

Feline Asthma

Feline allergic lower airway disease, more commonly called asthma, can be difficult to diagnose but is quite responsive to treatment.

By Cindy A. Adams

Veterinarians use the broader term "feline allergic lower airway disease" to describe a respiratory ailment that is akin to the well-known human condition called asthma. Essentially an allergic reaction, it is characterized by inflammation of the airways and accompanied by coughing and wheezing as airflow is restricted to the oxygen-absorbing tissues of the lungs. Definitive answers about the causes of feline lower airway disease are elusive.

"Asthmatic" cats may exhibit anything from severe, progressive episodes of respiratory distress—difficulty breathing, also called dyspnea—to a minor cough unaccompanied by respiratory difficulty. Coughing, wheezing and respiratory distress may be signals to owners that allergic lower airway problems exist, explains Elizabeth Rozanski, DVM, of the Tufts School of Veterinary Medicine, who is a diplomate of both the American College of Veterinary Internal Medicine and the American College of Veterinary Emergency and Critical Care. Dr. Rozanski has treated many companion animal patients with lower airway disease and says that it is less common in cats than in humans, and is even more rare in dogs.

Veterinary evidence points to inhaled pollutants such as smoke, dust, perfume, pollen and mold as possible triggers of this exaggerated reaction of the respiratory system. "Seasonal variations, mostly in spring and summer, are found in some cats," adds Dr. Rozanski. "And there tends to be a higher incidence among urban cats than rural ones. Anecdotally, the disease seems to occur more often in cats from smoking households and in cats who



There tends to be a higher incidence of asthma among urban cats than those living in rural areas.

experienced a severe respiratory infection in kittenhood." Heartworm infection also may trigger an allergic reaction similar to asthma. However, in most cases, no underlying trigger is found.

WHAT FELINE "ASTHMA" LOOKS LIKE

While an owner may initially think his or her cat is simply trying to dislodge a hairball, the astute caretaker may notice one or more of the following signs in a cat with feline allergic lower airway disease:

- ◆ more pronounced difficulty during expiration
- ◆ unusual squatting or crouching posture with neck extended
- ◆ diminished interest in food
- ◆ lethargy
- ◆ an unkempt coat, because the cat has less energy for grooming

- ◆ Coughing, wheezing, loud or raspy breath, or the sudden onset of respiratory distress are sure signs that something has triggered a respiratory reaction in your cat. A cat breathing with excessive effort

FELINE ASTHMA

- ◆ Feline allergic lower airway disease is characterized by inflammation of the airways, accompanied by coughing and wheezing.
- ◆ Evidence points to inhaled pollutants such as smoke, dust, perfume, pollen and mold as possible triggers of the exaggerated response of the respiratory system.
- ◆ Heartworm infection can also trigger an allergic reaction similar to asthma.



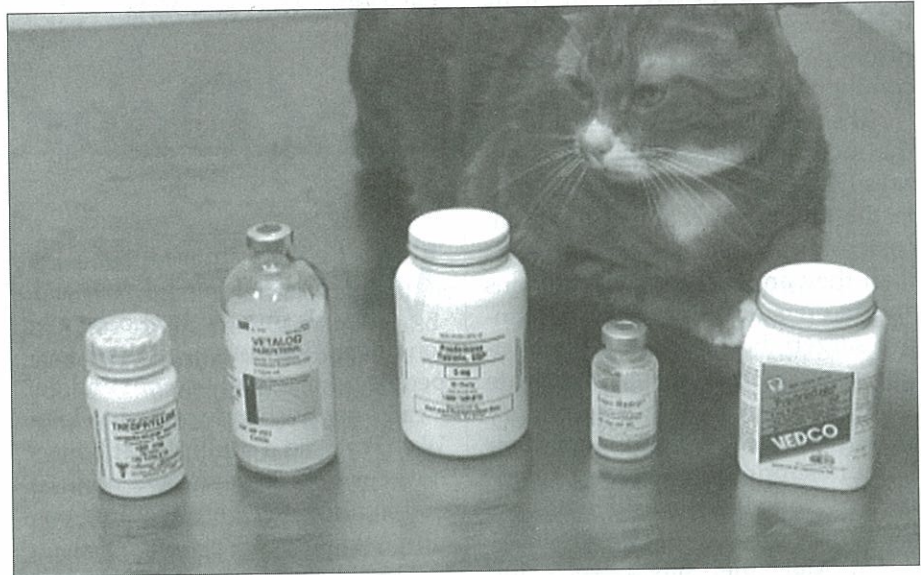
or panting with an open mouth requires emergency veterinary attention.

