



CORNELL FELINE RESEARCH LABORATORY

NEWSLETTER

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EUTHANASIA OF FIP ANTIBODY POSITIVE CATS

I have become extremely concerned about the recommendation being made by numerous practitioners throughout the country that healthy FIP antibody positive cats should be euthanized. I believe there is misunderstanding among the veterinary profession concerning exactly what the FIP antibody test measures, what a positive test means, and what one should recommend to the owner of a FIP antibody positive cat. While the FIP antibody test is of value in helping the clinician to arrive at a diagnosis of FIP, the test is not diagnostic. Furthermore recommendations that are utilized for feline leukemia test and eradication in my opinion are not applicable at this stage to FIP.

What is the Test? - The FIP antibody test is an indirect immunofluorescent test to detect the presence of circulating antibodies to the FIP virus. The test does not measure the presence of antigen or virus as do the FeLV slide test and the new Leukassay F Kit test. While the basic principles are the same, there is some variation in the way the test is run between laboratories. Basically the test utilizes either frozen sections of livers from FIP infected cats, or cell cultures infected with transmissible gastroenteritis (TGE) virus as a source of antigen. Since both viruses share a group specific antigen, there is good cross reactivity between the 2 viruses. However, there may be some variation in the FIP titer between these two tests. Some labs start the serum dilution at 1:25 while others start with undiluted serum. There also is variation between labs as to what constitutes a "positive" titer. Some labs call a titer of 1:25 or greater positive, while other labs call 1:5 or greater positive.

Interpretation of a Positive Test - A positive FIP antibody test is not diagnostic of clinical FIP, nor is it an indication that an active FIP infection is currently occurring in that cat. A positive test means only one thing - that the cat has been infected sometime in the past with FIP virus. Any further interpretation of a positive test is merely speculation since scientific data are not available to substantiate any further claims. However, based upon epidemiological information and minimal scientific data, it would appear that the majority of FIP antibody positive cats are shedding the virus, probably from the intestinal tract and/or the respiratory tract. A positive test from a healthy cat in no way implies that this cat will ever develop clinical FIP. In fact the vast majority of healthy serologically positive cats will not develop clinical FIP.

Interpretation of a Positive Titer - In my opinion many practitioners and diagnostic laboratories are placing undue emphasis upon the quantity of the titer from a healthy cat. While there is some justification for considering the titer in a cat that is ill, I seriously question that this is appropriate for the clinically healthy cat. Some cats develop higher antibody titers than others, and the antibody titer varies considerably with time. A cat with a titer of 1:1600 may have a titer of less than 1:5 within a year. Preliminary data from our studies indicate that FIP is an immune mediated disease by a mechanism which is still unknown. The presence of antibody or some other component in the immune mechanism sensitizes a cat so that under appropriate circumstances it may develop the secondary disease, so-called "wet" or "dry" FIP. Our data indicates there is little if any difference in the susceptibility of a sensitized cat with a titer of 1:5 as compared to a titer of 1:1600.

Should FIP Positive Cats be Euthanized? - I apparently have been misquoted in the lay cat literature concerning the recommendation for euthanasia of FIP positive cats. While I have stated that the mortality in clinical FIP approaches 100% and therefore euthanasia would seem to be in order, once a definite diagnosis of clinical FIP has been made, I have never made the statement that a FIP antibody positive cat should be euthanized. Some practitioners are recommending euthanasia of all FIP antibody positive cats, regardless of titer, while others are recommending euthanasia of cats with titers of 1:400 or higher. I believe these recommendations are not justified based upon the information concerning FIP currently available. Because of the extremely high incidence of FIP infection and the many questions about this virus and the disease to which we do not have answers, I cannot recommend at this time a test and eradicate program for FIP.

Incidence of FIP Antibody Positive Cats - The incidence of FIP antibody positive cats varies between 20 and nearly 100% depending upon the population of cats that are tested. Sixty-five percent of the serums submitted to the Diagnostic Laboratory at Cornell from all sources were positive for FIP antibody. The population in general excluding cattery and colony cats have an incidence of 20-30%. From diagnostic laboratory data and from an informal survey conducted with cat breeders it would appear that the incidence in breeding catteries is greater than 80%. The virus obviously is quite contagious and is nearly ubiquitous within the purebred cat populations.

When Should the FIP Test be Run? - While the FIP test is not diagnostic and is currently being over used, I believe there are 3 specific circumstances where the test is indicated. First, the test is of value in aiding the practitioner to make a clinical diagnosis of FIP in a sick cat. A positive FIP antibody test, especially if the titer is \geq 1:400 is consistent with clinical disease. A negative or low titer tends to reduce but not eliminate the possibility of clinical FIP. Secondly the test is of value to determine the presence of FIP virus within a cattery. Twenty to 30% of the cats within a cattery should be screened for the presence of positive antibody titers. If positive titers are found one can assume that approximately 90% of the cats in contact with these positive cats will also have positive titers. Little is to be gained by testing the remainder of the cattery. Thirdly the test can identify potential shedders of virus when a new cat is being purchased for introduction into a cattery or household that is free of FIP virus.

Summary - It is my opinion that the FIP antibody test currently is being over used and over interpreted. The test is of value to the practitioner in specific circumstances, but by itself it is not diagnostic of clinical FIP. Further it is my opinion that clinically healthy FIP antibody positive cats should not be euthanized under a routine test and eradication policy.

NEW FELINE LEUKEMIA VIRUS DETECTION TEST:

A new kit test, (Leukassay F, Pitman Moore) has been developed and marketed recently for the detection of feline leukemia virus (FeLV). We have received several telephone and letter inquiries about the test and it's accuracy.

The new test is an ELISA test similar to other calorometric enzyme-linked diagnostic tests for several other viral diseases. It is designed to detect the presence of feline leukemia virus in serum, plasma, or whole blood. Several investigators that have compared this test to the standard slide test have indicated to me that it is as accurate as the slide test. In fact there is some indication that the new test may be able to detect viremic cats slightly earlier than the slide test. As with the slide test, the new test is not diagnostic for clinical disease, but is diagnostic for the presence of feline leukemia virus.

DISINFECTANTS AND FELINE VIRUSES:

A recent study at the Feline Research Laboratory screened 35 disinfectant antiseptics, surgical scrubs and instrument disinfectants for their virucidal activity against feline panleukopenia virus, feline calicivirus, and feline rhinotracheitis (FVR) virus. All of the products tested were effective against the FVR virus, an enveloped herpes virus. Most of the commonly used disinfectants were not effective against the calicivirus, with the exception of the phenolic and aldehyde compounds. The FPL virus was resistant to all of the disinfectants except the aldehydes. The product that had the most satisfactory virucidal action and that appears to be practical for use in veterinary hospitals is ordinary household bleach or Clorox (5.6% sodium hypochlorite). At the recommended dilution (1:32 or 4 ozs. per gallon of water) Clorox was effective against all 3 viruses tested. One would expect that Clorox would also be effective against the canine parvovirus which has the same properties as FPL virus. Clorox can be used in combination with several disinfectants or detergents without losing its virucidal properties. However, caution should be used when Clorox is combined with other products. Specifics of this study will be published in the near future, and summary tables of the results are available by writing to the Cornell Feline Research Laboratory.