

Feline Calicivirus

Feline Calicivirus (FCV) is a viral disease that affects cats and is commonly recognized by the oral ulcers it causes. It is a common agent in infectious feline upper respiratory tract disease.

Virology

Feline Calicivirus is non-enveloped virus, making it a difficult pathogen to inactivate. The virus constitutes of a single-stranded, plus-sense RNA. Feline Calicivirus is not a zoonosis. Being an RNA virus, its elastic genome gives it the ability to readily adapt to environmental pressures. This is the reason for the existence of so many virulent strains of FCV. In cats that are repeatedly infected, the gene responsible for the protein in the virus's capsid has been shown to evolve through immune-mediated positive selection making it undetectable by the cat's immune system.

Clinical Signs

The incubation time once infection occurs is 2-6 days. Oral ulcers are the most common sign of Feline Calicivirus. They begin as vesicles that quickly rupture and then heal within the span of 3 weeks.

Feline Calicivirus is known to be a major cause of respiratory disease in cats. This virus is quite commonly contracted by cats that are unvaccinated but mortality rates are low. The most pressing scenario would be in kittens infected with a strain that causes pneumonia.

Up to 25% of asymptomatic cats from multiple cat environments including shelters and catteries will shed FCV. As many as half of all upper respiratory infections are caused by FCV.

Epidemiology of Transmission

Feline Calicivirus is naturally transmitted through fomites, contact between cats, short distances as an aerosol, or by a human handler from an infected cat to a susceptible one. Cats will secrete Feline Calicivirus in large amounts through their saliva until the virus is eliminated. In addition to direct contact, fomite transmission is the primary means of spread for FCV.

Treatment and Control

Diagnosis cannot be solely based on clinical presentation; the virus must be isolated in a cat's cell culture. This is done by identifying viral antigens using immunofluorescence, immunohistochemistry, or PT-PCR assay.

There is a vaccine currently available to combat Feline Calicivirus, however, due to the virus's tendency to mutate, the vaccine is not a fool-proof solution. Multi-strain vaccines have recently been developed in an effort to prevent the emergence of virulent systemic Feline Calicivirus. One of the most effective measures that can be taken to prevent the spread is to identify and isolate shedding cats as well as to clean and disinfect all possible infected surfaces with an approved EPA and Health Canada registered disinfectant that has proven efficacy against Feline Calicivirus.

References

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