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<http://www.epi.alaska.gov>

Rabies Post-Exposure Prophylaxis – Alaska, 2002 and 2003

Rabies Post-Exposure Prophylaxis

Rabies post-exposure prophylaxis (PEP) is lifesaving treatment given to prevent rabies in persons exposed to possibly rabid animals. For previously unvaccinated persons, rabies PEP involves human rabies immune globulin (HRIG) given intramuscularly on a per weight basis as soon as possible after exposure, and five doses of rabies human diploid cell vaccine (HDCV) over the following 4 weeks.

Indications for Rabies PEP

Recommendations for rabies PEP are based upon many factors, including epizootology of rabies, geographic location of incident, rabies vaccination status of biting animal, availability of animal for testing, whether a bite was provoked, among others. Section of Epidemiology staff are available 24-hours-a-day for consultation in evaluating rabies exposures, obtaining PEP free-of-charge, and for assistance in submitting animals for testing. Administration of PEP is time-consuming, labor-intensive, expensive, and associated with a low risk of serious side effects. However, because rabies is almost universally fatal to humans, PEP will be recommended when circumstances dictate its use.

Discussion

In 2002-03, patients who received rabies PEP in Alaska fell into three categories:

1. those exposed to animals confirmed to be rabid by laboratory tests;
2. those exposed outside of Alaska to possibly rabid animals; and
3. those exposed in rabies enzootic (northern and western) areas of Alaska to possibly rabid animals for which no information on the biting animal was available (Table 1).

In category one, several foxes transmitted rabies to unvaccinated dogs in a village in 2002. Both foxes and dogs tested positive for rabies, and Patients 8-23 were exposed to rabid dogs. In 2003, there were no incidents with humans exposed to confirmed rabid animals. In 2002-03, 154 animals were tested for rabies by the Alaska State Virology Laboratory (ASVL) in Fairbanks; 71 of these incidents involved human exposures. In 2003, 9 animals tested positive for rabies compared to 29 in 2002.

In the second category, eight persons were exposed outside of Alaska to possibly rabid animals. Most incidents were provoked and likely avoidable. Some travelers to foreign nations may have been candidates for rabies pre-exposure immunizations.

The third category resulted from lack of follow-up information about an animal. Six incidents involved unidentified domestic animals; one involved a dog that was destroyed before it could be tested. Two incidents involved wild foxes that could not be identified or located following the exposure incident. Past reasons that animals were not identified include the inability of young children or intoxicated persons to provide details about the bite incident.

Summary

In 2002-03, 32 persons received PEP in Alaska. In the 1970s, prior to the Lay Vaccinator Program, about 200 Alaskans received PEP annually. Epidemiology is committed to assisting healthcare providers assess rabies exposures; to providing PEP when indicated; to facilitating thorough incident investigations; and to supporting all efforts to reduce exposure of humans to rabies.

Recommendations

1. Possible exposures to rabies are **public health emergencies**. Epidemiology staff are available 24-hours-a-day: call 907-269-8000 during workdays and 800-478-0084 after-hours.
2. A critical part of rabies investigations involves gathering details about an animal that bit a patient. Every effort should be made to identify and test animals to rule out rabies and avert unnecessary administration of PEP.
3. Because pets serve as rabies transmission vehicles from wildlife to humans, **all** dogs and cats must be appropriately vaccinated against rabies. Rabies vaccination is required according to Alaska State Regulations 7 AAC 27.020 (b)(3). Communities should strive to actively control stray dogs and develop rigorous animal control programs.
4. Persons traveling overseas should consider obtaining a health consult to determine if pre-exposure immunization against rabies is indicated.

Table 1. Exposure scenarios of patients who received rabies PEP in Alaska, 2002 – 2003.

| 2002 Patients (N=23) | 2003 Patients (N=9) |
|--|--|
| 1. Bitten by a dog in Cambodia. | 1. Bitten by a fox in Arizona. |
| 2. Bitten/exposed to wildlife in Connecticut. | 2. Bitten by a dog in Africa. |
| 3. Bitten by an unidentified dog in an enzootic area of Alaska. Patient was intoxicated and could not describe the incident in detail. | 3. Bitten by a fox in an enzootic area of Alaska. Patient was intoxicated and was bitten while handling a trapped fox that ran away. |
| 4. Bitten by a monkey in Thailand. | 4. Bitten by a dog in Thailand. |
| 5. Bitten by an unidentified dog in an enzootic area of Alaska. | 5. Bitten by a cat in Nebraska. |
| 6. Bitten (child) by a dog in an enzootic area of Alaska. Dog was destroyed and unavailable for testing. | 6. Bitten by a fox in an enzootic area of Alaska. With a snowmachine, patient injured a fox and was bitten while handling fox that ran away. |
| 7. Bitten by a dog in Thailand. | 7. Bitten (child) by an unidentified dog in an enzootic area of Alaska. |
| 8-23. Bitten by rabid dogs in an enzootic area of Alaska. | 8. Bitten by an unidentified dog in an enzootic area of Alaska. Patient was intoxicated, broke into a home, and was bitten by a loose dog. |
| | 9. Bitten by an unidentified dog in an enzootic area of Alaska. |

For more information:

Section of Epidemiology website, RABIES bulletins: <http://www.epi.alaska.gov/bulletins/catlist.jsp?cattype=Rabies>