

Canine Vaccination and Risk--What Do We Know?

George Moore, DVM,PhD; Purdue University

The objective of this study was to use the electronic database of a large general veterinary practice to estimate the incidence rate and potential risk factors for vaccine-associated adverse events (VAAE) occurring within 3 days of vaccination in dogs.

The medical records of Banfield, The Pet Hospital, were searched for VAAE diagnosed and non specific vaccine reaction, allergic reaction, urticaria, or anaphylaxis within three days of vaccine administration in pet dogs. The administered vaccines included bordetella, borrelia, coronavirus, giardia, rabies, parvovirus, and/or a multivalent distemper-adenovirus-parinfluenza-parvovirus-letptospirosis (4 serovars) vaccine.

Between January 1, 2002 and December 31, 2003 there were 4678 (0.38%)VAAE diagnosed in 1,225,159 dogs vaccinated. The rate of VAAE per 10,000 dogs at-risk significantly decreased as patient weight increased. Dogs weighing >10.0 to 45.0kg (>22.0 to 99.0lb) had approximately half the risk of an adverse event compared to dogs weighting 10 kg (22.0 lb) or less. There were 42 breeds with >5000 dogs vaccinated. Dachshund, Pug, Boston Terrier, Miniature Pinscher, and Chihuahua breeds experienced the highest rates of VAAE. Compared with dogs 2 to 9 months of age, VAAE rates were significantly increased in dogs at one year of age and were greatest in dogs approximately two years old. Adverse event risk was also significantly increased in neutered compared to sexually intact dogs. The VAAE rate significantly increased with each additional vaccine administered at the same office visit. The predominant clinical signs were facial or periorbital edema, wheals/urticaria, generalized puritis or vomiting.

(Abstract limited--due to pending publication in the Journal of the American Veterinary Medical Association.)