A cat experiencing severe respiratory distress may benefit from a number of veterinary interventions. Valerie B. McDaniel, DVM, owner of Montrose Veterinary Clinic in Houston, Texas, explains, "During an attack, the main thing is to hit hard to relieve the inflammation of the airways immediately. We have three tools to do this: an oxygen cage, bronchodilators such as the drug aminophylline, and corticosteroid drugs. If the distress is severe, we will hit it with all three." Together these medications help to dilate the bronchial passageways and allow better air flow.

A DIFFICULT DIAGNOSIS

Veterinarians know what tools to use in an animal's breathing crisis, but they still must determine the cause. Several diseases mimic the symptoms of feline asthma. The doctor will begin with a thorough history and a series of tests to determine the cause of the attack. First steps include listening to the chest for "crackles" or wheezes, taking the cat's body temperature, and performing a complete blood count, blood chemistry profile and urinalysis. Cats are also tested for feline leukemia virus (FeLV) and feline immunodeficiency virus (FIV) infection. These tests allow assessment of the cat's general health as well as detection of the presence of the blood cells that are telltale indicators of lower airway disease.

Routinely, a heartworm antigen test is also used to rule out feline heartworm disease, which mimics the symptoms of feline allergic lower airway disease (see *Catnip*, July 2001). Various tests performed on the cat's feces are used to help rule out the presence of parasites—such as lungworms—that might cause or contribute to lung disease. Other factors to be ruled out include viral infection and infection with a microscopic bacteria-like organism called mycoplasma. Mycoplasma organisms can damage the lining of the air-



There are various drugs that can be used to help asthmatic cats, but the corticosteroid prednisone is still a common first line of treatment.

ways and have been identified in up to 25% of cats with lower airway disease.

Another important diagnostic tool is the tracheal wash, also called a transoral tracheal wash or transtracheal wash (TTW), which can reveal the presence of inflammatory cells, bacteria, and other organisms in the lower airways. Because a cat must undergo general anesthesia for this procedure, during which a small volume of fluid is instilled into the cat's trachea and then aspirated back out and examined, a TTW cannot be performed during a respiratory crisis.

Besides the risk of anesthesia, Dr. McDaniel adds that all of the fluid flushed into the lungs for the test doesn't come out immediately during the test; although the extra fluid is usually rapidly absorbed, it could potentially pose a threat to a cat's already-compromised ability to breathe.

"Occasionally the transoral tracheal wash may reveal bacteria or infection, warranting antibiotic therapy," says Dr. Rozanski, "but since the larger airways in cats are not a sterile environment and it may be possible to contaminate the sample with bacteria during collection, care must be taken to confirm such a diagnosis."

Radiographs (X-rays) of the chest often show evidence of feline allergic

lower airway disease, and can also help rule out conditions like congestive heart failure and fungal infection of the lungs. Radiographs can be misleading, however, with some appearing normal in asthmatic cats. Pulmonary function tests, like those used to measure breathing ability in humans, have been tested on cats but are not yet widely available to veterinary patients.

