Vaccination and Coccidia
Unexpected Consequences

By Ronna Kabler DVM
It was a cool Saturday in February when Helen and Robert, overjoyed with anticipation, headed to New Hampshire to pick up their new eight week old Bernese Mountain Dog puppy. Helen had been looking forward to this day since she first found out about this litter of nine healthy and boisterous Berners. Helen had already scheduled an appointment with me for the puppy’s first check.

It was love at first sight when Banyan was placed in Helen’s arms. She marveled at this huge ball of fluff with sparkling, mischievous eyes. The only little cloud overshadowing this happy scene was that the state required all of the puppies receive their first set of vaccines before they could leave the breeder. Their veterinarian had come and given all the pups their first DA2PP (distemper, adenovirus, parvovirus and parainfluenza) vaccination the day before. We would have preferred to postpone the first vaccination until Banyan was at least 12 weeks of age. Helen and Robert packed up Banyan and headed back to Massachusetts, ready to embrace the joys of having a puppy in the family.

A Close Call

The first indicator that all was not right was when a very worried Helen called me the next day and said that Banyan was not eating well; he was lethargic and had soft stools. At night, he started vomiting up foam and suffered bloody, mucousy diarrhea. Helen stayed up all night with the sick puppy, lying next to him on the floor.

The next day, Helen rushed Banyan to the clinic to see me. He was practically non-responsive, dehydrated and weak with a low grade fever and a painful tummy. What could be wrong? I gave him a homeopathic remedy and some subcutaneous fluids. Due to the severity of his condition I advised that he go straight to the emergency clinic to receive IV fluids and other supportive care.

What was Banyan’s mysterious illness? He had come from a highly recommended breeder with an impeccable history of producing healthy puppies. They were kept away from any unknown dog traffic to decrease the chance of exposure to infectious diseases. They were on a reasonably good diet and dewormed regularly. Multiple fecal analyses on the mother and puppies were consistently negative for intestinal parasites. The only issue was that the mother had trouble producing enough milk for her offspring and they had to be supplemented.

Could there have been a problem with the vaccination given on Friday? Could this puppy have caught parvovirus or was it caused by the vaccine? Could this be a case of chronic disease being activated from the vaccine or stress?

The next day I finally heard from the attending veterinarian at the emergency hospital. Banyan was stable but he was negative for parvo. To my surprise, the diagnosis was coccidiosis.

Banyan’s recovery was steady and uneventful after two days of fluids and standard medical treatment.

How could this big, healthy puppy raised in excellent conditions be this sick from coccidia? It made no sense.

Puppies and Parasites

Coccidia are one celled protozoal parasites that live in the intestinal tract of most species of animals. The parasites are host specific - that is they only thrive and reproduce in their intended host species.

Isospora is one of the most common types of coccidia found in dogs.

Coccidia are considered opportunistic parasites. They don’t usually cause much more than mild diarrhea in animals who are clean, healthy and well nourished. However, young puppies kept in an unhygienic environment or those who are weakened or malnourished can become very ill and even die from the coccidial parasite proliferating in their intestinal tract.

Coccidia are shed in the feces and thrive in the soil where they can be ingested by other dogs. Symptoms of affected puppies include lethargy, low grade fever, bloody and or mucousy diarrhea, vomiting, dehydration and even death. The symptoms in these cases can mimic parvo.

Coccidia are ubiquitous and even if a puppy or dog is positive for them on a fecal exam, it doesn’t mean he will become ill. Traditionally, any dog tested as positive for coccidia is treated with a medication that inhibits the reproduction of the parasite, called a coccidiostat.

There are also new medications available that actually kill the coccidia directly.

A more holistic approach to treatment would involve feeding a fresh bland diet, administering probiotics and other supplements that are supportive of the gastrointestinal tract and immune system and, if needed, a well indicated homeopathic remedy.

In the case of Banyan, he was raised in clean conditions and fed a fairly high quality diet. I needed to find out why Banyan became so sick.

I called the breeder to check on the status of the rest of the litter. She informed me that all nine puppies had become ill with varying degrees of gastrointestinal symptoms. Two had mild diarrhea only, but the rest were sick with the full spectrum of lethargy, low grade fever, inappetence, vomiting and bloody diarrhea. A total of four puppies needed to be hospitalized, including two the breeder kept for herself. All of the puppies tested negative for parvo and giardia and were positive for coccidia. Happily, all of the puppies recovered quickly with supportive care and conventional medication.

Unraveling the Mystery

It was puzzling why all nine puppies became ill. All had been fine before their vaccination and mother and babies were previously negative for intestinal parasites.

