



Bellwether Magazine

Volume 1
Number 7 *Spring 1983*

Article 3

4-1-1983

Rabies on the Rise

RABIES

on the Rise

The number of reported rabies cases in Pennsylvania, Maryland and Virginia has risen dramatically during the last two years. In 1981, Virginia reported 102 cases of raccoon rabies as compared to seven cases in 1980. By November there were seventy confirmed cases of rabies in Pennsylvania in 1982. These included not only wildlife, but also four dogs and one cow.

"The risk to humans has been increased by the spillover of rabies into domestic animals," said Dr. Lawrence T. Glickman, Chief, Section of Epidemiology, School of Veterinary Medicine, University of Pennsylvania. "In November 1982 a dairy cow from Lancaster County was admitted to the Large Animal Hospital at New Bolton Center. The animal had to be euthanized after four days and it was found to have rabies. Veterinarians, veterinary and laboratory technicians, students and nurses, had to undergo rabies post-exposure prophylaxis. This included thirty-two people in all at New Bolton Center and six additional people who had come into contact with the cow on the farm and during transport to New Bolton Center. The entire herd from which the cow originated was placed under a ninety-day quarantine."

This incident illustrates the need for veterinarians to suspect the possibility of rabies in animals showing neurologic signs or abnormal behavior. Dr. Glickman recommends that veterinarians, veterinary personnel, and wildlife personnel receive a three-dose pre-exposure rabies prophylaxis regimen. "A new killed vaccine is available," he explained. "Unlike the earlier vaccine which was developed from duck embryos and which could have severe side effects, the new vaccine is produced on human diploid cells, and was developed by the Merieux Institute of Miami, Florida, and side effects are uncommon." The vaccine is usually given as 1.0ml intramuscularly, though studies have shown that it is just as effective when given in smaller doses (0.1ml) intradermally for prophylaxis. Dr. Glickman explained that the latter course is followed here at the school where vaccination is offered to all students. "The vaccine, once reconstituted, has to be used within three hours," he said. "It is not packaged for intradermal injection; therefore, when using this technique, one needs a group of people to take advantage of the savings. A 1.0ml intramuscular dose costs about \$45 whereas 0.1ml dose costs about \$6 if you get seven or eight people together. This is why we use this technique; it makes the vaccine affordable to our students." Dr. Glickman did point out that the intradermal technique has not yet been approved by the FDA. However, the Immunization Practices Committee has accepted the ID regimen for pre-exposure vaccinations. All students who want to work with the Wildlife Service at the school must be vaccinated against rabies.



He also added that pet owners should be advised to have their dogs and cats vaccinated against rabies. "They provide a buffer between wildlife and the human population," he said. "They are more likely to come into contact with rabid wildlife and if they are not vaccinated, they can transmit the virus to people."



He also added that pet owners should be advised to have their dogs and cats vaccinated against rabies. "They provide a buffer between wildlife and the human population," he said. "They are more likely to come into contact with rabid wildlife and if they are not vaccinated, they can transmit the virus to people." He added that in 1981, for the first time, the number of reported rabies cases in cats outnumbered those in dogs. Rabies vaccines for cats and dogs are readily available and some offer protection for three years. "But one must realize that protection declines throughout this period," Dr. Glickman said. "Dogs and cats that stay indoors and are not exposed to wildlife are adequately protected with vaccinations every three years if a triannual vaccine is used. Animals that run free and hunting dogs used in the field, however, should be vaccinated every year to provide maximum protection against the disease regardless of the vaccine used." He also explained that puppies vaccinated prior to four months of age need a booster vaccination one year later. "Also, there really should be a requirement that all dogs and cats be licensed and that prior to receiving the license a proof of rabies vaccination is mandatory," he stated.

There is no vaccine approved for use in wildlife and Dr. Glickman recommends that people not purchase or take in wild animals as pets. "This can be quite dangerous because in some animals the incubation period for rabies is long, particularly in skunks. It is best to leave wildlife alone. If one must handle wildlife, it should be done with great care."

Rabies is invariably a fatal disease and if a person has been bitten or has come in contact with an animal suspected of having rabies, it is imperative that medical help be sought at once. "The virus has a varying incubation time; it may take as little as three weeks to manifest itself, or as long as six to nine months," he said. "Each year about 30,000 persons in the United States receive post-exposure treatment for possible rabies exposure. This is quite expensive; it may cost between \$500 to \$700 to treat one individual."

One European country is experimenting with an oral vaccine for foxes which are their major reservoir for rabies. No large-scale program is being tried for wildlife here in the United States.

The current epidemic of raccoon rabies which began in the 1970s in Florida, will probably continue its march up the Eastern Seaboard. The only way of preventing the disease from reaching the human population is to have all cats and dogs vaccinated regularly and to avoid contact with wildlife. Veterinarians and other persons coming into contact with animals should consider pre-exposure vaccinations. Exposure to a rabid animal can affect quite a number of people as shown by the dairy cow at New Bolton Center and can be devastating psychologically. In the case of rabies, prevention through vaccination is a lot wiser and cheaper than post-exposure treatment.