

## Alterations in the ileum of hamsters infected with *Leishmania (Viannia) braziliensis* during 60 days

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The most important causative specie of American Cutaneous Leishmaniasis (ACL) in Brazil is *Leishmania (Viannia) braziliensis* that usually cause the cutaneous and mucocutaneous forms. Though has been reported the visceralization of this parasite in the literature. The gastrointestinal system has already been studied in other leishmaniasis and important structural and functional alterations was found. Here, we evaluate the alterations that *L. (V.) braziliensis* infection causes in the ileum of hamsters. The Ethics Committee on Animal Experiments of the State University of Maringá approved this study with 094/2013 protocol. We divided 12 female hamsters (*Mesocricetus auratus*) in control group (CG), and two infected groups with different strain of *L. (V.) braziliensis*: MHOM/BR/1975/M2903 (G2903) and MHOM/BR/2000/1655 (G1655). The inoculation was made by an intradermal injection in left hind paw, the CG received 50µL of PBS. The infected groups received  $2 \times 10^7/50\mu\text{L}$  promastigotes forms of each strain and they were maintained for 60 days then suffered euthanasia. The ileum was collected, embedded in paraffin and the cuts were stained with hematoxylin and eosin. We measure the crypt depth, villus height and width with 16 images taken with 10X objective. Intraepithelial lymphocytes (IEL) were quantified in a total of 2500 epithelial cells of individual animal using 100X, and then calculated the ratio to 100 epithelial cells. The statistics were made by the D'Agostino-Pearson test for normality determination and the comparison of data was made by ANOVA with significance level of 5%. The infected groups showed an increase in all analyzed parameters, however only villus height from G1655 and villus width from G2903 and G1655 was statistically different. The increase in the villus height is related with the crypt depth because is in the crypts where occur the cellular proliferation and its increase leads to higher villus. (GÓIS et al., 2016). The increase of IELs although not significant can demonstrate migration of immune cells to the lamina propria causing wider villus (TREVIZAN et al., 2016). Based on our data we can conclude that *L. (V.) braziliensis* infection during 60 days causes important alterations in the ileum of hamsters. Funding: CAPES.

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