



# Cyclosporiasis at King Chulalongkorn Memorial Hospital, Thailand: a 10-year experience

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Presentation No: 583

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## Background

*Cyclospora cayetanensis* is an intestinal protozoon that can infect the mucosal epithelium of the small intestine. It can cause either acute or chronic gastroenteritis depending on the immune status of the hosts. We report here in the data regarding demography, clinical features, diagnostics, treatment, and outcomes of cyclosporiasis at King Chulalongkorn Memorial Hospital (KCMH), Bangkok, Thailand.

## Material/methods

A retrospective study was carried out in all patients with cyclosporiasis who attended at KCMH from January 2006 to October 2015.

## Results

There were 6 patients including 3 (50%) males with the median age of 31 (IQR 26.25, 44.75) years. Four (66.67%) patients had co-morbid diseases including human immunodeficiency virus infection (HIV) with CD4 count lower than 100 cells/mm<sup>3</sup> (2, 33.33%) and diabetes mellitus (2, 33.33%). The median duration of illness before the diagnosis was 3.5 (IQR 3, 16) days. The admission rate was 66.67% with the median length of hospital stay was 9 (IQR 3.75, 15.75) days. Watery diarrhea was the most common presenting symptom (5 patients, 83.33%), followed by abdominal pain (4, 66.67%), nausea (4, 66.67%), vomiting (4, 66.67%), malabsorption syndrome (3, 50%), and fever (2, 33.33%). One patient was asymptomatic. Regarding the degree of dehydration, there were 3, 2, and 1 patients with severe, moderate, and mild dehydration; no patient had hypovolemic shock.

The diagnosis was made by the direct simple examination (3 patients, 50%), concentration technique examination (6, 100%) and direct modified acid-fast staining (6, 100%) (Figure 1). Three (50%) patients had co-infection including giardiasis, Pneumocystis pneumonia, salmonellosis and late latent syphilis. Five (83.33%) patients improved after treatment with volume and electrolytes replacement as well as cotrimoxazole for eradication of the parasite in 2 (33.33%) patients with HIV infection. The mortality rate was zero %.

## Conclusions

In our institute, the patients with cyclosporiasis can present with acute or chronic watery diarrhea and malabsorption syndrome either in immunocompetent or immunocompromised host. All patients have made a dramatic response to the specific and supportive treatment.

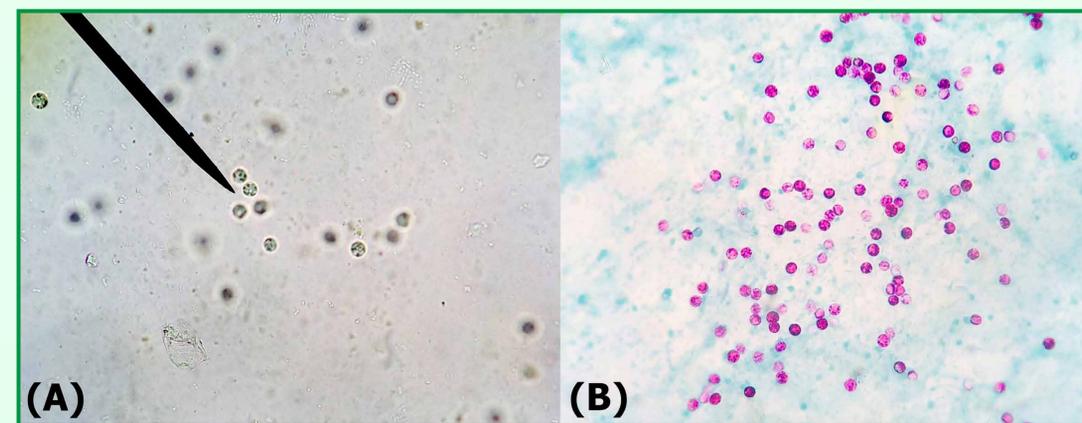


Figure 1. The stool examination for the diagnosis of *Cyclospora cayetanensis*. A. Multiple oocysts on direct examination and B. Oocysts on modified acid-fast staining (original magnification, X400).

No	Sex/Age (year)	Co-infection	Co-morbid diseases	Symptoms				Degree of dehydration	Time to diagnosis	LOH	Diagnosis			Time to improved	Treatment
				Watery diarrhea	Abdominal pain	Fever	Nausea/vomiting				Stool conc.	Stool fresh	mAFB		
1	F / 20	Giardiasis	-	+	+	-	+	Moderate	4	4	+	+	+	2	Volume replacement
2	M / 25	PCP,	AIDS	+	+	+	+	Severe	28	21	+	+	+	4	Volume replacement, TMP/SMX
3	F / 30	-	-	+	+	-	+	Moderate	3	3	+	-	+	3	Volume replacement
4	M / 32	PCP, Syphilis	AIDS	+	+	+	+	Severe	20	14	+	+	+	3	Volume replacement, TMP/SMX
5	M / 49	-	DM	+	-	-	-	Mild	3	0	+	-	+	2	Volume replacement
6	F / 57	-	DM	-	-	-	-	No	0	0	+	-	+	0	No

F, female; M, male; PCP, pneumocystis carinii pneumonia; AIDS, acquired immune deficiency syndrome; DM, diabetes mellitus; LOH, length of hospitalization; TMP/SMX, trimethoprim/sulfamethoxazole.

Table 1. A summary of the 6 patients with cyclosporiasis at our institution.