

The Surprise Diagnosis

A 2-month-old female boxer presented at Tufts' Foster Hospital for Small Animals late on the night of September 10. The patient's history included fever, slight lethargy for two days, development of a hunched back for two days, painful back and rear quarters, and crying out and biting for the last day. The owners had consulted their local veterinarian because of the animal's painful rear legs and tense muscles.

Physical examination revealed a temperature of 104F, ataxia of the rear legs, pain in back of the thoracic region, erythema of skin on the muzzle and foot pads, and bilateral harsh lung sounds. Initial neurologic examination demonstrated intact cranial nerve function, decreased proprioception and hopping on both rear legs, and ataxia of the rear legs.

Shortly after admission, the puppy had dark, tarry diarrhea and prolapsed its rectum from straining. In addition, the dog was rolling over in its cage and was biting in a manner that was not mentally appropriate. We initially ruled out several causes, including discospondylitis, meningitis, GME, canine distemper, other infectious diseases (herpesvirus, parvovirus etc.), metabolic disease, and/or exposure to toxins.

By late morning, the puppy was demonstrating paddling of the rear legs, continued diarrhea, and appeared to have mentally deteriorated. A neurologic consultation confirmed the previous findings and noted that the puppy's health was progressively worse.

Laboratory testing showed a normal chemistry profile and urinalysis. CBC revealed a slight anemia (PCV=35%), and an increased WBC (22,000/ul). The WBC differential showed absolute increase in segmented neutrophils (17,640/ul) and monocytes (1,680/ul). CSF tap revealed a moderate mononuclear cell pleocytosis.

By 1 p.m. the day after admission, the puppy had constant diarrhea, and by 4 p.m., she could no longer stand on her own. Despite supportive care and antimicrobial therapy, the puppy continued to deteriorate and was transferred to the ICU during the night. The puppy became non-responsive and hypothermic.

The owners elected euthanasia early in the morning of September 12. We submitted the body for a necropsy evaluation and routine rabies examination. On September 15, the laboratory results showed positive for rabies.

This case represents one of the many diagnostic challenges in veterinary medicine.

Given the age of the puppy, no initial history of any contact with other animals, and the initial signs relating to pain in the back and rear legs, we did not automatically assume rabies on the differential diagnosis list. However, our subsequent investigation determined that the puppy was housed outdoors in a pen with its mother and other puppies before the current owner purchased the dog approximately five weeks earlier. A rabid skunk or bat may also have entered the pen and spread the disease to the puppy.

For the many people who were involved in this difficult case, rabies was a surprise diagnosis that required an in-depth investigation after the puppy died. We needed to determine who had been exposed to the puppy and their level of exposure. Ultimately, our search led us to people in our hospital, at other veterinary facilities, within the owner's home and at other settings where people may have interacted with the puppy. It was a sober reminder that all of our beloved patients – regardless of their age or species – can carry deadly zoonotic diseases.