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EVALUATION OF SERUM LEVELS OF INTESTINAL FATTY ACID BINDING PROTEIN (I-FABP) IN INDIVIDUALS WITH PARASITIC INFECTIONS

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Abstract

Metabolites secreted by parasites, associated with the production of cytokines and cytotoxic T cells, are related to epithelial damage and enterocyte apoptosis. Intestinal fatty acid binding protein (I-FABP) is expressed in epithelial cells and, when damage to the intestinal mucosa occurs, I-FABP is released into the circulation and its plasma concentration increases. Thus, this study aimed to evaluate the levels of I-FABP in polyparasitized and in monoparasitized individuals by different species of parasites. For this purpose, sera from individuals with negative parasitological examination using different techniques (HPJ, Baermann, Agar Plate, Kato-Katz and Faust), and from individuals diagnosed with parasitic infections, were obtained from participants of a study carried out in the rural area of Camumu, Bahia, and from users attended at the Clinical Analysis Laboratory of the School of Pharmacy, Federal University of Bahia. The following groups of sera were tested using a commercial immunoenzymatic assay for I-FABP, according to the results of their parasitological examinations: negative (n=8), polyparasitized (n=8), *Ascaris lumbricoides* (n=4), *Trichuris trichiura* (n=4), Hookworms (n=3), *Strongyloides stercoralis* (n=4), and *Giardia duodenalis* (n=4). The highest serum levels of I-FABP (expressed in ng/mL ± standard deviation) were observed in polyparasitized (3.077 ± 1.485 ng/mL), and in monoparasitized hosts with hookworms (4.007 ± 1.697 ng/mL) or *Trichuris trichiura* (4.075 ± 1.334 ng/mL), the latter being statistically significant ($p<0.05$), when compared with individuals without parasitic infections (0.546 ± 0.760 ng/mL). Preliminary data suggest an effect of helminth parasitism on the levels of an important marker of enterocyte damage. New experiments are underway to measure a larger number of sera, including sera from individuals with intestinal amoebas.

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