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## Acute diarrhea in HIV infected patient receiving antiretroviral therapy: is there any role of microscopic stool examination at present?

Beuy Joob<sup>1</sup>, Viroj Wiwanitkit<sup>2</sup>

<sup>1</sup>Sanitation 1 Medical Academic Center, Bangkok, Thailand

<sup>2</sup>Visiting Professor, Hainan Medical University, China; Visiting Professor, Faculty of Medicine, University of Nis, Serbia; adjunct professor, Joseph Ayobabalola University, Nigeria

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### ABSTRACT

**Objective:** To reassess the usefulness of microscopic stool examination for the HIV infected patients with acute diarrhea. **Methods:** Overall 100 HIV-infected patients receiving standard antiretroviral therapy who visited to a primary care center (for privacy reason, the name is hereby blinded) with compliant of acute diarrhea were reviewed. In all patients, the standard microscopic stool examination was performed. **Results:** Of interest, from overall 100 indexed cases, there is no case with determined parasite in stool samples. **Conclusions:** Based on our setting, it seems that there is diagnostic role of using microscopic stool examination for determining possible parasitic infestation in HIV infected patients receiving standard antiretroviral therapy who present with acute diarrhea.

## 1. Introduction

Human immunodeficiency virus (HIV) infection is still an important public health threaten at present. This infection can be seen around the world and there is still no successful treatment. HIV infected patients usually have impaired immune function and can manifest several symptoms. Acute diarrhea is a common clinical presentation in HIV-infected patients.

In the era that the antiretroviral drugs are not widely available, the previous reports mentioned the microscopic stool examination can be useful for determining the underlying parasitic infestations[1-3]. Here, the authors reassessed the usefulness of microscopic stool examination for the HIV infected patients with acute diarrhea.

## 2. Materials and methods

Here, the authors retrospectively studied the microscopic stool examination results of the HIV infected patients with acute diarrhea. Overall 100 HIV-infected patients receiving standard antiretroviral therapy who visited to a primary care center (for privacy reason, the name is hereby blinded) with compliant of acute diarrhea were reviewed.

In all patients, the standard microscopic stool examination was performed. The reference laboratory procedures are the same as previously published in referencing paper[1]. The descriptive statistical analysis was used where it was appropriated.

## 3. Results

Of interest, from overall 100 indexed cases, there is no case with determined parasite in stool samples (Table 1).

\*Corresponding author: Beuy Joob, Sanitation 1 Medical Academic Center, Bangkok Thailand.

E-mail: [beuyjoob@hotmail.com](mailto:beuyjoob@hotmail.com)

**Table 1.**

Results of microscopic stool examination among 100 studied HIV infected patients receiving standard antiretroviral therapy who present with acute diarrhea.

Groups	Overall (n)	Number of patients with identified parasite in stool(n)
CD4+ >500 cells/mm <sup>3</sup>	50	0
CD4+ 200–500 cells/mm <sup>3</sup>	26	0
CD4+ <200 cells/mm <sup>3</sup>	20	0

#### 4. Discussion

Acute diarrhea is usually a problem in HIV infected patients. The diarrhea in HIV infected patients can be due to several etiologies including to parasite (both opportunistic and non-opportunistic worms and protozoa), bacteria and virus<sup>[4]</sup>. Using of microscopic stool examination can be a basic simple tool for studying the cause of diarrhea in HIV infected patients<sup>[2]</sup>.

For diagnostic recommendation, microscopic stool examination for parasite should be firstly used following by stool bacterial study and then colonoscopy<sup>[5]</sup>. At present, the antiretroviral therapy is easier available and affordable. It is interesting whether the widely use of the antiretroviral therapy can affect the epidemiology of pathogen causing diarrhea in HIV-infected patients. Of interest, in the present report, the null prevalence of parasite infestation can be seen.

This finding is very interesting and can imply in several ways: a) it might mean that the parasitic infestation is well controlled in cases with antiretroviral therapy, b) the null prevalence might reflect the good sanitation in the settings

that prevent transmission of parasite, c) the small sample size might lead to null prevalence and d) the parasite might not be the important cause of acute diarrhea. Nevertheless, the further studies on other causes of acute diarrhea such as bacterial and viral causes should be further done.

Based on our setting, it seems that there is diagnostic role of using microscopic stool examination for determining possible parasitic infestation in HIV infected patients receiving standard antiretroviral therapy who present with acute diarrhea.

#### Conflict of interest statement

We declare that we have no conflict of interest

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