

# CANINE HERPES

If you've never experienced this with a litter, thank your lucky stars and count your blessings. It's a heartbreaker and it can happen to you.

After doing all the medical/health checks and certifications and progesterone tests I bred my 'healthy' Corgi girl to a most famous and handsome Corgi boy. Since he was a famous and oft used boy the breeding was A.I. and the partners never came in physical contact with each other except for the 'necessary' bodily fluids to make babies.

My girl had a completely normal and uneventful pregnancy EXCEPT for a very mild case of 'presumed' kennel cough 2 weeks prior to her due date. She acted as if she had post nasal drip and seemed to clear her throat often and had a slight clear nasal discharge but never acted sick or missed a meal. She did not appear to run a temperature either. Many of my friends and the local kennels were seeing the same thing with their dogs. For all intents and purposes, my girl was her normal self although she was slow from being huge with puppies. And she was HUGE with puppies.

My girl began her labor one week later, 7 days prior to her first probable due date. I took her to the vet for a C-section as x-rays had shown that her puppies were huge and corgis are notorious for having whelping problems. I felt a daytime scheduled C-section was far preferable to a middle of the night emergency section. My vet refused to do the section stating that my girl was not in labor, that dogs do not have premature litters, and a section so early would only kill the puppies. I was furious but I could not convince my vet to do the section nor could I find an alternate vet that would do the section. That night my girl whelped out 7 fat, well done babies. 2 were stillborn because their sizes were so large it took forever to whelp them, or so I theorized. It was heart breaking. Corgi babies are not supposed to be 24oz at birth.

The surviving 5 puppies were robust and nursing well. My girl was a model mom. All seemed well. I took the remaining babies back to the 'surprised'

vet for dew claw removal and some "I told you so" and later that day we banded their tails. They were fat and thriving. All was going normally. I had no concerns.

On day 4, all their little banded tails dropped off on schedule. The puppies were calm, nursing and growing fat.

On day 5, one puppy began to cry and stopped nursing. Nothing comforted him. He cried continuously and pitifully for 3 days and died. Nothing the vet or I did helped or made a difference. The vet was very perplexed and had no advice or answers to offer. The very next day another puppy began to cry and stopped nursing. Again, nothing we did comforted him nor saved him. He died 3 days later cradled in my arms. I was devastated. I had NEVER lost a puppy before. The necropsies on the dead puppies showed nothing but I suspect, in hindsight, we didn't know what we were dealing with or looking for. I was heartbroken, devastated, mystified, and going broke with vet bills.

The remaining 3 puppies continued to thrive and have since grown up and are fine. Why did they survive and the others not? No one could tell me. Not even the vet.

So I went online to find what it could possibly have been that had killed my puppies. What I found was that I had experienced a classic case of canine herpes virus infection. The corgi folk were well acquainted with what I had been through but they called it "Fading Puppy Syndrome". Whatever you call it, it's devastating. And let me tell you, those puppies didn't "fade" away...they cried piteously for 3 solid days and nights before succumbing. It was horrible. And the vets I used didn't have a clue. They had 'heard' of CHV and Fading Puppy Syndrome but they had never dealt with it.

Canine herpes virus is found throughout the world in domestic and wild dogs. No one thinks much about this virus as the disease it produces in mature dogs is very mild and not life threatening and easily

overlooked and mistaken for mild kennel cough. And although it infects dogs of all ages it is only serious and life threatening in new born puppies. In urban dog populations the infection rate is estimated to be greater than 40% but like Parvo virus it is likely endemic in the socially active dog populations. In breeding kennels where one dog is infected, it is safe to assume the entire kennel is infected.

This virus is transmitted by direct contact with body secretions while the infected dog is having an outbreak and is shedding the virus. Indirect infection is rare because the virus dies quickly in the environment. A temperature over 104F and most common household disinfectants will kill this virus.

When mature dogs initially come in contact with the virus many develop a mild upper respiratory infection with clear nasal discharge and mild cough. In many dogs there are no signs at all that the dog is sick. Herpes virus also infects the genito-urinary system. The changes are mild and easily missed and include internal vaginal redness, pin point hemorrhages, small blisters inside the vagina or prepuce. It is suspected that all infected mature animals harbor this virus in an inactive state in their nerve ganglia for the rest of their lives. Stress will cause an episode or outbreak and the shedding of virus.

Regarding puppies and newborns, most are infected by their mothers at or shortly after birth. Some develop the infection while in utero. When infection occurs while the puppies are still in the uterus, they may be stillborn, absorbed, or aborted before they reach full term.

