Is rabies becoming more common?

Case scenario

“It was diagnosed with what?” You could not believe your ears.

“With rabies,” said a colleague. He was telling you a story of his family holiday a couple of summers ago in eastern Canada. “Yes, our neighbours came home one afternoon and their 2 dogs were circling a raccoon in their backyard. They killed and buried the raccoon. But because it was odd for a raccoon to confront 2 dogs in the heat of the day, its body was later exhumed and tested for rabies. Sure enough, it was rabid.” It is not uncommon now. Between January 2015 and March 2016, 2 dozen rabid raccoons and 1 rabid skunk have been detected in southwestern New Brunswick.1 “And the story gets worse,” your colleague adds. “This is not just in rural areas. In December 2015, rabid raccoons began showing up around Hamilton, Ontario. And they have been found in southern Quebec as well. Rabies in terrestrial animals is re-emerging in eastern Canada.”

Evidence

By the late 2000s, Ontario, Quebec, and New Brunswick had eradicated raccoon-strain rabies through excellent programs of surveillance, early detection, and aerial distribution of bait containing oral vaccines. However, like many successful programs, once the goals were reached, the programs wound down. But raccoon rabies persisted in the United States and has migrated northward. Sporadic cases were seen in New Brunswick in 2014 as well as in Ontario and Quebec in 2015, and the number of cases has been increasing. Fortunately, raccoon rabies prevention and control programs are now being reinstituted.1

Unfortunately, not only raccoons carry rabies. Canada also has endemic western skunk strains in southern Manitoba and Saskatchewan, which result in animal cases being diagnosed every year. However, the most common causes of rabies in humans in Canada are bat strains of the virus. Between 2000 and 2010, the 3 domestically acquired cases of human rabies were all due to bat bites.2 The National Advisory Committee on Immunization recommends post-exposure rabies prophylaxis following direct contact with a bat when a bite, a scratch, or exposure of a wound or mucous membrane to a bat’s saliva cannot be ruled out. Bites inflicted by bats might not be felt or leave visible marks.2 Rabid arctic foxes also pose a threat to the people and dogs of northern communities. Since 2012, there have been 3 incidents of puppies from the north adopted by people in urban centres in the south subsequently developing rabies.3

One of the intriguing things about the rabies virus is its long incubation period—on average 3 to 12 weeks. So after a domestic animal is bitten by a rabid animal, it can be fine for a couple of months. The first signs of rabies are notoriously non-specific, and might include such things as lethargy. This can progress within days to signs of cerebral dysfunction, such as ataxia, weakness, difficulty swallowing, excessive salivation, and abnormal behaviour. Once symptoms begin, rabies is invariably fatal.

Bottom line

Rabies is re-emerging in Canada as a public health risk to domestic animals and people.4 Any animal that has bitten a human or is suspected of being rabid should be reported to local public health authorities, regardless of whether terrestrial rabies is known to be in the area. Early post-exposure prophylaxis is life-saving.

People tend to underestimate the risk of rabies when traveling. The National Advisory Committee on Immunization recommends people consider receiving rabies immunization before traveling to countries where rabies is endemic.2 The World Health Organization has a map of areas where rabies transmission occurs.5 Children, especially those who are too young to understand the need to avoid animals or to report a traumatic contact, are considered at greater risk of rabid animal exposure and should receive immunization before traveling to endemic areas.2

References