



Lecture title: feline calicivirus

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Summary:

What is feline calicivirus?

Feline calicivirus is a virus that is an important cause of upper respiratory infections and oral disease in cats. This virus infects cats throughout the world and can cause disease in both domestic and exotic cat species. Although several different viruses and bacteria can cause respiratory disease in cats, calicivirus is one of the more common infectious agents isolated in cats with a respiratory infection.

FCV Is A Highly Contagious Pathogen Of The *Caliciviridae* Family, *Vesivirus* Genus.

FCV is highly contagious and can cause cats to develop mild to severe respiratory infections and oral diseases.

This disease-causing virus is common in breeding colonies and shelters. Younger cats are at a higher risk of getting infected with feline calicivirus than older ones.

most cats completely recover from this infection. But some rare strains (or types) of this virus can be deadly.

How does a cat get a calici virus infection?

Calici virus is highly contagious and infected cats can shed the virus in saliva or secretions from the nose or eyes. If an infected cat sneezes, airborne viral particles can be sprayed several meters through the air. It is speculated that the virus may also be shed in urine or feces, but this is not considered to be a major source of infection.

Are Other Cats In The Household At Risk Of Infection?
A Cat That Has A Calicivirus Infection Will Be Infective To Other Cats During The Incubation Period And For At Least 3 Weeks After Developing Symptoms. A Cat That Is A Carrier Of Calicivirus May Always Be Infective To Other Cats.

Pathogenesis

FCV infection in cats primarily occurs in the oropharynx, causing transient viremia, which spreads FCV to various tissues. Replication occurs in the upper respiratory tract epithelia and oral and conjunctival mucosa leading



to conjunctivitis, oral ulcers, and typical signs of upper respiratory tract disease.. Immunohistochemistry and electron microscopy have confirmed that FCV infects feline epithelial and endothelial cells, leading to cell death, vascular damage, and high mortality

FCV strains target fJAM-A .The feline JAM-A (fJAM-A)). Junctional adhesion molecule A (JAM-A) is a functional receptor for feline calicivirus (FCV is an immunoglobulin superfamily protein

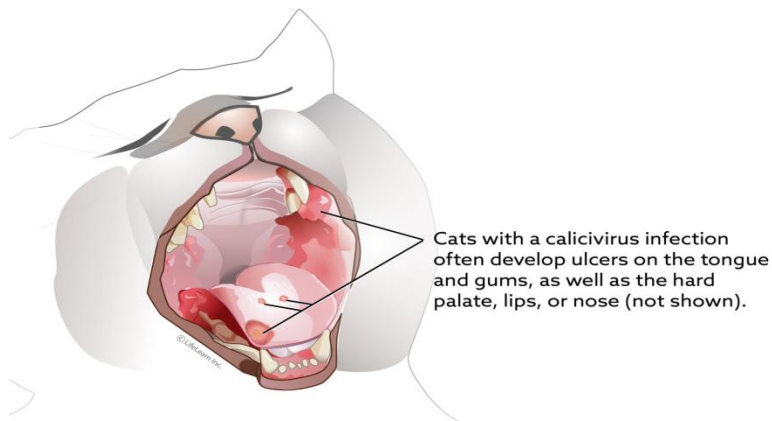
a receptor found at epithelial and endothelial cell junctions, causing junctional disruption and leakage. Additionally, the presence of the fJAM-A receptor on feline platelets and blood leukocytes suggests a hematogenous distribution of FCV, as indicated by the detection of FCV RNA in the blood.

Clinical signs

The initial symptoms involve the eyes, nose, and mouth, but the infected cat quickly develops a high fever, severe depression, edema of the legs and/or face, jaundice, conjunctivitis (inflammation of the membranes lining the eyelids), and discharge from the nose or eyes. The discharge may be clear or may become yellow/green in color.

cats with a calicivirus infection often develop ulcers on the tongue, hard palate, gums, lips, or nose. These cats will usually salivate or drool excessively as the ulcers are very painful. Other non-specific signs of an upper respiratory infection include anorexia, lethargy, fever, enlarged lymph nodes.

Some strains of calicivirus may cause an infected cat to develop sudden painful lameness in one or more joints; this lameness occurs more frequently in kittens.





Is my family at risk?

Calici virus is very species specific and does not represent any risk to people or other species of animals.



Herpesvirus Infection in Cats (Feline Viral Rhinotracheitis)

viral rhinotracheitis (FVR), is an infectious disease caused by feline herpes virus type-1 (FHV-1). As with other herpes viruses, the virus is very species-specific and is only known to cause infections in domestic and wild cats. The virus can infect cats of all ages.

It transmitted by:



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1. Direct contact – through contact with saliva, ocular or nasal secretions
 2. Inhalation of sneeze droplets
 3. Sharing of food bowls and litter trays

Infection Sick cats shed FHV in oral, nasal and conjunctival secretions; shedding may last for 3 weeks. Infection requires direct contact with a shedding cat.

FVR is a major cause of upper respiratory disease in cats and is the most common cause of conjunctivitis (inflammation of the tissues surrounding the eye, especially the lining of the lids and the third eyelid).

Disease signs

cause acute rhinitis and conjunctivitis, usually accompanied by fever, depression and anorexia. Affected cats may also develop typical ulcerative, dendritic keratitis.

What Are the Symptoms of Cat Herpes?

Most symptoms can last two to three weeks but the virus may lay dormant inside the cat's body for years.

Classical acute disease :rhinitis, conjunctivitis, corneal ulcer, dermatitis, viraemia, pneumonia .Chronic disease: keratitis& chronic rhinosinusitis.

Histological lesions

Feline herpesvirus most commonly presents as an upper respiratory tract infection, but in severe cases it can affect the lower respiratory tract.

The histopathologic lesions :the trachea and lung were severely affected, the nasal cavity and lung were affected. Lesions included necrotizing bronchointerstitial pneumonia, necro-ulcerative rhinitis, and necro-suppurative tracheitis. Intranuclear viral inclusion bodies were found in scattered respiratory epithelial cells and were most prevalent in the trachea. These inclusions are diagnostic for feline herpesvirus.

Can Human Beings or Dogs Catch Herpes from Cats?

No, people and dogs cannot catch herpes from cats. However, cats can catch herpes from other infected cats.



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