

***Toxoplasma gondii* infection reduces myenteric glial cells in the jejunum of rats**

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Toxoplasma gondii is an obligate intracellular parasite whose main form of infection is the ingestion of contaminated food and water. After ingestion of cysts or oocysts, is necessary for the parasite cross the gastrointestinal tract (GIT), to reach the circulatory current and migrate to sites of affinity, which may lead to morphofunctional changes in the digestive system. Alterations caused by infectious/inflammatory processes in the GIT may cause changes in its function. Our objective was to evaluate the jejunal myenteric enterogial cells of rats infected with different inoculums of *T. gondii* oocysts, ME-49 strain, genotype II. Were used 42 male Wistar rats (*Rattus norvegicus*) of the 60-days-old (CEAE n° 081/2012). The animals were divided in groups according to the oocysts doses received, G50 (50), G100 (100), G500 (500), G1000 (1000), G5000 (5000). The control group (CG) received 1mL of saline solution by gavage. After 30 days of infection the animals were submitted to euthanasia and the jejunum was removed and fixed in 4% paraformaldehyde for 3 hours. After fixation, the segment was dissected to obtain the myenteric plexus. The immunohistochemical technique of the S100 protein was performed and the glia cells images were taken with 200x magnification. It were counted the glia S100⁺ cells present in 50 microscopic fields of each animal. There was a decrease in the number of glia cells /mm² by 43% in G50, 25% in G100, 34% in G500, 11% in G1000 and 27% in G5000, p <0.05. Enteric glial cells are involved with neuronal protection. The reduction observed might be indicative that the neurons of the myenteric plexus is exposed to the inflammatory process triggered by the infection. Thus, we conclude that *T. gondii* infection reduces enteric glial cells in the myenteric plexus of the jejunum of rats.