LETTER TO THE EDITOR

IS THE AGAR PLATE CULTURE A GOOD TOOL FOR THE DIAGNOSIS OF Strongyloides stercoralis IN CANDIDATES FOR TRANSPLANTATION?

Dear Editor,

Strongyloides stercoralis, causes strongyloidiasis, a chronic infection that is often asymptomatic or minimally symptomatic. Autoinfection cycles in the normal host can progress to a hyperinfection syndrome and dissemination that leads to severe illness and death in the immunocompromised host.\(^2,5^\)

Identification and treatment of chronic strongyloidiasis is the most important factor for avoiding the severe form, particularly in transplant candidates, in whom immunosuppressive therapy (including the use of corticosteroids) is a risk factor for the occurrence of severe disease.\(^4^\) Definitive diagnosis of strongyloidiasis is usually made through detection of the larvae in stool samples, which have low sensitivity. Agar Plate culture is considered more efficient than other conventional methods in the parasitological diagnosis of \(S.\) stercoralis with high sensitivity.\(^1,3^\) However, it has not been used to screen candidates for transplantation.

The objective of this study was to verify the use of the Agar Plate culture method to diagnose \(S.\) stercoralis in candidates for transplantation. Therefore, feces samples from a population of 150 candidates for transplants (kidney, liver and bone marrow) were analyzed by spontaneous sedimentation, Rugai and Agar Plate culture methods, after signing a term of informed consent. The study was approved by the local Ethics Research Committee (protocol 0123/10).

Our observations confirmed that 9.33% (14/150) of the candidates for transplantation were positive for \(S.\) stercoralis based on three parasitological diagnostic techniques. The Agar Plate culture alone or combined with other techniques detected 71.43% (10/14) of cases positive for \(S.\) stercoralis, corresponding to 6.67% (10/150) of the candidates for transplantation (Table 1).

Given the inconvenience in collecting large numbers of samples, we suggest an evaluation using only one sample, in which a combination of three parasitological diagnostic techniques is used.

This study demonstrated the high sensitivity of Agar Plate culture for diagnosing strongyloidiasis, especially when combined with other techniques to diagnose \(S.\) stercoralis, which indicates that it can be used to screen candidates awaiting transplantation.

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REFERENCES


Reports in the literature show that the analysis of a single stool sample has a sensitivity of only 15-30%; however, sensitivity increases to nearly 100% when seven consecutive daily stool specimens are examined.\(^6^\)

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SS, spontaneous sedimentation method; R, Rugai method; APC, Agar Plate culture method.