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A Study of Adverse Vaccine Reactions in Animals

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Commentary

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ABOUT THE STUDY

Studies have shown that both dogs and cats might experience adverse effects after receiving immunizations. Guidelines that change the recommended frequency and methods/locations for both the vaccination of dogs and cats have been updated due to concerns about adverse effects. The question of vaccinations has been contentious in recent years among vets and pet owners. Reducing the frequency of pet vaccinations is being advocated for a variety of reasons including specific unpleasant reactions and overall effects on long-term health and immunity. The World Small Animal Veterinary Association's (WSAVA) 2010 pet vaccination recommendations suggest administering vaccines less frequently and suggesting fewer vaccines that should be considered essential for pets. The 3-year booster or re-vaccination recommendations, however, are either random or influenced by vaccine manufacturers according to a lengthy analysis of these recommendations written in an open letter to WSAVA by an Australian pet owner and long-time consumer advocate. Despite the widespread practice of "boosting" vaccinations every one to three years, she cites the scientific findings of WSAVA and other top researchers that show that, similar to humans, the Duration of Immunity (DOI) for pets immunised with MLV (Modified Live Viruses) early in life is many years, if not the entirety of adulthood.

The WSAVA guidelines do make an argument against over vaccination and in favour of "the development and use of simple in-practice testing for determination of seroconversion (antibody) following vaccination" in the executive summary section. They add as well that "Vaccinations should not be provided repeatedly. After the 12-month booster shot given after the puppy/kitten series, core vaccinations should only be administered every three years because the Duration of Immunity (DOI) lasts for a long period and may last the entire life of the animal." The criticism in the open letter focuses on the less nuanced summation of these recommendations in the Tables

provided for vaccine recommendations which may suggest that booster shots should be administered every three years.

Types of adverse reactions

Cutaneous vasculitis and ischemic dermatopathy: This issue may appear close to, over or near the site of vaccination around the vaccine material that was injected or it may manifest as a more broad reaction. It is a rare and frequently misinterpreted reaction to the canine rabies vaccine. Ulcers, scabs, darkening of the skin, lumps at the injection site and scarring accompanying hair loss are other symptoms. In addition to the injection site, lesions most frequently appear on the cheeks, elbows, hocks, footpad centres and ear flaps (pinnae). Scarring could last a lifetime. Dogs rarely appear ill but they occasionally get a fever. After receiving a vaccination, symptoms may appear right away or may take months to become noticeable. Pentoxyfylline, a medication that is helpful in treating small artery vasculitis or tacrolimus, an ointment that can help reduce the inflammation in the affected areas, may be used to treat dogs with active lesion development and/or widespread illness. To the extent that it is safe and lawful to do so, owners and veterinarians of dogs who have experienced this type of reaction should carefully review the immunisation regimen. Vaccines from the same manufacturer should be avoided, at the very least. It is also advised that subsequent immunizations be given in the back leg as far down on the leg as feasible and that they be injected in the muscle rather than under the skin.

Erythema and anaphylaxis: Fortunately, dogs seldom experience serious systemic vaccination allergic reactions. However, when it does happen, anaphylaxis is a serious medical emergency. Dogs more frequently have urticaria or hives shortly after having a vaccination. When this happens, a veterinarian will typically successfully treat the reaction with antihistamines and corticosteroids. The vaccine component thought to have caused the reaction must be taken into account when modifying future vaccination programmes.

Sarcoma/Tumor: A Vaccine-Associated Carcinoma (VAS) is a malignant tumour that is typically found in cats but can also occur in dogs and ferrets on occasion. The type, frequency and places of recommended immunisation protocols have changed as a result of VAS concerns. Owners are encouraged to keep an eye out for tumours at injection sites and get in touch with their veterinarian right away if one appears.