

Allergic Bronchitis in Cats

Ronald M. Bright, DVM, MS, DACVS

BASIC INFORMATION

Description

Feline allergic bronchitis is inflammation of the lower airways (primarily bronchi). The inflammation is often complicated by narrowing of the airways (bronchoconstriction), which can greatly reduce the intake of oxygen.

Allergic bronchitis has two forms. The acute form (sudden onset, less than 3 months' duration) is associated with reversible inflammatory changes and is also referred to as *feline asthma*. The chronic form (long-term, often intermittent signs) is associated with irreversible airway damage. It can eventually lead to emphysema, a debilitating disease that results from enlargement and dysfunction of the smallest airways in the lungs.

Causes

The acute form may be triggered by a hyperactive immune response to environmental irritants such as dust (including dust from kitty litter), molds, or smoke. In most cases, the specific inciting cause (allergen) is never identified. Mycoplasmal bacterial infections can trigger this disease in some cats.

Clinical Signs

Most cats are young to middle-aged when they are first affected. The cat usually appears healthy and has no systemic signs of illness. Wheezing and coughing are common signs. The cough can be mistaken for retching associated with hairballs. If signs are mild and intermittent, the cat may be normal between episodes.

Occasionally, episodes of breathing difficulty may progress to become severe and life-threatening. The cat may sit hunched over with the neck extended, trying to take in air. Panting and drooling may be noted. The gums may become blue (cyanotic) from inadequate intake of oxygen. Severe episodes may result in collapse and shock.

Diagnostic Tests

A tentative diagnosis may be made from the history and physical examination findings. Physical examination sometimes reveals severe respiratory distress, a "barrel-shaped chest" (from air being trapped within the lungs), and lung sounds that are typical for this condition. Many diagnostic tests are delayed in severely compromised cats until they are stable.

X-rays may or may not reveal changes compatible with allergic bronchitis but help to rule out other causes of coughing. Laboratory tests may be normal or may show evidence of an allergic response or secondary infection. Examination of airway secretions obtained by a tracheal wash or bronchoscopy often identifies inflammation and elevated numbers of white blood cells. The presence of

eosinophils helps confirm the diagnosis. Bacterial culture and tests for heartworm and other parasites are often recommended.

TREATMENT AND FOLLOW-UP

Treatment Options

Cats in severe respiratory stress require hospitalization and intensive therapy with oxygen supplementation; injectable, rapid-acting corticosteroids; bronchodilators; and intravenous fluids. Once the cat becomes stable, long-term management is mandatory to control inflammation and prevent or minimize recurrence of the signs.

Long-term therapy includes continuation of steroids, which are given in tablet form or via an inhaler.

- High doses of steroids are used initially, then slowly decreased after the signs abate to the lowest dose that controls the disease. Abruptly decreasing or stopping the steroids may cause severe signs to recur.
- Injectable medications may be considered for cats that do not tolerate inhaled therapy or cannot be given oral medications. Injectable medications are often repeated every 2-8 weeks.
- Although the injectable form is convenient, it is not considered the best choice because of a higher risk for side effects. Some possible side effects are urinary tract infections, diabetes mellitus, and the development of refractory allergic bronchitis.

Cyclosporine may be substituted for corticosteroids in those cats that develop resistance to steroids or require large doses of steroids to control the signs. Cyclosporine blood levels must be adjusted to ideal therapeutic levels, so weekly blood tests are often needed until the target level is reached, and then periodically.

Bronchodilators such as albuterol, theophylline, or terbutaline are frequently given as tablets or via metered-dose inhalers. An antihistamine, cyproheptadine, may also be added. Efforts to reduce potential irritants and allergens in the cat's environment are also very important.

Follow-up Care

Cats with severe signs often require intensive monitoring and hospitalization for several days. Recheck visits are scheduled after discharge. Most cats require periodic monitoring and adjustment of medications for the rest of their lives. Repeated testing may be needed in cats that do not respond to therapy or have recurrent signs.

Prognosis

Most cats respond favorably to therapy, with good control of the clinical signs. Long-term therapy is usually necessary, and occasional relapses are common. If the disease is not controlled, the development of progressive, irreversible changes in the airways and lungs is likely.