

Von Willebrand's Disease - Miniature Schnauzers

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What is it?

Von Willebrand's disease (vWD) is a genetically carried condition that inhibits the body's ability to clot blood properly. Specifically, it is caused by a reduction in the quantity of von Willebrand factor (vWF) in the blood. This protein is essential for the normal functioning of cells called platelets, which are integral to the clotting process. There are three forms of the disease. Type I is the most common form, and is the one that Miniature Schnauzers can be somewhat prone to. It causes only mild to moderate bleeding, while Types II and III are much rarer, can cause severe bleeding problems, but fortunately for Minis, don't generally occur in the breed.



This disease can obviously be a serious issue if you have a dog with vWD that needs surgery. You must ensure that your veterinarian is aware that your dog has the disease, so if no alternatives to surgery are available, then preparations can be made prior to the procedure to ensure the best outcome.

What are the signs or symptoms?

Some affected dogs may display symptoms including nose bleeds, blood in faeces or urine, excessive bleeding during teething, oestrus and even prolonged haemorrhaging from small wounds. Although affected dogs may sometimes require special attention during surgical procedures, it is also common for them to get through such surgery without complication. The reasons for this are not well understood, however it is known that the level of von Willebrand's factor in an affected dog's blood can vary throughout its lifetime.

In dogs with a predisposition for Type I vWD, stillborn puppies, or those that die shortly after birth may indicate the necessity to investigate the disease status of the parents. These so called 'fading puppies' may be the result of both parents being carriers of the disease.

How is it diagnosed?

Von Willebrand's Disease may be suspected due to the onset of some of the symptoms described above. The age of onset of these symptoms can be quite variable, with the disease commonly not manifesting itself until a dog reaches 3 to 5 years of age. If your veterinarian suspects vWD, then a blood test to determine the level of vWF in the blood may be performed. For some breeds, a DNA test is available to determine whether the defective gene is present, although there is not one currently available for Mini Schnauzers. The ELISA blood test is a reasonable alternative, however it is not as reliable.

The ELISA test is cheaper than the DNA test, but tests for carrier status only, and can be inaccurate if the dog is ill and has received medications in the previous few weeks. It is also affected by vaccinations, pregnancy, lactation, heat (for bitches) and stress. This test measures the amount of von Willebrand's

factor in the blood which, as mentioned earlier, can vary during a dog's life. It is therefore necessary to repeat the test more than once, to give a more accurate diagnosis. The test is also useful for your veterinarian to perform prior to surgery, as it can determine the current levels of vWF in the blood, and therefore indicate likely risk levels for surgery.

How is it treated?

There is no cure for this disease, however in most cases it can be managed well enough not to pose a serious threat to your dog. Mild bleeding episodes at home, such as cuts and scrapes, can generally be controlled by applying pressure to the site of the wound, and more serious bleeding may require veterinary attention. This may involve the use of Intravenous (IV) fluids, clotting factors, and even blood transfusions in extreme cases.

Anything that puts your dog under stress may make the condition worse, so it is useful to be alert to and manage those situations. Also, no dog should be administered drugs not prescribed by your vet. As an example, I know that some people give aspirin to dogs for pain relief, and this is particularly dangerous for a dog with vWD, as it can reduce the ability of the blood to clot even further.

How can I avoid buying a dog with it?

Types II and III are inherited via a recessive gene, meaning that a dog will only be affected if they receive an abnormal gene from each of their parents. Type I however, and the one that Mini Schnauzer owners need to be aware of, is passed on via an incomplete dominance. This means that a puppy only requires one copy of the gene (from either parent) for a chance to be affected. Because the dominance is 'incomplete', the pup may or may not be affected despite possessing the abnormal gene. This all sounds a bit complicated, but basically it means that it will be very difficult for you to make sure you are not purchasing a dog that will express the disease, as the gene can potentially pass silently through a number of generations with no sign of vWD, and then one can suddenly pop up. Also, unfortunately the ELISA blood test is not reliable enough for breeders to be sure of being able to breed the condition out of their genetic lines. However, good breeders should maintain excellent records of the pedigrees of their stock, and so will have a better chance of using that history to detect health problems. A good breeder should be happy to discuss the health of their breeding stock with a potential customer, and whether they have had any experience with von Willebrand's Disease amongst their dogs.