THE PROGNOSIS: GOOD

Once feline allergic lower airway disease is identified, long-term maintenance therapy often is very successful, although any cat may have recurrent bouts and a small number of cats become fatally ill. Some lucky cats can be weaned off their medication and have no recurrence. For example, Dr. Rozanski treated Mac, a 7-year-old male cat brought in with respiratory distress that had grown worse over four days. He was stabilized with oxygen and medication; after other diseases were ruled out, he was given prednisone, a corticosteroid drug that decreases inflammation of the airways, for two weeks. During the next two months he was tapered off the medication and has had no recurrence of illness in two years.


Other drugs, including bronchodilators like aminophylline and theophylline, and zafirlukast (Accolate, a popular choice for

human asthma sufferers), are being used more often. The use of prednisone, a corticosteroid, is still a common first line of treatment.

"It's the 'old reliable'; steroids are the most potent antiinflammatory," says Dr. McDaniel. Given orally and in the low doses cats require, corticosteroids produce fewer side effects than they are known for in humans and in dogs. But since they can hinder surgery by prolonging the healing process and may complicate matters for a cat with a secondary bacterial infection because of their immunosuppressive effects, veterinarians sometimes hesitate to use them.

Dr. McDaniel has been using zafirlukast for about two years with "really good results." One of her patients, Maria Peaches, had been maintained on prednisone for nearly that long. The young indoor cat's owner became frustrated that she could not have Maria Peaches, who had gone into heat several times, spayed due to the use of prednisone, but each time she tried to wean her off for the surgery, Peaches' asthma symptoms would reappear.

Once she was switched to zafirlukast, however, she was able to be spayed, and she has maintained well on the drug. "Steroids have a definite place," says Dr. McDaniel, "but I would rather try zafirlukast if I have time to test the efficacy. I try to leave steroids as a last resort." Like Dr. McDaniel, other veterinarians are pleased to have these additional drug options too.

Feline allergic lower airway disease—"asthma"—is as uncomfortable for a cat as it is frustrating and stressful for his guardian and his veterinarian. Successful treatment is best achieved when a caring owner works closely with a veterinarian who, through experience, education, and analysis of new information about available drugs and treatments, develops an individualized treatment plan that addresses that cat's specific needs. With ever-expanding therapeutic options, most asthmatic cats are living happily ever after. 

LETTERS FROM READERS

Dear Editor

We were amused and amazed to read your article on how to choose a kitten or cat. "Do you mean there are people who actually go out and get a cat?" my husband wanted to know. We have been a multiple cat household for over 30 years, and none of our companions were acquired on purpose.

Streaky and Georgie arrived in a box, dumped anonymously on our doorstep when they were about 12 weeks old. Spooky, Molly, and Winnie were ferals who were slowly persuaded to give up the open road in favor of domesticity. Molly brought a bonus with her—a litter of kittens. Winnie was actually a gift from our vet. He had trapped her in the hills behind his home, and she was living at the clinic. When we had to put our beloved Herbert to sleep, Dr. Pitts gave us Winnie in an effort to console us.

Herbert and Charlie came from school. Herbert hung around my classroom for two days before I decided he was lost and took him home. I advertised and found his owner, who declined to take him back. Charlie was given to me by a

student who worked part-time for a vet. He was an unwanted kitten whose owner brought him in to be euthanized. He was rescued by my student, who figured she could find a home for him.

Boots actually belonged to the people next door. They neglected him shamefully, and I often fed him and gave him some affection. When they moved away, they left him behind. It was only natural for him to join the family.

PC appeared in our patio one afternoon, and made it quite clear that she intended to move in. From the minute her paw crossed the threshold, she was top cat, in spite of being the newcomer and only half grown.

None of these furry friends were chosen from a field of candidates. None of them passed a personality test. All of them, with the exceptions of the outgoing PC and Herbert have been timid. They have all been wonderfully affectionate lap cats, except for Spooky, who still doesn't tolerate much petting.

As my husband says, in our case, cats happen! And we love it.

Patricia Jones, via Email

