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SEROEPIDEMIOLOGY OF STRONGYLOIDIASIS IN SAMPLES FROM RECIFE BLOOD BANK: A NEGLECTED DISEASE

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Abstract

The World Health Organization (WHO) recently defined the strongyloidiasis as one of the Neglected Tropical Diseases (NTDs). More detailed epidemiological data on the global distribution of strongyloidiasis are needed. In this context, the aim of this study was to perform a seroepidemiological evaluation of *Strongyloides stercoralis* infection, to detect anti-*Strongyloides* IgG antibodies present in serum samples from blood bank donors in the city of Recife, Pernambuco, Brazil. The study analyzed 766 serum samples from blood donors from the Hematology and Hemotherapy Foundation of Pernambuco (HEMOPE). A heterologous extract of the cuticle of infective larvae of *Strongyloides venezuelensis* was prepared to be used in the enzyme-linked immunosorbent assay (ELISA). To determine the cut-off of the reaction, control serum samples with positive parasitological results for *S. stercoralis* (n=28), negative (n=53) and positive for other parasitoses (n=20) were used. Samples with absorbance values above the cut-off were considered reactive. The ROC curve generated with the control samples showed an area of 0.996 (95% CI = 0.989-1.003; p< 0.0001). The cut-off was 0.420, with a sensitivity of 96.1% (95% CI = 80.4% to 99.9%) and specificity of 96.2% (95% CI = 87% to 99.5%). The optical density values ranged from 0.117 to 2.720 (median 0.396). Of the 766 serum samples analyzed, 343 were classified as reactive, corresponding to 44.8% positivity (mean 0.815±0.451). These results may suggest a significant rate of exposure or response to the nematode *S. stercoralis* in the studied population. Furthermore, it may be important for the implementation of public policies to control this neglected helminthiasis.

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