

PERIDOMESTIC RODENTS FROM CAPE VERDE AS RESERVOIRS OF ZONOTIC GENOTYPES OF GIARDIA DUODENALIS

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Giardia duodenalis is a flagellated parasite, considered one of the most common causes of protozoal diarrhea in humans and animals. Molecular analysis has revealed the presence of eight different *G. duodenalis* assemblages (A–H) of which assemblages A and B are the most common in humans. These genotypes have been detected in a wide range of mammalian hosts. In Cape Verde, giardiasis is common in the population, however, no information about the occurrence in reservoirs is available.

Objectives: The present study aimed to obtain data on the infection with *G. duodenalis* of rodents in Cape Verde, and to identify the potential zoonotic risk that it implies.

Methods: Stool samples were collected from 122 wild rodents (60 *Rattus rattus* and 62 *Mus musculus domesticus*). *Giardia* isolates detected were characterized based on an assemblage-specific PCR targeting the triose phosphate isomerase (TPI), β-giardin (BG) and glutamate dehydrogenase (GDH) genes, and sequenced. A BLAST search was carried out, and Chi-square test was used to evaluate parasitological results. A phylogenetic analysis was performed to assess the genetic diversity among *Giardia* isolates detected in this study.

Results: The overall prevalence of giardiasis was 11%, being the infected rodents in 5 of the 7 areas studied, highlighting the high distribution of *Giardia* sp. in the island. Significant differences in the prevalences obtained between South and Central areas ($\chi^2 = 8.97$) were found. While, there were no differences when comparing the presence of *Giardia* between hosts, age and the sex. A total of six sequences for the TPI gene were obtained. The nucleotide sequences showed high homology with *G. duodenalis* genotype B.

Conclusions: Firstly, these are the first data about *Giardia duodenalis* in rodents in Cape Verde. And secondly, this finding is of relevance from the public health point of view, considering the health risk that implies the presence of a zoonotic assemblage in rodents from a rural area in Santiago island.

