

Feline Calicivirus Infection

Basics

OVERVIEW

- A common viral disease of domestic and exotic cats characterized by upper respiratory tract signs, ulcers in the mouth, pneumonia, and occasionally inflammation of the joints (known as “arthritis”), or a highly fatal, generalized (systemic) disease with bleeding and fever
- “Upper respiratory tract” (also known as the “upper airways”) includes the nose, nasal passages, throat (pharynx), and windpipe (trachea)
- “Lower respiratory tract” (also known as the “lower airways”) includes the bronchi, bronchioles, and alveoli (the terminal portion of the airways, in which oxygen and carbon dioxide are exchanged)

SIGNALMENT/DESCRIPTION OF PET

Species

- Cats

Mean Age and Range

- Young kittens greater than 6 weeks of age—most common
- Cats of any age may show clinical disease

SIGNS/OBSERVED CHANGES IN THE PET

- May present as an upper respiratory infection with eye and nose involvement, as an ulcerative disease primarily of the mouth, as pneumonia, as a sudden (acute) inflammation of the joints (arthritis), as a generalized (systemic) disease characterized by bleeding, or any combination of these
- Sudden onset
- Generally alert and in good body condition
- Lack of appetite (known as “anorexia”)
- Discharge from the eyes or nose, usually with little or no sneezing
- Ulcers on the tongue, hard palate, lips, tip of nose, or around the claws; ulcers may occur without other signs
- Difficulty breathing (known as “dyspnea”) from pneumonia
- Sudden (acute), painful lameness
- Fever
- Evidence of generalized (systemic) bleeding



CAUSES

- Feline calicivirus
- Numerous strains exist in nature

RISK FACTORS

- Lack of vaccination or improper vaccination
- Multicat facilities
- Co-existent infections with other disease-causing agents (such as feline herpesvirus-1 or feline parvovirus)
- Poor air circulation (ventilation) in multicat facilities (such as catteries)

Treatment

HEALTH CARE

- Outpatient, unless severe pneumonia or bleeding occurs
- Clean eyes and nose, as needed
- Oxygen—for cats with severe pneumonia

ACTIVITY

- Pets should be restricted from contact with other cats to prevent transmission of the calicivirus

DIET

- No restrictions
- Special diets—perhaps to entice cats to resume eating (a/d)
- Provide soft foods—if ulcers in the mouth restrict eating (a/d)

Medications

Medications presented in this section are intended to provide general information about possible treatment. The treatment for a particular condition may evolve as medical advances are made; therefore, the medications should not be considered as all inclusive

- No specific medications to eliminate the virus (known as “antiviral drugs”) are effective
- Broad-spectrum antibiotics—may be indicated (such as amoxicillin); however, secondary bacterial infections of affected cats are not nearly as important as for cats with feline herpesvirus-1 infections
- Antibiotic eye ointments—to reduce secondary bacterial infections of the moist tissues of the eye (known as the “conjunctiva”)
- Appropriate pain medication—for transient pain from inflammation of the joints (arthritis); should be administered only under the direction of your pet's veterinarian
- Lysine is used to slow the spread of the virus, several formulations available

Follow-Up Care

PATIENT MONITORING

- Monitor for sudden development of difficulty breathing (dyspnea) associated with pneumonia
- No specific laboratory tests

PREVENTIONS AND AVOIDANCE

- All cats should be vaccinated at the same time they are vaccinated against feline herpesvirus-1 and feline parvovirus; routine vaccination with either modified live virus (MLV) vaccine or inactivated vaccines should be done as early as 6 weeks of age and repeated every 3–4 weeks until at least 16 weeks of age
- Breeding catteries—respiratory disease is a problem; vaccinate kittens at an earlier age, either with an additional vaccination at 4–5 weeks of age or with an intranasal vaccine at 10–14 days of age; follow-up vaccinations every 3–4 weeks until 16 weeks of age
- American Association of Feline Practitioners—classifies feline herpesvirus, feline parvovirus (panleukopenia), and feline calicivirus as core vaccines; vaccinate all kittens/cats with these three agents on the initial visit, as early as 6 weeks of age, repeat every 3–4 weeks until 16 weeks of age, and 1 year after the last kitten vaccination; revaccinate for calicivirus every 3 years

- Vaccination will not prevent virus infection in a subsequent exposure, but will prevent serious clinical disease caused by most strains of calicivirus

POSSIBLE COMPLICATIONS

- Pneumonia—most serious complication; can be life-threatening
- Secondary bacterial infections of the lungs or upper airways
- Ulcers of the mouth and the sudden (acute) inflammation of the joints (arthritis) usually heal without complications
- Generalized (systemic) bleeding disease may be severe and fatal

EXPECTED COURSE AND PROGNOSIS

- Clinical disease—usually appears 3–4 days after exposure to calicivirus
- Once antibodies appear, about 7 days after exposure, recovery is usually rapid; an “antibody” is a protein that is produced by the immune system in response to a specific antigen (in this case, the calicivirus)—when the body is exposed to the antigen, the antibody responds
- Prognosis excellent, unless severe pneumonia or generalized (systemic) bleeding disease develops
- Recovered cats—persistently infected for long periods; will shed small quantities of virus continuously in secretions from the mouth

Key Points

- Proper vaccination is very important in controlling development of clinical disease for most strains of feline calicivirus
- Modify the vaccination protocol in breeding catteries to include kittens before they become infected (often at 6–8 weeks of age) from a mother cat carrying the virus (known as a “carrier queen”)
- Calicivirus is relatively stable in the environment and is resistant to many disinfectants