What Is Your Diagnosis?

History

A 12-week-old female Cavalier King Charles Spaniel was examined because of a cough and mucopurulent ocular discharge of 1 month’s duration. Initial radiography revealed signs of inflammatory pulmonary and pleural disease. A diagnosis of bronchopneumonia was made, and the dog was subsequently treated with amoxicillin-clavulanic acid (25 mg, PO, q 12 h). The owner noticed a decrease in severity of coughing episodes while the dog was being treated with the antimicrobial; however, resolution of clinical signs did not occur. When the owner noticed nonspecific signs of lethargy for a period of 24 hours, the dog was readmitted for further evaluation.

Physical examination revealed a serous nasal discharge with a productive cough. Thoracic auscultation revealed crackles and expiratory wheezes in all lung fields. A CBC revealed leukocytosis (30,300 cells/µL; reference range, 6 to 18 × 10^3 cells/µL) characterized by a mature neutrophilia (22,725 cells/µL; reference range, 3 to 15.3 × 10^3 cells/µL) and a mild regenerative anemia (PCV of 39% and reticulocyte count of 3.2%; reference range, 43.3% to 59.3% and < 1%, respectively). Thoracic radiographic views were obtained (Figure 1).

Determine whether additional imaging studies are required, or make your diagnosis from Figure 1—then turn the page →

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is supportive of PCD. Mucociliary scintigraphy may reveal delayed mucociliary clearance and can be supportive of a diagnosis of PCD.\textsuperscript{6,7}

Treatment is aimed at controlling infection to facilitate the clearance of respiratory secretions. Broad-spectrum antimicrobials, nebulization, and coupage are the mainstays of medical treatment. Early intervention and treatment are necessary to avoid permanent sequelae such as chronic sinusitis, pneumonitis with associated microatelectasis that may progress to bronchiectasis, and pulmonary fibrosis.\textsuperscript{8} Despite treatment, patients are prone to recurrent episodes of pneumonia.

Bronchoalveolar lavage was performed on the dog of this report 2 days after admission. Cytologic examination of the specimen retrieved revealed neutrophils, macrophages, and cocci and diplococci. Bacteriologic culture of the specimen yielded scant growth of \textit{Proteus mirabilis}, \textit{Pseudomonas aeruginosa}, and $\beta$-hemolytic \textit{Streptococcus} spp, which were susceptible to enrofloxacin and amoxicillin-clavulanic acid. Thoracic radiography performed 4 weeks after treatment with these 2 antimicrobials did not reveal substantial changes in the interstitial and peribronchial infiltrates. Pleural fibrosis was suspected on the basis of rounding of pleural margins and incomplete inflation of the right cranial lung lobe. Radiography performed after 8 weeks revealed resolving bronchopneumonia, and bronchoalveolar lavage at 12 weeks after treatment revealed a few neutrophils, macrophages, and well-differentiated epithelial cells. Bacteriologic culture did not yield growth. Cough, serous nasal discharge, and increased bronchovesicular sounds did not resolve. Treatment continued with nebulization and coupage performed 3 to 4 times a day. Because of the expense and risk to the dog, the owner declined further diagnostic evaluation.

5. Alysworth AS. Clinical aspects of defects of body of the heart. \textit{Arch Bronconeumol} 2001;38:45–49.