Does *Strongyloides stercoralis* modulate liver damage in alcoholic patients?

JOELMA NASCIMENTO DE SOUZA[1], FERNANDA SILVA DOS SANTOS COSTA[1], WESLEI ALMEIDA COSTA[1], ALEX BRUNO DE SOUZA[1], MÁRCIA CRISTINA AQUINO TEIXEIRA[1], NECI MATOS SOARES[1]

[1]FACULDADE DE FARMÁCIA, UNIVERSIDADE FEDERAL DA BAHIA, BAHIA/BRAZIL

Alcoholic patients are vulnerable to several comorbidities of multifactorial etiology, resulting from the combination of malnutrition, imbalance of both the immune response and the endocrine system, as well as liver dysfunction. Previous studies demonstrate an elevated *Strongyloides stercoralis* infection frequence in alcoholic individuals, as well as a higher risk of severe strongyloidiasis.

This is a case-controlled study with 240 alcoholic patients, 60 infected and 180 non-infected with *S. stercoralis*. All patients were admitted for alcoholic detoxification at an Alcoholic Care and Treatment Center. The blood biomarkers evaluation was performed by automated methods (hematological biomarkers), commercial kits (biochemical biomarkers) and nephelometry (IgE dosage).

A high frequency of alcoholics with a low hemoglobin content was observed, but there was no difference between the infected and non-infected groups. The percentage of individuals with eosinophilia, 58.3 (35/60) and 26.1% (47/180), and the concentration of total IgE, 2,882 and 1,400 IU/mL, were significantly higher ($p<0.05$) in alcoholics infected with *S. stercoralis* than in non-infected individuals, respectively. ALT and AST levels were high in both groups compared to the reference values. However, in the infected group, lower AST levels and a smaller frequence of individuals with high levels of ALT were found. Also, AST levels were higher in individuals with a parasite load greater than 100 larvae/g of feces compared to those with a parasite load less than 10 larvae/g of feces, 90.80 ± 39.9 and 56.42 ± 31.9 U/L, respectively ($p<0.05$). A similar result was found for ALT levels.

This study indicates possible protection from alcohol-induced liver damage in *S. stercoralis*-infected individuals, which could be associated with a parasitic immunomodulation of the inflammatory process and may depend on the parasite load.

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