

Effects of the infection with different *Leishmania (Viannia) braziliensis* isolates on hamsters ileal muscular layer

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Leishmania (Viannia) braziliensis is a specie that causes American Cutaneous Leishmaniasis (ACL). This disease usually presents cutaneous and mucocutaneous manifestations, however it has been described in literature the visceralization in the infection with this specie and intestinal changes in infections with other *Leishmania* species. Our objective was to evaluate the effects of infection by different *L. (V.) braziliensis* isolates on hamsters ileal muscular layer. For this, there were used 24 female hamsters (*Mesocricetus auratus*). They were randomly divided in control group (CG) and five different infected groups. An infected group with MHOM/BR/1975/M2903, considered the reference strain, and the others with the strains MHOM/BR/2003/2314, MHOM/BR/2003/2311, MHOM/BR/2000/1655 and MHOM/BR/2009/3476, that were isolated from patients with different treatment responses attended by Laboratório de Ensino e Pesquisa em Análises Clínicas, from State University of Maringá. The infected groups received an intradermal injection of each isolate of promastigotes forms ($2 \times 10^7/50\mu\text{L}$) in the left hind paw and the CG received $50\mu\text{L}$ of PBS. After 60 days the hamsters were euthanized and had their ileum collected for histological routine, and then stained with hematoxylin and eosin. The measurements were performed from 16 images taken with 40X objective. The statistics were made by the D'Agostino-Pearson test and the comparison of data was made by ANOVA with significance level of 5%. The Ethics Committee on Animal Experiments of the State University of Maringá with 094/2013 protocol approved this study. The results showed different alterations in the infected groups when compared to CG. The G3476 presented an increase in the muscular layer, while the G2314 and G2311 had a significant reduction when compared with CG. The muscular layer is essential in the intestinal immune response because has an extensive network of macrophages, mast cells and some resident leukocytes (VICENTINO-VIEIRA et al., 2015). This cells respond to stimuli caused by microorganisms, causing hypercontractility in smooth muscles, explaining the increase in the muscular layer observed in G3476 (TREVIZAN et al., 2016). The infected groups with the most treatment susceptible strains demonstrated a reduction in the ileum muscular layer, this may happened because the muscular force impressed on the intestinal lumen was smaller (SILVA et al., 2010). In conclusion, the infection with *L. (V.) braziliensis* during 60 days causes alterations in the muscular layer of the hamsters's ileum. Funding: CAPES.

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