

## **Evaluation of Inflammatory Disease in the Nasal Cavity and Paranasal Sinuses using CT in Dogs and Cats**

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Chronic sinonasal disease is common in cats and dogs and poses a diagnostic challenge. Diagnostic tools of sinonasal disease are survey radiographs of skull, computed tomography (CT), and magnetic resonance imaging. However, CT is the primary modality in diagnosing and mapping suspected inflammatory sinonasal disease. This study describes the use of CT to evaluate five dogs and two cats with inflammatory disease in the nasal cavity and paranasal sinuses and reviews the CT features of sinonasal disease.

Inflammatory sinonasal disease was diagnosed in five dogs and two cats with clinical signs of nasal discharge and epistaxis. Survey radiography and CT were performed in all of patients. CT of the rostralcranium in transverse plane using soft tissue and bone window was performed with a thickness of 2mm. Nasal cytology and culture from nasal smear were performed immediately after CT examination.

Accurate increase of radiographic opacity of the nasal cavities and paranasal sinuses was observed in only 3 cases. On CT images, the lesions were isodense in nasal cavity (7 cases), frontal sinuses (3 cases), and nasopharynx (2 cases) with destruction of the nasal septum (4 cases), maxillary turbinates (5 cases), maxilla (3 cases), and hard palate (3 cases). The lesions were enhanced after intravenous contrast administration in 5 cases and were not enhanced in 2 cases. Inflammatory cells were observed in nasal cytology. Most of the cultures from nasal smear were bacteria.

CT is useful to diagnose sinonasal disease and is more accurate in demonstrating the extent and character of lesions of nasal cavity.

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