Introduction

Rabies is enzootic among the fox populations of northern and western Alaska. Periodic epizootics (epidemics among animals) have been documented every 3 to 5 years and usually occur early fall through early spring. During early spring, foxes tend to move inland off the sea ice to the shore, increasing the likelihood that they come into contact with domestic animals or humans. Therefore, it is critical during these seasons to ensure that adequate rabies control and prevention measures are in place.

Recent cases of animal rabies

Since March 1, three foxes submitted to the Alaska State Virology Laboratory (ASVL) in Fairbanks have tested positive for rabies (Table 1). Additionally, a dog from Bethel that was seen running loose and then subsequently died also tested positive. This dog had a vague history of exposure to a fox prior to dying and was not vaccinated against rabies. Three of the four rabid animals came from the Yukon-Kuskokwim Delta region, an area known to be enzootic for animal rabies. No humans were exposed to any of the rabid animals; therefore, rabies post-exposure prophylaxis was not indicated.

<table>
<thead>
<tr>
<th>Animal</th>
<th>Location</th>
<th>Date tested positive for rabies</th>
<th>Number of Humans exposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red fox</td>
<td>Bethel</td>
<td>March 26</td>
<td>0</td>
</tr>
<tr>
<td>Red fox</td>
<td>St. Mary's</td>
<td>April 2</td>
<td>0</td>
</tr>
<tr>
<td>Arctic fox</td>
<td>Red Dog Mine</td>
<td>April 9</td>
<td>0</td>
</tr>
<tr>
<td>Dog</td>
<td>Bethel</td>
<td>April 12</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 1. Cases of animal rabies, March-April 15, 2003.

Vaccinate all dogs

Because the elimination of rabies from the fox population in Alaska is impractical, a mainstay of preventing cases of human rabies is to reduce the chance of rabies transmission from wildlife reservoirs to domestic animals that in turn can transmit the fatal virus to humans. In Alaska, dogs can serve as the transmission vehicle of rabies virus from wildlife to humans, making it essential that all dogs are appropriately vaccinated against rabies. Dogs should be vaccinated against rabies at the first opportunity after 12 weeks of age. The first rabies vaccine given, regardless of the dog's age at the time, must be followed by a booster dose 12 months later. Thereafter, rabies vaccines are given every 3 years.

Dogs can be vaccinated against rabies by private veterinarians and, in rural Alaska, by lay vaccinators. The Division of Public Health's Lay Vaccinator Program trains local personnel from public agencies or organizations to provide animal rabies vaccination services to communities without access to veterinary care. For more information, contact Don Ritter, ASVL, 907-474-7017, or Louisa Castrodale, Section of Epidemiology, 907-269-8000.

Control stray and feral dogs

In addition to attaining a high level of rabies vaccine coverage of domestic pets, communities need to actively control stray and feral dogs by requiring owned dogs to be tied up or otherwise prevented from running free in the community. Feral and un-owned dogs should be captured and transported to animal control facilities (if available). Effective animal control requires a collaborative community effort to devise a rigorous plan that meets the needs and resources of that community.

In response to the recent rabies cases, animal control staff in Bethel, in cooperation with Yukon-Kuskokwim Health Corporation Office of Environmental Health (EHD), initiated a blanket rabies immunization campaign of dogs in the Bethel neighborhood where the rabid dog was found. More than 60 unvaccinated dogs were identified during this time and subsequently vaccinated against rabies. Additionally, a village-wide rabies vaccination clinic will be held to provide rabies vaccine to other unvaccinated animals.

Recommendations for rabies prevention and control

- All dogs (and cats) must be appropriately vaccinated against rabies; unvaccinated animals can be confiscated or euthanized [7 AAC 27.020 (b) 6]. This regulation exists to protect both human and animal health.
- The Section of Epidemiology strongly recommends that all unvaccinated animals with rabid animal contact, in which a human exposure has occurred, should be immediately euthanized. Control measures must be instituted immediately after a dog has known contact with a rabid fox to minimize dog-to-dog spread of rabies and exposure of humans to rabid dogs.
- Any animal, regardless of rabies vaccination status, displaying signs of illness compatible with rabies should be immediately euthanized and tested for rabies. Rabid animals may display obvious neurologic impairment, such as a staggering gait or inappropriate response to stimuli, but also may display subtle signs, such as mild drooling or reluctance to move. Any animal that dies without an obvious cause in a rabies enzootic area should be evaluated for rabies.
- If vaccinated animals are exposed to rabid animals, they may be immediately revaccinated and then confined for a minimum of 30 days. However, if vaccinated animals cannot be adequately confined or quarantined, they should be euthanized.
- Lay Vaccinators and animal owners should maintain readily accessible, up-to-date rabies vaccination records to expedite public health decision-making.

Rabies is considered a public health emergency. Section of Epidemiology staff are available 24-hours a day for consultation in determining what constitutes a rabies exposure, and for assistance in submitting an animal head for testing or obtaining rabies post-exposure prophylaxis for humans exposed to a rabid animal.
(Reported by Louisa Castrodale, DVM, MPH, Section of Epidemiology; and Don Ritter, Manager, Alaska State Virology Laboratory. Special thanks to Jillian Kinghorn and Troy Ritter, Yukon-Kuskokwim Health Corporation Office of Environment Health; and Mike Burley, Bethel Animal Control Officer.)