

Vaccination failure!

There is a potential for maternally derived antibodies (MDA) to interfere with a puppy's response to core vaccination.

Elizabeth Hart

According to an article by Mark Kelman, (a representative of Virbac Animal Health and a member of the Australian Small Animal Veterinary Association's (ASAVA) Executive Committee), (published in the industry magazine *The Veterinarian* in August last year), an alarming amount of alleged parvovirus cases being reported to the Virbac Disease WatchDog, an industry-funded companion animal disease surveillance database endorsed by the Australian Veterinary Association (AVA), have been 'vaccinated' animals.

The raw data indicates that *"animals that have received at least one vaccination represent 28 per cent of puppies infected, and 11 per cent of adults infected."* These alarming percentages indicate approximately 197 vaccinated puppies and 11 vaccinated adult dogs were reported to be infected with parvovirus (subject to verification) in the period between January 2010 and the time of writing the article, which was published in August 2010.

Dr Kelman notes that this information had been collected from only an estimated 20 per cent of veterinary clinics across Australia. So, considering that, according to Dr Kelman's calculation at that time, 80 per cent of veterinary clinics had not reported to the Virbac Disease WatchDog, numbers of vaccinated puppies and adult dogs being diagnosed with parvovirus, or other possible adverse experience in relation to vaccination, could be considerably higher across Australia, possibly many hundreds of vaccinated puppies/dogs.

In late January 2011, I raised concerns about this matter with both Dr Kelman and Dr Allen Bryce, Veterinary Medicines Program Manager of the Australian Pesticides and Veterinary Medicines Authority (APVMA), but their response was most unsatisfactory.

I also tried to ascertain whether these cases of apparent vaccine failure were reported to the APVMA's Adverse Experience Reporting Program, but both Dr Kelman and the APVMA refused to provide a transparent answer to this question.

If these cases of parvovirus in vaccinated animals are confirmed, this indicates a failure of the vaccine. The World Small Animal Veterinary Association's

(WSAVA) Guidelines for the Vaccination of Dogs and Cats note that vaccines may fail for various reasons, e.g. the vaccine may be poorly immunogenic, which may reflect a range of factors from the stage of vaccine manufacture to administration to the animal. Another reason for failure may be that the animal is a poor responder, i.e. its immune system intrinsically fails to recognize the vaccinal antigens.

However, the WSAVA 2010 guidelines suggest **the most common reason for vaccination failure is maternally derived antibodies (MDA) neutralizing the vaccine virus**, and note that *"when the last vaccine dose is given at 14-16 weeks of age, MDA should have decreased to a low level, and active immunization will succeed in most puppies (>98%)"*.

However, many core vaccine product labels generally recommend an early finish at 10 or 12 weeks, advice which conflicts with the more recent advice of the WSAVA 2010 guidelines. The advice on the vaccine product labels is particularly contentious given that trials for core vaccines are conducted with puppies which are seronegative, i.e. **do not have MDA**, so how can the response of these seronegative puppies to vaccination be comparable with that of puppies in the general community, whose dams are likely to have been vaccinated (or exposed to parvovirus naturally), and therefore have MDA which could interfere with vaccination?

Due to the interference of MDA, it is possible that puppies being vaccinated in accordance with the earlier finish of the manufacturers' vaccine product label recommendations may be unprotected and pet owners are not being warned about this.

The possibility of MDA interference has been known for years. For example, this matter was raised in letters to the British Veterinary Association's journal *The Veterinary Record* in 2006, with one correspondent, Hal Thompson, noting: *"Maternal antibody to parvovirus is known to last beyond 12 weeks of age in puppies and kittens. Low titres of maternal antibody (≤ 32) can be breached by modified live virus vaccines, but such levels can also prevent the development of active immunity. I have yet to see any field studies by the members of NOAH (National Office of Animal Health, UK) that justify the claims in the data sheets that their CPV vaccines induce active immunity in an acceptable proportion of 10-week old vaccinated puppies. The Veterinary Products Committee also stays silent on what standards it expects. The profession is therefore blackmailed into blindly following a poor vaccination regimen for fear of disregarding data sheet instructions."*

An article in the Brisbane Courier Mail on 20 March this year, which included comments by a representative of the AVA, referred to an apparent victim of parvovirus, a 'vaccinated' five month old Rottweiler puppy, but the opportunity was not taken to discuss possible non-responders to vaccination, nor to warn pet owners about the confusion regarding the timing of appropriate puppy vaccination and the potential for interference by MDA.

In their paper "Vaccination guidelines: a bridge between official requirements and the daily use of vaccines", veterinary experts Etienne Thiry and Marian Horzinek state that: "*It is of primary importance that the vaccination schedules followed by the veterinary practitioners are the most efficacious ones even if this means that they do not strictly follow the recommendations of the package inserts.*"

Why aren't veterinarians heeding this advice, and ensuring their clients are warned about the contradictions between non-evidence based vaccine product labels and more recent advice in international vaccination guidelines?

