Influenza Virus in Ferrets

**Basics**

**OVERVIEW**
- Influenza virus is a common, self-limiting viral respiratory disease of ferrets characterized by sneezing, runny nose, fever, eye discharge, and occasionally pneumonia.
- Viruses that cause flu in people, including human influenza types A and B, and the novel H1N1 influenza virus, cause disease in ferrets. The virus can be transmitted from human to ferret or ferret to human. Virus infection usually begins in the nasal lining, causing nasal and eye symptoms within 48 hours following exposure. Occasionally, infection spreads to the lungs, causing pneumonia.

**SIGNALMENT**
All ferrets are equally susceptible to infection.

**SIGNS**
- Symptoms usually begin suddenly
- Most ferrets are alert and in good condition
- Decreased appetite or refusing food
- Clear nasal or eye discharge, may become thick and yellow/white with secondary bacterial infections
- Sneezing
- Coughing if pneumonia occurs
- Lethargy and fever
- Occasionally vomiting

**CAUSES**
- Human influenza types A and B, including H1N1 (swine flu)
- Secondary bacterial infections frequently occur

**RISK FACTORS**
Contact with infected ferrets or humans

**TREATMENT**

**APPROPRIATE HEALTH CARE**
- Outpatient, unless severe pneumonia occurs
- Unless a secondary bacterial infection develops, the disease is self-limiting and will run its course in 7–10 days.
- Keep eyes and nose clear of discharges. Many ferrets will not eat if they cannot smell their foods.
• Provide palatable foods and warm foods to release enticing odors to encourage the ferret to eat. Make sure the ferret is drinking water and staying hydrated.
• Fluid therapy, given by IV or subcutaneous injection, may be needed in ferrets that are not eating or become dehydrated.

**DIET**

Special diets may be needed to entice ferrets to resume eating. Canned chicken human baby foods, Eukanuba Maximum Calorie diet (Iams Co., Dayton, OH), Clinicare Feline liquid diet (Abbott Laboratories, North Chicago, IL), or homemade “duck soup” recipes are examples of foods accepted by sick ferrets. Warming the food or offering via syringe may increase acceptance.

**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 all-inclusive.
• Antibiotics—to reduce secondary bacterial infections. Examples of common antibiotics used include trimethoprim/sulfonamide, quinolones such as enrofloxacin or ciprofloxacin, penicillins (amoxicillin), or cephalosporins.
• Antihistamines such as chlorpheniramine or diphenhydramine may help to alleviate nasal discharge.
• Antibiotic eye ointments—to reduce secondary bacterial infections in the eyes

**FOLLOW-UP**

**PATIENT MONITORING**
• Monitor for symptoms of secondary bacterial infection in the nose, eyes, or sinuses such as thick, white or yellow discharges, not eating, and severe lethargy. Seek veterinary attention if noted.
• Monitor for symptoms of pneumonia, such as coughing, lethargy, and labored breathing. Seek veterinary attention.

**PREVENTION/AVOIDANCE**
• Avoid exposure to humans or ferrets exhibiting symptoms of influenza.
• No flu vaccine is available for ferrets.

**POSSIBLE COMPLICATIONS**
• Pneumonia—most serious complication
• Secondary bacterial infections of the nasal passages, sinuses, or nose

**EXPECTED COURSE AND PROGNOSIS**
• Symptoms usually appear within 48 hours after exposure.
• Recovery is usually rapid, occurring within 7 days of the onset of symptoms.
• Prognosis excellent, unless severe secondary bacterial infection develops

**KEY POINTS**
• Ferrets are susceptible to the same viruses that cause flu in humans, influenza A and B, including H1N1 (swine flu).
• Flu can be spread from people to ferrets, ferrets to people, and ferret to ferret.
• Unless the ferret develops secondary bacterial infections of the sinuses or pneumonia, the disease is usually self-limiting and ferrets will recover in 7–10 days.
Enter notes here