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Poster Session II
Intestinal parasites

FIRST REPORT OF CRYPSTOSPORIDIUM IN RODENTS FROM SANTIAGO (CAPE VERDE) AND THE POSSIBLE ROLE IN THE TRANSMISSION OF ZOONOTIC GENOTYPES

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Cryptosporidium is a protozoan pathogen that affects many species of vertebrates including humans, in both developed and developing countries. The disease caused by *Cryptosporidium* is usually self-limiting in immunocompetent individuals. However, in immunocompromised individuals such as AIDS patients, the disease can be severe, resulting in death. In Cape Verde, AIDS is considered an epidemic, being Santiago, Fogo and San Vicente the most affected islands. At present, there is no information about the occurrence of *Cryptosporidium* in Cape Verde.

Objectives: The aim of this study was to conduct the first study of *Cryptosporidium* in rodents from Santiago (Cape Verde), and to analyze the level of genetic variation and zoonotic potential of the characterized isolates.

Methods: Stool samples were collected from 122 wild rodents (60 *Rattus rattus* and 62 *Mus musculus domesticus*). In order to detect the protozoa, assemblage-specific PCRs targeting the 18S-rRNA gene of *Cryptosporidium,* were carried out. The nucleotide sequences were analyzed to the characterization of the isolates using BLAST search. Phylogenetic analysis was performed to assess the genetic diversity among *Cryptosporidium* isolates detected. Chi-square test was used to evaluate parasitological results.

Results: The range of prevalence present in 6 of the 7 areas studied for *Cryptosporidium* was 5.5-17.6%, with an overall prevalence of 12%. Significant differences between prevalences were detected, both considering the different areas studied, and when compared the hosts species. However, no differences were detected when comparing age and sex of the hosts. A total of 10 sequences of the 18S-rRNA gene (8 in *R. rattus* and 2 in *M. m. domesticus*) were obtained. Three assemblages of *Cryptosporidium* were identified: *Cryptosporidium* sp. GIII genotype, *Cryptosporidium suis* and *Cryptosporidium parvum*.

Conclusions: This work constitutes the first extensive study on the presence of *Cryptosporidium* in rodents from Cape Verde. The results of our study highlight the role of *R. rattus* and *M. m. domesticus* as reservoirs of *Cryptosporidium* species in Santiago island. The finding of *C. parvum* in rodents is of relevance from the public health point of view, considering the health risk that could implies this zoonotic specie.