



ECE: Morbidity and Mortality

by Leo V. Gates, III, DVM

Epizootic catarrhal enteritis (ECE) hit San Antonio, Tex., with a very high morbidity and low mortality. This disease was reported to me by Rick White (director of the San Antonio Ferret Enthusiasts) after he learned about the disease's spread on the East Coast. I feel confident that the information I received helped save many ferrets. Consultations with veterinarians already dealing with the disease were very informative and timely (it takes months to get information out in our professional journals).

ECE is suspected to be a corona virus that affects the intestines by causing loss of villi. As a result, the absorptive surface of the intestines is depleted. Affected ferrets become rapidly dehydrated, suffer electrolyte disturbances, and lose weight quickly.

In San Antonio we saw two forms of the disease. The first form was seen in ferrets <9 months old. They exhibited a mild diarrhea with lethargy. Most of these ferrets had soft stools that were orange, brown, or green, all with fluid or mucous. Most of these young ferrets were treated with Amoxicillin drops (5–10 mg per pound of body weight, twice a day) and an electrolyte solution (Resorb, Pedialyte, or similar product). Food was given free choice and augmented with a high calorie supplement (Hill's A/D, Nutrical, Ferrivite, etc.). These ferrets generally recovered in 3–10 days.

The second form of the virus we saw

occurred in ferrets >1 year old. Severe diarrhea was accompanied by severe dehydration. These ferrets were often hospitalized and given massive amounts of lactated ringers subcutaneously (100–200 mL per pound of body weight). Most adult ferrets can generally tolerate a 22 or 23 gauge needle with 24–48 mL of fluids every 1 or 2 hours.

The adult ferrets we treated were usually placed on Amoxicillin drops (5–10 mg per pound of body weight, twice a day) or Metronidazole (25 mg per pound of body weight, once per day). Our experience was that Centrine did not seem to affect the diarrhea. PeptoBismol did seem to make these ferrets feel better (0.125 tab every 4–8 hours or 0.25 teaspoon of the liquid formula every 6–8 hours). External heat was usually offered via a heat lamp/trouble light hung on the outside of the cage. Most ferrets slept under towels next to the external heat source.

The affected ferrets were usually anorectic and were tube fed 12 cc of Hill's A/D every 1–2 hours. In order to get these ferrets to eat again, we usually fed gruel type foods that apparently caused less intestinal cramping. We suggest mixing Sustical with turkey baby food into a thick, gravy consistency. Sustical can be purchased at most pharmacies. Add to this mixture (if the ferrets will tolerate the changes) Nutrical or Ferrivite, Ferretone, and ferret food (softened with hot water). This mixture is usually fed with syringes or eye-droppers and should eventually be eaten free choice out of a bowl.

Most of the ferrets we treated took 10–14 days to recover, while some took as long as 30 days. We treated a few that mostly recovered after a few weeks, but never returned to their normal activity or appetite levels. Based on the regional lymphocytosis of the intestines, we theorized that there was lymphocyte-induced damage and gave dexamethasone (0.0625 mg, ie, 0.25 of a 0.25 mg tablet, once a day by mouth). Most of these ferrets responded dramatically within 2–3 days with great appetites and return to normal behavior. We treated with dexamethasone only after the acute phase of the disease was over. We treated for 10–14 days and then abruptly ceased all medications.

Sadly, some of the affected ferrets died. These animals were sent to Bruce Williams, DVM, for histopath at the Department of Veterinary Pathology, Armed Forces Institute of Pathology in Washington, DC. Our submissions revealed villus necrosis as the general lesion with numerous lymphocytes and plasma cells present. Most ferrets that died had an unrelated, unknown, pre-existing ailment, such as intestinal lymphosarcoma, adrenal neoplasia, or renal disease, that apparently decreased their ability to survive.

In addition to speaking with Dr. Williams, I consulted with Susan Brown, DVM, and Tom Kawasaki, DVM. Please feel free to copy and distribute this information to veterinarians and colleagues. I sincerely hope this effort will save lives of ferrets from this disease.

Reprinted with permission.