Aleutian Disease Virus (ADV) in Ferrets

Drs. Foster & Smith Educational Staff

aleutian virus:

causes, symptoms, diagnosis & prevention

What is Aleutian Disease?

Aleutian Disease (AD) is a growing concern to ferret owners, breeders, and rescue organizations. Aleutian Disease Virus (ADV) is a parvovirus, but not the same strains as those that affect dogs, cats, or humans. One ferret-specific strain of ADV has been isolated and the disease has also been reported in mink, skunks, and raccoons. Aleutian Disease Virus does not seem to affect any animals outside the Mustelidae family. Currently in the ferret population overall, the incidence of Aleutian Disease is low.

So named for first being isolated from the Aleutian strain of mink and initially reported in the 1940's, ADV was not reported in ferrets until the late 1960's. A hardy virus, it can survive in unfavorable conditions for months.

What are the signs of ADV?

Manifesting as a chronic wasting disease, ADV can have limited effects or can be quite pervasive, involving nearly all organ systems. Any combination of the following may be seen: chronic weight loss, lethargy, cough, hindlimb paralysis or weakness, head tremors, enlarged kidney, liver and/or spleen, and blood abnormalities (dyscrasias). An infected ferret can also be totally asymptomatic.

How is ADV transmitted?

ADV is highly contagious, although infected animals may act as carriers without displaying outward symptoms of the disease. The virus can become airborne, although, it is more commonly spread via casual contact with the saliva, blood, feces, or urine of infected animals. It can also be spread via contact with contaminated surfaces or objects. If people get ADV on their hands or clothes, they can also transmit ADV from one ferret to another. How frequently an infected ferret sheds the virus is unknown at this time. Until further research proves otherwise, it is prudent to assume the virus can be shed at any time.

ADV is currently not considered to be a threat to the overall ferret population. Although isolated outbreaks have occurred in Texas, Michigan, Alabama, and the East Coast, the overall reports of the disease in clinical practice are low.

How is ADV diagnosed?

Currently, diagnosis is based on clinical signs and symptoms, history, and serum antibody tests, such as counterelectrophoresis, ELISA, or a new antibody test developed in 2001. Antibodies to ADV are present in the blood 14 days after initial infection. Post mortem histological (looking at tissue under the microscope) findings are the most definitive method of diagnosis.

Scroll to the end of this article for more ADV testing information.

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How is ADV treated? Is there a cure?

Because so many organ systems may be involved, the treatment for ADV is non-specific, supportive, and depends on how debilitated the ferret has become. This may include administering fluid therapy, tube or syringe feeding, and administering anti-inflammatory drugs. If the ferret is eating on his own, a good nutritional diet recommended for ferrets is very important. (This is, of course, important at all times but especially in the case of illness.) There is currently no "cure" for ADV.

There is currently not a vaccine for AD, and in fact, an effective vaccine may be difficult to develop. When infected with ADV, the body produces huge quantities of antibodies, which is exactly what a vaccine would stimulate the body to do. Unfortunately, the antibodies which are produced do not kill the virus.

How can ADV be prevented?

Prevention is best accomplished by controlling the spread of ADV. This is particularly important in a breeding facility or shelter where other ferrets may be housed. Any suspect ferret, or those having been identified as serum positive, should be isolated from other ferrets. All items that may have come into contact with the infected ferret should be scrupulously cleaned with a 10% bleach solution.

An infected ferret may be a carrier of the virus, but should still be isolated from uninfected ferrets. If you have only one ferret and he has tested positive, there is no reason you should not keep the ferret, as long as your ferret has a healthy and happy quality of life. This is not a disease that can be transmitted to your other pets (unless they are in the Mustelidae family). It is also not a disease that can be transmitted to you.

ADV Testing Information

The two forms of testing you can do at home are CEP (Counterelectrophoresis) testing that uses blood and the Antibody ELISA test that uses saliva. After collecting the specimens, you would mail them to the following addresses:

CEP Testing
Blue Cross Animal Hospital
ATTENTION: Dr. Blau - CEP TESTS
401 North Miller Avenue
Burley, Idaho 83318

The fee is $10 per test, and you can include your payment via check or money order with the specimens you send in for testing. Include your name, address, phone number, and a fax number.

Avecon Diagnostics - ADV Antibody ELISA Test
Avecon Diagnostics, Inc.
501 Grouse Drive
P.O. Box 8
Bath, Pennsylvania 18014

Prices are $12 for the first 10 tests, and $10 for each additional test over 10.

For more information on testing or to find links to further ADV information, visit Ferretadv.com.

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