The first thought that came to mind was that there was either a problem with the vaccine or the vaccine had an immunosuppressive effect on the puppies. This, combined with the stress of going to their forever homes within 24 hours of vaccination could possibly weaken the puppies enough so they became ill. This didn’t really seem feasible because two of the sickest puppies were not sent to a new home.

Then what was it about these puppies that made them so susceptible? Is it possible that their mother didn’t provide enough maternal antibodies to her babies?

Next, I contacted the veterinarian who gave the puppies their vaccinations. He told me there were no other problems with the batch of vaccine used. I asked him if he had filed a report to the pharmaceutical company that produced the vaccine and he had done so. I also put in a call to the pharmaceutical company to let them know I was pursuing this incident.

Then I filed an adverse effect report with the USDA.

The findings in this case were pointing to immunosuppression as the inciting factor in causing illness in this litter. I looked for documentation and research on the immunosuppressive effects of vaccination and I reached out to my colleagues and two top researchers in vaccinology and immunology, Drs Ron Schultz and Jean Dodds. Both agreed that the DA2PP vaccination likely caused suppression of the immune system, making these puppies susceptible to suffering illness from coccidia.
Renowned veterinary vaccine researcher Dr Ronald Schultz co-wrote a research paper back in 1989 documenting the immunosuppressive effects of polyvalent or combination vaccines. This article was published in the Canadian Journal of Veterinary Research. (Phillips et al, Effects of Vaccines on the Canine Immune System. 1989)

The results of this study clearly showed that the combination of distemper and adenovirus vaccine suppresses the immune system by affecting lymphocytes - cells that are integral to the function of the immune system. The conclusion of the researchers was: “It is possible that vaccine induced immunosuppression may potentiate the severity of a concurrent disease or allow inapparent infection to become clinically apparent.”

As I discussed this with Dr. Schultz, he told me how every DA2P or DAPP will cause immunosuppression starting three days post vaccination and lasting for up to seven days, especially when the pup has low levels of maternal antibodies against distemper and adenovirus. He explained that if there are insufficient maternal antibodies to block the invasion and replication of live vaccine virus, then the animal is going to be more susceptible. But it also means that there’s a higher chance that the vaccine will work and the animal will develop a lasting immune response. The parvovirus component of the multiple vaccine also contributes and can worsen the effects.

Though not published, Dr Schultz has documented cases that clearly demonstrate these immunosuppressive effects: dogs with local demodex developing generalized demodex, puppies contracting kennel cough, and mild puppy pyoderma (skin infection) turned into severe pyoderma. He had no doubt that suppression from the vaccine could make coccidia more severe in this litter of Berners. He told me, “Even though the immunosuppressive effects of these vaccines may be short lived and transient, they can have profound effects on the health of susceptible individuals.”

After gathering this information, I felt the pharmaceutical company should be accountable for the illness their vaccine caused and that the owners should be compensated for their veterinary expenses. After I contacted them, the company representative denied the vaccine could have caused immunosuppression, in spite of our many discussions and the results of the studies from Dr Schultz.

Then I found out that Journey, one of the sickest puppies and one that the breeder had kept for herself, died of bloat at 13 weeks of age. I was certain it had to be related to her serious illness and immunosuppression. I became more determined that the company should do the right thing. With the help of Dr Schultz and the veterinarian who administered the vaccines, we finally convinced the company to pay for the puppies’ medical expenses. Sadly, no money in the world would make up for Journey’s untimely death.

Today, a little over a year later, all eight surviving dogs are doing well. Banyan was never vaccinated against DA2PP again and his titer test done after 16 weeks of age showed high antibody titers against distemper and parvo virus from the one vaccine that nearly killed him at eight weeks of age.

Vaccination is not always an innocuous procedure. As guardians of our dogs, we must step forward and make sure that every adverse event from any vaccine or drug is reported to the proper agencies. Unfortunately, most of these occurrences aren’t reported at all and the real frequency of these adverse events is vastly underestimated. The first step is to recognize that vaccination can be a cause of illness and the second step is to make sure it gets reported when this happens.

To report adverse events from vaccines in the US, visit www.aphis.usda.gov/animal_health/vet_biologics/vb_adverse_event.shtml

This article is dedicated to Journey. Special thanks to Patricia Jordan, Ron Schultz and Jean Dodds

Ronna Kabler graduated from Tufts University School of Veterinary Medicine. Dr Kabler completed Dr Pitcairn’s Advanced Course in Veterinary Homeopathy and is currently studying to obtain her certification in Veterinary Homeopathy. Dr Kabler started Waggin’ Tails Veterinary Services, a mobile practice that serves many clients in Massachusetts.