presence of the larvae results in inhibition of immune response based on Th1 cells and promotes Th2 immune response, during which levels of IgE and eosinophiles are elevated. Production of regulatory T lymphocytes is also stimulated.

Key words

Toxocara spp., toxocariasis, TES, immunomodulation, regulatory T lymphocytes, cytokines