

The Animal Medical Clinic

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Rabies in Dogs

Rabies is a viral disease that may infect any warm-blooded animal. Regardless of the initial site of virus introduction into the animal, the virus eventually invades the central nervous system. With rare exception, it is a fatal disease.

Contributing Factors

For domestic pets, such as cats and dogs, the greatest risk factor for contracting rabies comes from failing to receive proper rabies immunization and then coming in contact with a rabid animal.

Prevalence

Rabies is found on a worldwide basis. Even though all warm-blooded animals can become infected, some species are more susceptible than others. Skunks, raccoons, and bats are considered most susceptible, with cats, dogs, horses, and humans intermediate in susceptibility. Opossums and birds are relatively more resistant to the virus compared to other species. It is important to note that while wildlife represents the major reservoir of rabies in nature, cats and dogs are the principal source for rabies transmission to humans.

Causes/Transmission

The usual source of rabies infection is the bite of an animal infected with the virus. The virus is found in high concentrations within saliva. Once inoculated into the victim, the virus travels up nerve endings to the central nervous system. There have been a few rare cases of humans contracting rabies by inhaling aerosolized virus in bat caves.

Clinical Signs

Rabies is classically divided into three distinct stages: prodromal, furious, and paralytic. The prodromal stage lasts 2-3 days and is characterized by major behavior changes. Normally friendly domestic animals, such as dogs and cats, become aggressive. In contrast, wildlife will lose fear of humans. Also, wild animals that are normally seen only at night (nocturnal species) may be seen during the day. During the furious stage, dogs will typically become very vicious and make lunge at any moving object. They may have muscle tremors and incoordination. During the final stage, the paralytic stage, paralysis sets in and death follows. Most dogs die from rabies within 2-7 days after they begin to show signs of the disease.

Diagnosis

Rabies can be suspected based on clinical signs, but it can only be confirmed by microscopic examination of brain tissue. For this reason, animals suspected of having rabies are usually autopsied with a sample of brain tissue submitted to a pathologist. Although this can be upsetting for owners, remember that there is no room for error with rabies. If a human has been exposed and does not receive treatment, death is inevitable.

Whenever an animal without proper rabies vaccination bites a human, the animal is usually required to be confined and observed by a veterinarian for at least a 10-day period.

Therapy

Treatment is not recommended for animals with rabies because of the potential risk for human exposure to the virus.

Prognosis

Rabies is always fatal in warm-blooded animals that develop the disease.

Transmission to Humans

Rabies can be transmitted to a human through the bite of an infected animal or inoculation of rabies-infected saliva into an open wound. Whenever a human is bitten by an animal, a physician *should always be promptly contacted*. In some areas, physicians are required to contact local animal control officials so that the vaccination status of the animal can be verified and an appropriate quarantine initiated.

Prevention

Because rabies-immunized pets represent an important buffer between humans and the rabies reservoir found in wildlife, the importance of regular rabies boosters for pets cannot be overemphasized.

The first rabies vaccine is usually given at 12-16 weeks of age, followed by regular boosters. Depending upon state regulations, the boosters are given every year or every three years thereafter. These vaccines are considered safe and effective.