When the puppies are infected after they are born the infections occur between one and four weeks of age and the disease is usually 100% fatal because the puppies lack immunity and cannot mount a fever response. Pregnant bitches infected in midterm or later pregnancy often abort weak or stillborn puppies. These mothers remain asymptomatic. Some puppies infected during late gestation appear normal at birth only to die a few days later.

The first sign of infection is the puppy stops nursing and then begins to cry. The puppy cries continuously and appears uncomfortable. Nasal discharge is common but not necessarily present. Newborns and young puppies are not capable of running a fever so the disease progresses unfettered. The puppy's temperature drops to subnormal, the disease progresses rapidly, and the puppy dies in about 3 days.

Herpes virus is only fatal during the first week or two of life. When it occurs later the disease is mild or shows no symptoms at all. Mother dogs pass their immunity to herpes virus infection on to their puppies which is why the litter that follows an infected group of puppies does not develop the disease and die.

There are only a few diseases that might be mistaken for herpes deaths in puppies. They are toxic milk syndrome, septicemias, fatal congenital birth defects, minute virus of canines, canine adenovirus, corona virus and accidents. In herpes virus infection the primary gross lesions are pin point hemorrhages in the kidneys and other body organs and are easily missed during necropsy if you don't suspect herpes virus infection.

Treatment of the disease is unsuccessful. While elevated temperatures kill this virus, treating the puppies with elevated temperatures has not proved all that effective in saving the puppies. Warmth, tube feeding, intravenous or subcutaneous fluids may extend the puppy's life but in the end they usually die anyway. There are reported cases where puppies were saved by giving them blood serum from adult dogs that had recently recovered from the virus, and another report that the antiviral drug, vidarabine, has been effective in some puppies. When puppies survive herpes virus infection they are usually left with nervous system and heart damage.

In kennels, vigorous sanitation and isolation can slow the spread of herpes virus throughout the facility but most likely will not eradicate it. In the United States, vaccines for this disease are not available. It is suggested that when herpes virus is found in a kennel all breeding should stop. This gives the adult population of the kennel time to

develop immunity. In Europe, an inactivated sub-unit vaccine has been available since 2003. When three injections are given to bitches during their heat, early and late pregnancy, puppies survive even in infected kennels.

Some dogs remain carriers of the virus for months or even years. These dogs harbor the virus in their nerve ganglia, tonsils, and salivary glands. Shedding of the virus can be intermittent or continuous and can be triggered by stress.

So in the end, I learned a lot about Fading Puppy Syndrome and Canine Herpes Virus (CHV). I would have preferred to not have had this first hand experience but I doubt anything less would have made me read up on these topics.

My corgi girl is fine to date with no outward signs of infection or ill health. Her surviving puppies appear in fine health as well. Why the remaining 3 puppies survived we will never really know for sure. None have heart or nervous system issues either. Will I breed my girl again? It's been 2 years now and yes, I'm thinking of breeding her again. I'm a glutton for punishment but everything I've read says we will not have a repeat of dieing puppies. What I can't shake is this nagging guilt feeling that I now own a Typhoid Mary dog(s). There are no tests to show who is infected or who is a carrier or when a dog is having an outbreak save for running serum titer tests looking for the rise and fall of antibodies every two weeks. And since I own multiple dogs in a group situation I think it's safe to assume that ALL my dogs are now infected, have immunity, and quite possibly are carriers who can possibly infect other dogs. Dire thoughts for sure, but where did my girl contract this disease? Whose dog did she visit with? Where? When? The stud dog? Some dog at a show? One of my own? A friends dog? I'll never know. But I think I'm safe in assuming that she's not the only herpes virus positive dog out there at the shows, the dog parks, the training classes, the vets waiting room, or the neighborhood. Nearly all dogs that have any dog contact outside their homes have been exposed, and given the way dogs "meet & greet" each other, I'm also sure there are a lot more herpes virus positive dogs shedding virus out there besides mine.

And of my 3 surviving corgi puppies; one was a to

die for lovely plush fluffy (a disqualifying coat fault), one was a black-faced tri-color tragedy on the move with not an ounce of bidability, and one was a delightfully happy dim witted beautiful normal-coated red & white male...with only one testicle. I'm also \$4000 in the hole from start to finish with nothing to "show" for my efforts. As we all know, if you breed long enough you will experience everything. This experience I wish I could have taken a 'pass' on.

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