

Cyclospora infection: A tropical disease in our midst

A 45-year-old healthy female presents to you with a 3-week history of nonbloody diarrhea. Initially she experienced 5 to 10 watery bowel movements per day with abdominal pain, low-grade fever, fatigue, and nausea. Although she has improved, she continues to have relapsing semiliquid stools every 2 days with abdominal pain and bloating. She is otherwise well and on no medications. She has not traveled recently, nor has she had contact with other symptomatic people. A stool C&S performed at a walk-in clinic was negative. You order a stool O&P. The laboratory reports the presence of *Cyclospora cayetanensis* oocysts. You decide not to treat but to see her again in a week, at which point her symptoms have improved considerably. A few weeks later, the media reports that BC is affected by a *Cyclospora* outbreak associated with imported fresh herbs.

Spring marks the start of the *Cyclospora* risk period in Canada (www.bccdc.ca/health-info/diseases-conditions/cyclospora-infection). Nearly every year for the last decade, BC has been affected by outbreaks of locally acquired *Cyclospora* infection (Table).

Cyclospora cayetanensis is a protozoan parasite that causes a protracted, relapsing gastrointestinal illness. Symptoms include frequent watery diarrhea, anorexia, abdominal cramps and bloating, nausea, flatulence, fever, and weight loss.¹ Symptoms typically last 2 weeks to 2 months, and often wax and wane in intensity. Biliary disease, Guillain-Barré syndrome, and reactive arthritis have been reported

following infection. Symptoms may resolve spontaneously, but patients with a severe or prolonged course and those who are immunocompromised should be treated with TMP/SMX or ciprofloxacin.²

Cyclospora infection is diagnosed by stool ova and parasite (O&P) by microscopic examination. All BC laboratories use acid-fast staining to detect *Cyclospora* on all O&P samples. The Infectious Diarrhea – Guideline for Ordering Stool Specimens³ recommends O&P testing for patients with mild to moderate diarrhea with a likely infectious cause lasting more than 2 weeks. If initial results are negative and symptoms persist, a second O&P may be necessary.

People are infected by ingesting contaminated food or water. The infection is not spread from person to person. Infected individuals excrete oocysts in their feces. Oocysts require 7 to 15 days to sporulate in the environment before becoming infectious and may contaminate food where it is grown.

Cyclospora is not endemic in BC or Canada. Most infections are acquired from consuming contaminated food or water during travel to Central and South America or Asia in the spring and early summer. When infection occurs in a BC resident who did not travel, it is likely associated with imported food from an endemic coun-

try and leads to an outbreak investigation (Table).

Physicians play an important role in identifying outbreaks in the community. If patients present with acute but prolonged relapsing diarrhea, consider stool O&P testing even when no travel is reported. *Cyclospora* infection is reportable to public health. If a patient may be part of an outbreak or there is more than the usual number of patients with similar symptoms in a short period, report this to your local health unit or medical health officer for public health investigation.

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References

1. Ortega YR, Sanchez R. Update on *Cyclospora cayetanensis*, a food-borne and waterborne parasite. *Clin Microbiol Rev* 2010;23:218-234.
2. Bugs & Drugs. Accessed 9 February 2018. www.bugsanddrugs.org/Home/Index/bdpage62B55D83D9294CF6AA576C8B045C139F.
3. BC Guidelines. Infectious diarrhea—guideline for ordering stool specimens. Accessed 26 February 2018. www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines/infectious-diarrhea?keyword=infectious&keyword=diarrhea&keyword=guidelines.

Table. *Cyclospora* outbreaks affecting BC residents, 2013–2017.

Year	Duration of outbreak	Number infected	Suspected imported food sources
2013	June–September	25	Blackberries, raspberries, lettuce
2014	April–August	85	Blackberries, cilantro
2015	May–August	97	Blackberries, lettuce, basil
2016	May–August	87	Blackberries, lettuce
2017	May–August	158	Blackberries, cilantro

Source: PHAC 2018

This article is the opinion of the BC Centre for Disease Control and has not been peer reviewed by the BCMJ Editorial Board.