

CANINE HERPES

By Amanda Camiller

In March 2002 I lost 5 out of 7 puppies in an AI frozen semen litter to canine herpes. It took 6 days, visits to 3 different vets (and a whole lot of money!) before a correct diagnosis was made, by then I was only able to save 2 puppies. There is a lot of conflicting information and a stigma surrounding the canine herpes virus so I decided to share my experiences and what I have learnt about this virus in the hope that it may prevent other breeders from going through the same horrific experience.



Firstly this virus does not come from 'dirty' kennels – it is everywhere! The canine herpes virus is present in approx 85% of all adult domestic dogs with an estimated infection rate of 40-100% in kennels around Europe. If your dog attends shows, trials or any sort of dog club your dog has almost certainly been exposed to the canine herpes virus. Canine Herpes is so prevalent in the canine population that I believe many undiagnosed or unexplained "fading puppy" deaths, still born puppies and re-absorption of the foetus may be caused by this virus. The virus can also be responsible for weak and under sized litters.

Although the virus can be transmitted sexually through

breeding it is more commonly transmitted as an airborne aerosol. Most dogs pick up the virus from another dog sneezing, nasal discharge or from aerosols on human

clothing. Yes Canine Herpes can be literally carried home on your clothes! Dogs that have come into contact with the virus are said to have a positive titer. This means they have developed antibodies to protect against the virus.

The virus inhabits dog's reproductive and upper respiratory tracts and in the adult tends to lie dormant with little or no symptoms. The virus only becomes acute during times of stress, a run down immune system or contact with another dog with acute symptoms shedding heavy virus particles. Acute symptoms in the adult dog can include blister like lesions on the genitals, respiratory distress, extended bouts of sneezing and greenish mucus discharge from the eyes.

Upon becoming infected with the virus the adult dog will develop a fever which is nature's way of combating the virus. The canine herpes virus thrives in cold conditions but does not fair so well in heat. At 38 degrees and above the virus cannot replicate. Outside a host the virus can only survive for a limited amount of time and can be killed by most common household disinfectants.

So while canine herpes is rife in our canine population, many of us are blissfully unaware of its existence, as it rarely causes any problem. However there is one instance when we definitely do not want our dogs to come into contact with the virus for the first time – that is when we have a bitch in whelp.

If the virus is contracted for the first time by a bitch in whelp during the last 3 weeks of pregnancy or the first 3 weeks post whelping this will usually result in infection of the puppies. This happens because the Mother infects the puppies with the virus but she has not yet developed any antibodies to pass onto her puppies to give them any protection. The virus can cross the placenta and infect the puppies while they are still in uterus, or they may become exposed from vaginal secretions during birth or most commonly from air born particles post whelping. Prior to whelping still born puppies and abortion may occur.



pies

The virus has an incubation period of approx 10 days so usually infects a litter when the puppies are under 3 weeks of age. The virus is highly contagious quickly spreads through an entire litter. Puppies normally die of Herpes under 2-3 weeks of age because they are unable to control their temperature thus cannot mount a fever response. Without the heat from a fever to combat the virus canine herpes spreads like wildfire and can kill a whole litter of pups in the space of 24 - 48 hours. Between 2-3 weeks of age puppies develop the ability to control their temperature and are much less likely to fall victim to the virus.

Symptoms in puppies include lack of interest in nursing, chilling, painful crying and tender abdomens. Stools may be yellowish green. Nasal discharge may be present. If you have a puppy die, and suspect Canine Herpes an autopsy of the deceased puppy will easily diagnose canine herpes as there will be visible mottling on the kidneys. If you are not comfortable performing an autopsy yourself, refrigerate the body (don't freeze it), and have your vet autopsy it as soon as possible.

Unfortunately treatment of canine herpes in an infected litter of puppies is limited. An ounce of prevention is worth a ton of cure. By the time the virus is evident and the first puppy has died it may be too late. The best preventative practice is to always keep your litters very warm particularly immediately after delivery and for the first few days afterwards. The first few hours or days after birth is the time the puppies are most likely to contract the virus. Remember this virus thrives in cold or chilled puppies but does not do so well in hot conditions. If you suspect your litter is infected crank up the temperature to 38°C. This temperature creates an artificial fever response and the virus will be unable to replicate. I have found the best way to raise temperature is to use a thermostatically controlled heated whelping box combined with a humidifier in the room to raise the ambient temperature and help prevent dehydration of the puppies. Humidifiers can be purchased at most chemists and heated whelping boxes are advertised in most Canine Control Council magazines in Australia. Antibiotics may be useful for some secondary complications but do not cure the virus.

Anyone who has lost puppies to canine herpes is naturally concerned as to how any future litters from the bitch will be affected. The good news is that any subsequent litters are unlikely to be affected as the bitch will have developed antibodies against the virus which she will pass onto her puppies. However we still need to be careful as when a bitch is in whelp her immune system is lowered. We should try to avoid stress or contact with dogs that have acute symptoms and may be shedding heavy virus particles.

Trying to shelter a bitch from contact with canine herpes prior to breeding is probably a mistake and just about impossible anyway. I try to make sure my girls are social butterflies before they are bred, to ensure they have come into contact with the virus and have developed immunity, and wallflowers when in whelp. When a bitch is in whelp it is safest to assume she has not come into contact with the virus. Do not take your pregnant bitch to shows or anywhere she might come into contact with other dogs particularly in the last 3 weeks of pregnancy and the first 3 weeks post whelping. When caring for your bitch tend to her before any other dogs, always wear clean clothing and do not swap food bowls, toys etc.

A company called Merial launched the first and only vaccine for canine herpes Eurican[®] Herpes 205. The vaccine is given to the bitch after mating and again when in whelp 6-7 weeks later. It has been shown to significantly improve fertility rates and reduce early puppy death.

My bitch and her 2 surviving daughters from the Canine Herpes affected litter have all conceived and whelped litters with no further problems from the virus. However one of the girls died quite young from renal failure which (although not proven) may have been a complication from the canine herpes virus.

Disclaimer:

This information has been gathered by research, consultation with various veterinary surgeons/specialists and my own experience. This information does not in any way replace veterinary advice. If you suspect your litter of puppies has Canine Herpes seek veterinary assistance immediately.