An Infection Case of Cyclospora Cayetanensis in a Patient with Chronic Thyroiditis

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Abstract

Cyclospora cayetanensis, which is a protozoon, falls into the coccidia subclass of Apicomplexa branch. It has been reported that this parasite can infect all age groups and cause diarrhea among patients with non-immune deficiency and immune deficiency. Moreover, it is known that the prevalence of C. cayetanensis increased in tropical and subtropical regions. In the present case, a 45 year-old female patient having L-tyrosine treatment for chronic thyroiditis and traced as euthyroid visits the interior disease polyclinic with complaint about severe diarrhea for one week. Following examination for parasite using Kinyoun’s acid-fast staining method revealed C. cayetanensis oocysts. The parasite in the present case can be an agent of persistent diarrhea especially among patients with suppressed immune system. Moreover, this case is also presented to note that it can be a cause of diarrhea among non-immune deficiency patients based on the case stories reported.

Introduction

It has been reported that Cyclospora cayetanensis is an agent of diarrhea among patients of all ages, who are either healthy or with immune deficiency. Cyclospora infection is reported to be common in tropical and subtropical regions. The parasite oocysts discharged with human feces are round and about 10 µm. They are stained with acid-fast method and they are not mature when discharged. Sporulation is needed for this oocysts to become infective after they get mature outside, which affects the epidemiology of this parasite.

Due to the difficulty of the identification of the Cyclospora oocysts, it is recommended to examine the feces samples after they are concentrated to facilitate the diagnosis. It has been reported that it is useful to examine the fresh feces samples under ultraviolet fluorescence microscope thanks to the ability of cyclospora oocysts to give autofluorescence and that oocysts give green fluorescent under 450-490 nm excitation filter. The present parasite case is presented in order to note that it can cause diarrhea among non-immune deficiency patients since it can cause persistent diarrhea among patients with suppressed immune system and also it has been generally reported in cases.

Case Description

A 45 year-old female patient having L-Tyrosine treatment for Chronic Thyroiditis and traced as euthyroid visits the interior disease polyclinic and complaints about severe diarrhea which started one week ago. Routine examinations were demanded and the patient was forwarded to parasitology laboratory due to diarrhea complaint. The anamnesis of the patient revealed diarrhea of excessively watery and in gushing nature, stomachache, and exhaustion. After the blood examination and thyroid functions tests revealed normal, the patient’s feces sample was examined, and as some dubious structures thought to belong to Coccidias were found using native-lughole (Figure 1), C. cayetanensis oocysts were detected using Kinyoun’s acid-fast staining method (Figure 2.3). Native preparates were examined via fluorescence microscope under 40X objective with 380-420 nm wave length filter, and it was determined that mentioned structures gave autofluoresan. The patient began to receive a two-week 2X160/240 mg trimetoprimsulphametoksazol treatment, after which patient stated that her complaints ceased and no parasite were found in her feces examination.

Discussion

It was emphasized that C.cayetanensis, which was first found to infect man in Papua New Gina in 1979, is a significant reason of chronic diarrhea among patients with immune deficiencies including those with AIDS. The infection of the parasite show watery diarrhea, stomachache, nausea and loss of weigh. Similarly in the present case, severe stomachache and watery diarrhea for one week were observed. It was also reported that the parasite was seen among British troops in 1994, that a tab-water-related cyclospora epidemic broke out in a small military troop in Pokhara/Nepal and parasite was isolated from the tab water. It was understood that some water-related epidemics, the causes of which not explained...
adequately before, were caused by C. cayetanensis. Recently some diarrhea epidemics have been reported about C. cayetanensis, which shows a cosmopolitan distribution around the world. In the present case, it was found that the patient had a vegetable-rich diet and consumed tap water. The first case in our country was detected by Koç et al. while a HIV positive patient’s chronic diarrhea etiology was examined. Next, Turgay et al. and Yazar et al. also reported cases. In Malatya, Çelik et al. reported the parasite in a boy. In this case study, it was intended to note that C. cayetanensis can be a cause of diarrhea among non-immune deficiency patients and it must be examined in unclear diarrhea.

References

Illustrations

Illustration 1

Figure 1: C. cayetanensis oocysts (native) 400X
Illustration 2

Figure 2: C. cayetanensis oocysts (Kinyoun's acid-fast) 1000X
Illustration 3

Figure 3: C. cayetanensis oocysts (Kinyoun's acid-fast) 1000X
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