Título: ENTEROBACTERIACEAE CIRCULATION IN THE SERRA DA CAPIVARA NATIONAL PARK (PNSC), PIAUÍ, BRAZIL: A PROSPECTIVE ZOONOTIC TRIAD OF ANIMAL, HUMAN, AND ENVIRONMENT

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Resumo:

The Serra da Capivara National Park (PNSC), located in the southeast of the Piaui state, Brazil, is dedicated to the conservation of endemic species from the Caatinga biome. It has a singular importance as the largest archaeological site in Brazil. Since water availability in this region is scarce, both human and animals (wild and domestic) populations use it from the same sources, which increase the probability of pathogens circulation and occurrence of infectious diseases. This study's objective was to analyze the presence and circulation of zoonotic and potentially enteropathogenic bacteria in the PNSC. A total of 170 samples were collected from water sources and feces (human, wild and domestic animals) in different areas inside and around the PNSC. Five hundred and twenty two strains of the family Enterobacteriaceae were isolated: *Escherichia coli* (32.6%); *Enterobacter* spp. (22.8%); *Klebsiella* spp. (11.8%); *Salmonella* spp. (10%); *Citrobacter* spp. (9.2%) and others. *Campylobacter* strains were not isolated from the samples. Seventy one percent of the studied samples, were resistant to, at least, one of the drugs tested. Among the drugs tested, penicillin, cefoxitin and tetracycline resistances were the most common observed. The surveillance of *Salmonella* serovars in aquatic environment constitutes an important element to monitor animal and human infections. In this study, 11 different *Salmonella* serovars were identified: Worthington, Panama, Brooklyn, Glasgow, Braenderup, Isangi, Grumpensis, Rubislaw, Miami, Cerro and Thompson. Results from phylogenetic analysis showed 14 different clones. The same clonal strains were circulating in distinct areas inside and around the PNSC. These results are relevant for public health, due to their contribution to environmental monitoring, understanding of enteropathogens circulation and their impacts on animals and human populations living in the PNSC area.

Palavras-chaves: Serra da Capivara National Park, Enterobacteriaceae, Salmonella spp., antibiotic resistance, clonal groups.

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