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## ION TRANSPORT IN RATS CAECAL WALL DURING THE COURSE OF *HYMENOLEPIS DIMINUTA* INFECTION

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The tapeworm *Hymenolepis diminuta* is a cosmopolitan cestode infecting small intestine in rodents, but rarely in humans. The aim of this study was to examine the effect of *Hymenolepis diminuta* infection on ion transport in isolated caecal wall of rats. Twenty five rats were orally infected with 5 cysticercoids *Hymenolepis dimuta*. Rats were divided to five groups: group I - 25 day post-infection (dpi), group II - 35 dpi, group III- 40 dpi, group IV - 50 dpi and group V- 60 dpi. The control group comprised uninfected rats. The caecal fragments from infected and uninfected rats were placed in the Ussing chamber in Ringer solution. The experiment consisted of measuring transepithelial electrical potential difference (PD) and the transepithelial electrical resistance (R) of the caecal. Mechanical stimulation (dPD) was performed by directing a jet of bathing medium on the mucosal surface of caecal wall. In the control group PD was  $-1.5 \pm 0.3$  mV, R  $207.2 \pm 7.1 \Omega \times \text{cm}^2$  and hyperpolarization after mechanical stimulation with incubation fluid (dPD) was  $-0.7 \pm 0.1$  mV. In group I (25 dpi) the PD and dPD value decreased to  $-0.9 \pm 0.1$  mV and  $-0.2 \pm 0.0$  mV, whereas R did not change. Similar values of the parameters were obtained in groups II, III and IV. In group V (60 dpi), the PD of rat intestine decreased to  $-0.1 \pm 0.0$  mV and dPD decreased to 0.0 mV. The experimental data presented in this study indicates that experimental hymenolepiasis inhibits ion transport in the epithelium of the rat caecum with preserved tight junction continuity.

Conflict of interest statement: None declared.