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Updates on Pulmonary Function Testing in Small Animals  1
Anusha Balakrishnan and Lesley G. King

This article focuses on the most commonly used tests of pulmonary function in companion animals, including tests of pulmonary mechanics as well as of gas exchange in the lungs.

Laryngeal Disease in Dogs and Cats  19
Catriona MacPhail

The most common disease process involving the larynx is laryngeal paralysis, which occurs much more frequently in dogs than in cats. Diagnosis of laryngeal paralysis requires close attention to anesthetic plane and coordination of respiratory effort with laryngeal motion. Surgical arytenoid lateralization improves respiration and quality of life in dogs with laryngeal paralysis; however, aspiration pneumonia is a recognized complication, and generalized neuropathy can progress. Laryngeal collapse can result from any cause of chronic upper airway obstruction, but is most often associated with unaddressed brachycephalic airway syndrome. Laryngeal neoplasia, while generally uncommon, occurs more frequently in cats than in dogs.

Chronic Rhinitis in the Cat  33
Nicki Reed

The cause of feline chronic rhinitis is incompletely understood and it is often a diagnosis of exclusion. History, clinical signs, and investigations performed to reach this diagnosis are discussed. Several treatment options are provided, although cure of this frustrating disease is rarely achieved.

Feline Aspergillosis  51
Vanessa R. Barrs and Jessica J. Talbot

Feline aspergillosis includes sinonasal aspergillosis (SNA), sino-orbital aspergillosis (SOA), other focal invasive forms, and disseminated disease. SOA is an invasive mycosis that is being increasingly recognized, and is most commonly caused by a recently discovered pathogen Aspergillus felis. SNA can be invasive or noninvasive and is most commonly caused by Aspergillus fumigatus and Aspergillus niger. Molecular methods are required to correctly identify the fungi that cause SNA and SOA. SNA has a favorable prognosis with treatment, whereas the prognosis for SOA remains poor.
Canine Nasal Disease

Leah A. Cohn

Nasal disease often manifests as nasal discharge with or without other nasal signs. Attention to signalment, history, and physical examination findings often facilitates a differential diagnosis. Imaging techniques and tissue sampling for microscopic examination are usually necessary for diagnosis. Advanced imaging offers important advantages over traditional skull radiographs but is less widely available and more costly. Bacterial culture is seldom beneficial, and fungal culture is reserved for cases likely to have fungal rhinitis. Nasal biopsy is required to confirm a specific diagnosis and is always required for diagnosis of specific tumor type or for inflammatory rhinitis.

Update on Feline Asthma

Julie E. Trzil and Carol R. Reinero

This article provides an overview of recent advances in the diagnosis and treatment of feline asthma. The authors discuss the potential pitfalls in the diagnosis of feline asthma. In addition, current literature investigating new therapies for the treatment of feline asthma is reviewed.

Canine Chronic Bronchitis

Elizabeth Rozanski

Chronic bronchitis is a syndrome defined by cough on most days for at least 2 months where no specific cause can be identified. Older small breed dogs are most commonly affected, but bronchitis is also documented in midsized and larger breed dogs. Diagnostic testing includes physical examination, laboratory testing, radiography, and airway evaluation via bronchoscopy, cytology, and culture. Treatment is directed at reducing exposure to irritants, reducing airway inflammation, and controlling cough.

Tracheal and Airway Collapse in Dogs

Ann Della Maggiore

Tracheal and airway collapse (bronchomalacia) are common causes of chronic cough in middle-aged to older dogs where weakening of cartilage within the respiratory system leads to narrowing of airways, coughing, wheezing, and other secondary effects. Successful treatment involves correct identification of the problem, recognition of concurrent problems, and appropriate medical therapy. Surgical and noninvasive treatment options are becoming readily available, and it is important to understand indications for such procedures.

Idiopathic Pulmonary Fibrosis in West Highland White Terriers

Henna P. Heikkilä-Laurila and Minna M. Rajamäki

Canine idiopathic pulmonary fibrosis (CIPF) is a chronic, progressive, interstitial lung disease affecting mainly middle-aged and old West Highland white terriers. Other dogs, especially terriers, have been diagnosed with
the disease. The cause is largely unknown, but it is likely to arise from interplay between genetic and environmental factors. CIPF shares several features with human idiopathic pulmonary fibrosis. This article summarizes the current literature; describes the findings in physical examination, arterial blood gas analysis, bronchoscopy, bronchoalveolar lavage, diagnostic imaging, and histopathology; compares the canine and human diseases; gives an overview of potential treatments; and discusses biomarker research.

Bacterial Pneumonia in Dogs and Cats 143

Jonathan D. Dear

Bacterial pneumonia is a common clinical diagnosis in dogs but seems to occur less commonly in cats. Underlying causes include viral infection, aspiration injury, and foreign body inhalation. Identification of the organisms involved in disease, appropriate use of antibiotics and adjunct therapy, and control of risk factors for pneumonia improve management.

Exudative Pleural Diseases in Small Animals 161

Steven E. Epstein

Exudative pleural diseases are a common cause of respiratory distress and systemic illness in dogs and cats. This article addresses the pathophysiology, development, and classification of exudative pleural effusions. The most current diagnostic strategies, causes, imaging findings, and medical or surgical treatment options for select diseases are reviewed in detail.

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