Acapromazine for or in Seizures?

Some phenothiazines reportedly reduce the seizure threshold and induce electroencephalography (EEG) discharge patterns like those seen in epilepsy. Acepromazine has, therefore, generally been avoided in dogs with histories of seizures, although the effects of acepromazine in these animals have not been well documented. This retrospective study evaluated the response of dogs with seizures to acepromazine. Medical records revealed 36 dogs with histories of seizures that had been given acepromazine for tranquilization during hospital stays and 11 dogs in which acepromazine was given to decrease seizure activity. In the 36 dogs given acepromazine for tranquilization, no seizures were seen within 16 hours of administering the drug. Eight of the 10 dogs that were given acepromazine to decrease seizure activity showed abatement of seizures for 1.5 to 8 hours ($n = 6$) or their seizures did not recur ($n = 2$). One dog had a reduction in excitement-induced seizure frequency for a period of 2 months. While no evidence indicated that acepromazine increased the risk for seizures in dogs with seizure histories, several factors confounded the evaluation of drug effects in this study, including variation in the cause of disease and drug dosage; concurrent administration of sedatives, anesthetics, or anticonvulsant medications; and the retrospective nature of the study. A prospective study is probably necessary to determine the true incidence of seizures after acepromazine administration in dogs with seizure histories and in the general canine population.

**COMMENTARY:** This is a useful article that discusses pertinent evidence on the effects of acepromazine maleate on seizure threshold. Many veterinarians still use acepromazine in patients with seizure disorders, and according to this study, some have even used it to directly treat seizures. Unfortunately, the evidence of this study is not much stronger than the original evidence that made us wary of using acepromazine in patients that have seizure disorders in the first place. The article is worth reading to know the situations in which acepromazine was used. From the information presented, selective use of acepromazine in certain patients is reasonable.—**Chris Wong, DVM**


The Quest for HIV & FIV Vaccines

Feline immunodeficiency virus (FIV) is a lentivirus that causes an infectious disease in domestic cats similar to that of human immunodeficiency virus (HIV) in people. Although FIV is eventually fatal, an FIV-positive cat can live for many years without signs of illness. Many vaccines have been tested against FIV and include inactivated virus and infected cell vaccines, DNA and virus-vectored vaccines, subunit and peptide vaccines, and vaccines using bacterial vectors. The first licensed vaccine against FIV was released in 2002. This review outlines some of the difficulties encountered in developing this vaccine. Despite its success, little knowledge has been translated into developing a vaccine for HIV. The animal models, such as simian immunodeficiency virus and FIV, have shown that a lentivirus vaccine can be a success, but the model it provides continues to be largely ignored with regard to HIV.

One of the problems with developing a vaccine against FIV is that at least 5 subtypes or clades (A–E) exist. Despite the genetic differences between viruses from different clades, immune responses elicited in one clade are often able to target viruses from other clades. An animal can be vaccinated with antigen derived from one clade and challenged with virus derived from another clade. Such cross-protection gives hope for development of HIV vaccines. Because recovery from natural infection with FIV or HIV does not occur, it is difficult to predict which immune responses might be desirable in a protective vaccine. Without defined correlates of protection for lentivirus vaccines, viral challenge provides the only realistic method for measurement of vaccine efficacy. However, deciding what constitutes the most appropriate challenge is not straightforward. The FIV model is developed enough to likely be able to answer some remaining questions regarding HIV vaccination, such as the reasons behind enhancement caused by some vaccines and the difficulties in protecting against challenge with some virus strains but not others.

**COMMENTARY:** Despite its low incidence in the United States, FIV is a dreaded disease that is always eventually fatal. The vaccine is a huge breakthrough in the scientific world but still has some problems. The absence of tests that distinguish cats vaccinated for FIV from infected cats, along with questions regarding the vaccine’s ability to induce protection against all the subtypes and strains of FIV, makes the decision whether to recommend its use difficult. The pros and cons of the vaccine should be discussed in detail with the client. This review provides insight into the problems surrounding the vaccine and why a vaccine for HIV is still not on the near horizon.—**Valerie MacDonald Dickinson, DVM, Diplomate ACVIM (Oncology)**