Given the warnings in the WSAVA 2010 guidelines that some puppies may not respond to vaccination until 14-16 weeks, **why aren't the AVA and APVMA being more proactive in warning the public about the conflict between the early finish of 10 or 12 weeks generally recommended on MLV core vaccine product labels, and the WSAVA 2010 guidelines recommendation for a later finish, as there is a risk that some puppies that have had the earlier finish recommended by the manufacturer might be unprotected?**

Why isn't the AVA proactively promoting the option of titre testing to the public as an evidence-based means to ascertain if a puppy has responded to core vaccination? The WSAVA 2010 guidelines advise that titre testing "*is presently the only practical way to ensure that a puppy's immune system has recognised the vaccinal antigen.*"

Titre tests have been available in Australia for years, yet very few pet owners I know have been offered the opportunity of a titre test for their pets.

Contrary to misleading advice by some veterinarians, titre tests are not expensive.

I have been quoted around \$90-100 for a lab-based IFA (immunofluorescent antibody) test (via a Sydney vet), and around \$67 for an in-surgery titre test (i.e. Biogal VacciCheck via an Adelaide vet).

The cautious pet owner may not think this a high price to pay as it provides a useful option to verify a vaccination response for their pet.

When a vaccination response has been verified, I can see no benefit in either repeated core vaccination nor titre testing, as the WSAVA 2010 guidelines advise that "*duration of immunity (DOI) is many years and may be up to the lifetime of the pet.*"

Vaccination practice in countries such as Australia, the UK and the US remains a dire shambles, with many pet owners still being misled into inappropriate, and potentially harmful, vaccination practice for their pets.

As many veterinarians are still not properly informing their clients about critical issues regarding vaccination best practice, (a serious professional lapse which should be subject to formal investigation), **I suggest pet owners consider the following key points in the best interests of their pet:**

- the WSAVA 2010 guidelines advise duration of immunity with core vaccines is "many years and may be up to the lifetime of the pet";
- manufacturers' 'annual' and 'triennial' revaccination recommendations on core vaccine product labels are not evidence-based;
- there is a conflict between the early finish of puppy vaccination generally recommended on vaccine product labels (i.e. 10 or 12 weeks), and the later finish recommended in the WSAVA 2010 guidelines (i.e. 14-16 weeks) which means some pets undergoing an early finish may be unprotected due to neutralization of the vaccine virus by maternally derived antibodies (MDA);
- the WSAVA 2010 guidelines advise that titre testing "is presently the only practical way to ensure that a puppy's immune system has recognised the vaccinal antigen". Lab-based and in-surgery titre tests to test the response to core vaccines are available, and have been for years.
- the WSAVA 2010 guidelines advise to "reduce the 'vaccine load' on individual animals in order to minimize the potential for adverse reactions to vaccine products";
- the WSAVA 2010 guidelines advise to "vaccinate each individual less frequently by only giving non-core vaccines that are necessary for that animal";
- request advice on how to properly isolate vulnerable puppies, and on how to transport vulnerable puppies to the veterinary surgery (a possible source of infection) for vaccination, (and titre testing, if desired by the pet owner);
- consider the potential risks of simultaneous vaccination and application of other medical products (e.g. the heartworm injection) for individual animals; and
- demand that veterinarians provide up-to-date advice on vaccination practice based on current scientific knowledge and thinking.

Given the ongoing confusion regarding an appropriate puppy vaccination protocol, it is to be hoped that the WSAVA Vaccination Guidelines Group will provide clear and objective advice on the optimal puppy vaccination and optional titre test confirmation protocol in the very near future.

***This article was based on information contained in a recent open letter of formal complaint about unnecessary vaccination of pets, forwarded to the Australian Veterinary Association, Australasian Veterinary Boards Council, and the Australian Pesticides and Veterinary Medicines Authority on 26 March 2011. The open letter is freely accessible via this internet link: <http://bit.ly/gBuQZY>**

Thanks to Bea Mies for her valuable comments on this article.
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Puppy love needed for older or disabled Victorians

Wesley Mission Victoria needs dog-loving volunteers to join the Pet Pals program, a free service which matches volunteers to older people, or adults with a disability who have a dog, who need help caring for their pet.

Program Manager Kylie Whyte says Pet Pals is a valuable service that addresses a real need in the community.

“For many of our participants, their pet plays a central role in their lives, providing them with a sense of comfort, wellbeing and happiness. By assisting people to care for their beloved pet, Pet Pals volunteers enable older adults and those with a disability to remain independent and to have an increased sense of wellbeing.”

Alternatively, if you think your dog would be a good companion to an older person and are willing to visit someone in their home, why not join the program and spread the puppy love around?

Julia is vision impaired while her partner, Pete, is wheelchair-bound. Both need help caring for their beloved Jack Russell, Rusty. For several months Mardi, an office-worker from Melbourne has been helping out the pair by taking Rusty out for regular walks, once a week.

“My visits to Rusty and her family make me so happy. She just makes me smile, plus it's a great way to keep fit, healthy and to give something back to the community,” she said.

Julia, Rusty's owner, also enjoys the visits, and says Rusty does too. *“She (Rusty) looks forward to her*

walks very much. I strongly recommend the Pet Pal program to any pet owner. It's a great way of giving your pet some exercise and a chance for you to socialise with other people. It is also a chance for the owners to make new friends, as well as the dogs!” Julia said.

If you or your pooch would like to volunteer with Pet Pals, call Wesley on 03 9662 2355.

All dogs are assessed prior to commencement, free of charge.

