

Sept. 8 was World Rabies Awareness Day so this question is very timely. Rabies is a viral disease that occurs mostly in carnivores and bats, but it can affect any mammal, including humans. It causes encephalitis (inflammation of the brain) and a variety of clinical signs.

The most common finding is a sudden change in the animal's behavior. Aggressiveness or an apparent lack of fear is common (the "mad" or "furious" form), but some animals show minimal changes in behavior and become paralyzed (the "dumb" or "paralytic" form).

The onset of paralysis is often associated with salivation and the inability to swallow. The main concern caused by rabies is the fact that once clinical signs begin to appear, rabies is considered to always be fatal.

Worldwide, there are more than 55,000 human deaths due to rabies each year. Most of these occur in Africa and Asia although some occur in Latin America, including Mexico.

In the United States, less than 10,000 animal cases of rabies occur each year with fewer than 1,000 cases in domestic animals. Most of the cases in wildlife occur in raccoons, skunks, foxes, and coyotes; however, bats have become one of the most important reservoirs for rabies. Hawaii is the only state that does not have rabies.

Since 1990, there have been 50 human deaths due to rabies in the U.S. Two-thirds of these have been associated with exposure to bats; the next most frequent type of exposure was due to contact with rabid animals while traveling in foreign countries. It usually takes from 20 to 60 days after exposure to rabies before clinical signs develop in humans.

Approximately 50 to 100 animal rabies cases are confirmed each year in Oklahoma. Almost 75 percent of these cases are skunks with less than 5 percent in bats. Cattle, dogs, cats, and horses comprise most of the remainder of Oklahoma's animal rabies cases.

Rabies is usually spread by the bite of infected animals because their saliva contains the infective virus as the disease develops. Rabies is transmitted much less frequently by contamination of existing cuts or wounds with saliva or by contact of saliva with mucous membranes, such as the lining of the eyes.

Rabies cannot be transmitted by contact with blood, urine, or feces from an infected animal. In most cases of rabies, infected animals begin shedding virus in their saliva at the same time that clinical signs begin to develop.

However, in a few cases, animals may be shedding virus before clinical signs can be detected. This is the reason why, for example, that a dog which has bitten a person but otherwise appears normal must be observed for 10 days to make sure that clinical signs of rabies do not subsequently develop.

Animal control regulations and requirements for rabies vaccinations of dogs and cats in the U.S. are largely responsible for the relatively low level of rabies in domestic animals and small

number of human deaths in this country. Rabies vaccines have an excellent record of safety and efficacy when used according to directions. Although animal owners may obtain rabies vaccines from retail sources, licensed veterinarians must administer rabies vaccinations to meet requirements for official vaccination in Oklahoma.

Oklahoma law requires that all dogs, cats, and ferrets must be vaccinated for rabies by 4 months of age and must receive booster vaccinations on a regular basis. These animals should receive their second vaccination within one year of the initial vaccination. Subsequent booster vaccinations should be given every 1 to 3 years depending upon the provisions stated on the label of the vaccine and any specific legal requirements of local municipalities.

Oklahoma law does recognize three-year immunity provided by rabies vaccines labeled for three-year booster intervals. Rabies vaccines are also produced for other animals, including cattle and horses. Owners of animals other than dogs, cats, and ferrets should consult with their veterinarians to evaluate the risk of their animals being exposed to rabies and the potential benefits of rabies vaccination.

This column is provided by the faculty of the OSU Boren Veterinary Medical Teaching Hospital.

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