

Feline leukaemia virus (FeLV)

Definition

Feline leukaemia virus (FeLV) is a widespread, incurable virus that typically suppresses a cat's immune system and is considered the most common cause of cancer in cats. FeLV is species-specific, so humans and dogs are not at risk.

Causes

Research indicates that feline leukaemia virus is highly contagious among cats of all ages. Among cats, it is spread by all bodily fluids including saliva, urine, and blood. The disease is spread from cat to cat through bites, mutual grooming, and sharing food or water dishes and litter boxes. A cat can also pass the virus along to its kittens in a number of ways before they are born. Age predisposition is usually seen in animals older than 7 years and kittens less than 5 months (resistance to persistent viraemia develops after 5 months of age, but this can be overcome by large doses of virus or immunosuppression).

Epidemiological studies indicate that only 1-2% of free range single cats develop active infections once exposed to FeLV, while cats in multicat households are at a much higher risk of disease with ~40% developing active infections. In addition, approximately 70% of adult cat viraemias and virus shedding is transient, lasting 1-16 weeks. The other ~30% of cats become persistently viraemic

Symptoms

There are three disease syndromes associated with FeLV infection: immunosuppression, proliferative (neoplasia, leukaemia) and degenerative (anaemia, leukopaenia).

Reproductive failure (abortion and failure to conceive), neuropathies (anisocoria, urinary incontinence and hindlimb paralysis), glomerulonephritis and enteritis presentations have also been documented. The range of presenting problems is non-specific and includes weight loss, regurgitation, vomiting, diarrhoea, anorexia, polyuria/polydipsia, abortion and infertility, abdominal masses and lymphadenopathy. Immunosuppressed cats may present with septicaemia, repeated infections, non-responsive infections and poor-doers. Anaemic cats will tend to present with pale mucous membranes, rapid weak pulse and lethargy. Factors determining the clinical signs include the strain of virus involved, the exposure dose, exposure duration (outdoor access and high local prevalence), the age of the cat and nature of the immune response.

Diagnosis and treatment

Avoiding exposure with infected cats and updating vaccinations are the best tools of preventive medicine. FeLV is highly contagious, so it is important to have your cat vaccinated if it could be exposed to other cats. The American Association of Feline Practitioners recommends all kittens receive the vaccine.

Infected cats may harbour the illness for several years with no signs of illness. Over time, they may lose weight, become depressed, or develop a fever. Their coats often deteriorate, and they may develop skin, bladder, or upper respiratory infections. The latter infections can present as recurrent infections.

Virus isolation is the gold standard and usually takes about 1 week (virus is grown in cell culture). Alternatively immunofluorescence assay (IFA) tests on peripheral blood smears and in-clinic ELISA p27 antigen tests are also used. It is important to note that an ELISA positive test does not indicate viraemia. Tumours can also be biopsied.

The outcome of interferon use in treating FeLV positive cats has been variable with respect to clinical efficacy. The treatment of immunosuppressed and anaemic cats remains symptomatic and supportive. Chemotherapeutic treatments for various neoplastic presentations of the disease exist with variable remission rates and survival periods. No treatment will stop viral excretion.

Your veterinarian will talk to you about the importance of maintaining a balanced diet. Also, he or she will ask you about your cat's lifestyle and look for ways to reduce stress, both of which are key to managing your cat's disease.

Infected cats should ideally be kept indoors so they won't spread the virus. If you have multiple cats, have all of them tested, vaccinate any that are not infected, and consider the importance of housing infected cats separately.

Your veterinarian can determine the best program for your cat. Although some cats are able to eliminate the virus on their own and develop immunity, many others die as a result of cancer or opportunistic infections. The prognosis is good if latent and transient viraemia is the result of infection, however, persistently viraemic animals have a poor prognosis. Current statistics indicate that 85% of FeLV-infected cats (persistently infected) are dead within 3 - 3.5 years of diagnosis.