

## Raccoon latrines and risk of *Baylisascaris* transmission

**L**ike it or not, raccoons are part of our urban landscapes. They can be found eating, sleeping, and defecating in parks, backyards, and other areas where British Columbians live, work, and play. While some may find them cute and others may find them a nuisance, what is certain is that raccoons commonly carry a serious zoonotic pathogen, *Baylisascaris procyonis* or raccoon roundworm. A large percentage (60% to 80%) of BC raccoons harbor this parasite.<sup>1</sup> Although human *Baylisascaris* infections are extremely rare, the clinical repercussions of this larva migrans infection can be very severe or even fatal. This disease is not reportable in BC and the BCCDC is aware of only two cases: one in a 17-month-old boy and another in an elderly woman with Alzheimer disease who was asymptomatic.<sup>2</sup>

Infection with *Baylisascaris* occurs when humans ingest infectious eggs from raccoon feces or from food, water, objects, or soil contaminated with raccoon feces that contain infectious eggs. Globally, cases are most commonly reported in children as they are more likely to have contact with infected raccoon feces, particularly in children with pica or geophagia. Generalized clinical signs and symptoms, which often appear 1 to 4 weeks after infection, can include fatigue, nausea, and fever. Other clinical presentations can take months to years to develop and depend on the migratory pathway of the larva, categorized as neural, ocular, or visceral larva migrans (**Table**).

The prognosis of *Baylisascaris* infection is often not favorable,

*This article is the opinion of the BC Centre for Disease Control and has not been peer reviewed by the BCMJ Editorial Board.*

**Table. Clinical presentations of *Baylisascaris* larval migrans.**

Neural	Ocular	Visceral
<ul style="list-style-type: none"> <li>• Loss of coordination and muscle control</li> <li>• Lethargy</li> <li>• Seizures</li> <li>• Coma</li> </ul>	<ul style="list-style-type: none"> <li>• Visual impairment or blindness (often one-sided)</li> <li>• Photophobia</li> </ul>	<ul style="list-style-type: none"> <li>• Macular rash</li> <li>• Abdominal pain</li> <li>• Hepatomegaly</li> <li>• Pneumonitis</li> </ul>

especially in cases of neural larval migrans. The clinical effects of *Baylisascaris* are more severe than with other parasites that cause larval migrans (e.g., *Toxocara* spp.) because the larva continues to grow in the intermediate host, causing extensive tissue damage and reaction.<sup>3</sup>

Diagnosis of *Baylisascaris* is difficult; consultation with medical microbiology and infectious disease specialists is recommended. Diagnostic results from hematology (e.g., eosinophilia), serology (*Baylisascaris* antibodies), ocular examination, and imaging contribute to a final diagnosis of *Baylisascaris* infection. In addition, microscopy of suspect soil or raccoon feces can be examined for infectious eggs. Early treatment with albendazole has been shown to be effective if given within 3 days of ingestion of the contaminated substance (e.g., raccoon feces, infected soil). Once clinical signs develop, treatment entails a combination of albendazole, corticosteroids, and other supportive therapies depending on the organs that are affected.<sup>3</sup>

Raccoons habitually defecate in the same location as other raccoons residing in the vicinity. Often these latrines, which can be shared by one to six raccoons, are near areas of human activity, such as in backyard woodpiles, around trees or shrubs, or in open structures such as garages, decks, or attics. With the high prevalence of *Baylisascaris procyonis* in raccoons and the millions of eggs that

they can shed in their feces, raccoon latrines represent a health risk to people and their pets. *Baylisascaris* eggs take from 2 to 4 weeks to become infectious and can remain viable in the environment for years.<sup>3</sup>

Prevention strategies include promptly removing latrines from affected properties and deterring raccoons from revisiting, keeping children away from raccoon sites and deterring them from putting their hands in their mouths when playing outside, keeping pets dewormed, and practising effective hand and household hygiene when latrines and raccoons are present.<sup>4</sup>

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**Revamped mental health and substance use website for young people**

The BC Children’s Kelty Mental Health Resource Centre has launched a new website so families and health professionals can more easily find mental health and substance use information and resources to support children and youth.

The website, [keltymentalhealth.ca](http://keltymentalhealth.ca), contains information, tools, and services, including evidence-based supports, created by trusted health experts at BC Children’s Hospital. Kelty also launched a new Instagram account (@keltycentre) to comple-

ment information already provided through Facebook ([www.facebook.com/keltymentalhealth](http://www.facebook.com/keltymentalhealth)) and Twitter (<https://twitter.com/KeltyCentre>), connecting followers to the latest resources and information on mental health and substance use via social media.

In addition to the website, the Kelty Centre offers a variety of services so that children, youth, and families can find the help they need, when they need it, as close to their home communities as possible. This includes peer support services from trained young adults and parents with experience in child and youth mental health, through a collaboration with FamilySmart.



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<sup>1</sup> Ranked 10th out of 1,204 balanced mutual funds in Canada. Source: Morning Star Advisor Workstation, April 30, 2018.

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