Vaccinations or Antibody Titers: Which to Use?

Canine parvovirus type 2 (CPV-2), canine distemper (CDV), and canine adenovirus type 1 (CAV-1) are highly contagious with high mortality. Prevention via vaccination is the primary method of control because there is no specific treatment. In this field study, antibody titers from 1031 dogs (2–18 years of age) were measured for CPV-2 via a hemagglutination inhibition test, CDV via immunoperoxidase test, and CAV-1 via neutralization test. All dogs received a standard vaccination protocol and serum was collected 1 year after the last vaccination. Antibody titers were divided into three classifications: protective (≥ CPV-2 1:160, CDV ≥1:640, CAV-1 ≥1:160), borderline (≤ CPV-2 1:40, CDV 1:160, CAV-1 1:40), and susceptible/low (≤ CPV-2 ≤1:20, CDV ≤1:80, CAV-1 ≤1:20). For CPV-2, the percentage of dogs having a protective, borderline, or susceptible titer was 86%, 9%, and 5%, respectively; for CDV, the percentage of dogs was 72%, 18%, and 10%, respectively; and for CAV-1, the percentage of dogs was 71%, 20%, and 9%, respectively. Antibody titer retention was higher in young dogs for CPV-2 and higher in older dogs for CDV, but for CAV-1 there was no association with respect to age.

Commentary: With publication of the 2011 AAHA Canine Vaccination Guidelines,1 discussion on using antibody titers in lieu of booster vaccination is likely to continue. Protective titers, regardless of the level, will provide the patient protection when challenged. Breaking titers down into protective and borderline classifications is ineffective, and patients with titers below protective levels should be considered susceptible to infection. These patients should be revaccinated with the owner’s informed consent. An important step to remember is that revaccinated dogs should have titers reevaluated ≥2 weeks later (our clinic reevaluates after 4 weeks). If the titer remains low, then 1 of 3 possible scenarios exists for vaccine failure: maternal antibodies are blocking the effect of the vaccine; the vaccine failed (eg, not stored correctly); or the dog is a poor responder or nonresponder, is possibly susceptible to the disease being evaluated by titer, and is likely incapable of producing a protective antibody response regardless of how much vaccine is given.—Sandra Sawchuk, DVM, MS


Treating Canine Lipoma

Lipoma, a common tumor type affecting older dogs, is often left untreated until size causes functional impairment. Liposuction, which is used to treat lipomas in humans, offers a smaller incision, decreased anesthetic time, and decreased postoperative pain as compared with conventional surgery, as well as allows multiple-lipoma treatment during a single procedure. In this retrospective study, 20 dogs with 76 lipomas underwent liposuction. Lipomas were classified as simple (unilobular, encapsulated, and <15 cm in diameter; n = 68), giant (uni- or multilobular and ≥15 cm in diameter; n = 6), and infiltrative (intersecting or invading tissue planes; n = 2). Case records were reviewed for number and size of lipomas, response to treatment, short-term complication rate, and long-term outcome.

Results showed that liposuction was effective in treating 73 of 76 lipomas (96%). Simple lipomas responded best, having the greatest ease of removal and fewest complications. Giant lipomas proved harder to treat and were more susceptible to postoperative seroma and hematoma formation. Long-term recurrence was relatively common, irrespective of size, with 10 of 36 lipomas (28%) regrowing at 9 to 36 months. The authors concluded that liposuction is an effective, less-invasive way of reducing the size of lipomas in dogs, especially those measuring <15 cm. It is not recommended for lipomas that are large (≥15 cm), infiltrative, or located in the inguinal region. Eventual regrowth is fairly common and should be considered when electing liposuction over surgical excision. Prospective studies in dogs are needed to determine whether liposuction yields quicker, less painful short-term recovery than conventional treatment.

Commentary: Most canine patients with lipomas are geriatric (12–13 years of age) and have multiple masses (3 or more). Removal by conventional surgery requires multiple large incisions—approximately the size of the lipoma—and, therefore, a relatively long surgery/anesthesia time. This report suggests that a minimally invasive procedure results in a high success rate for removing lipomas <15 cm in diameter. No specialized instrumentation is necessary. Many practices already have conventional suction devices capable of creating -720 mm Hg. In addition, the procedure is not technically demanding and results are predictably successful for most patients. Most clients are familiar with the term liposuction so the procedure may be easier for them to understand. As long as the owner is advised of the slightly higher recurrence rate, this is a technique that should be considered when evaluating patients for lipoma removal.—Howard B. Seim III, DVM, Diplomate ACVS