



THE UNIVERSITY *of* EDINBURGH

Edinburgh Research Explorer

Computed tomographic features of feline infectious bronchopneumonia

Citation for published version:

Pentcheva, P, Orekhova, A, Cerna, P, Liuti, T, Gunn-Moore, D & Schwarz, T 2023, 'Computed tomographic features of feline infectious bronchopneumonia', International Veterinary Radiology Association / European Veterinary Diagnostic Imaging Joint Scientific Conference, Dublin, Ireland, 18/06/23 - 23/06/23 pp. 66-67.

Link:

[Link to publication record in Edinburgh Research Explorer](#)

Document Version:

Peer reviewed version

General rights

Copyright for the publications made accessible via the Edinburgh Research Explorer is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

The University of Edinburgh has made every reasonable effort to ensure that Edinburgh Research Explorer content complies with UK legislation. If you believe that the public display of this file breaches copyright please contact openaccess@ed.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.



Abstract

Introduction

Lower respiratory tract infection is a common and important condition in dyspnoeic cats with *Mycoplasma* spp, *Bordetella bronchiseptica*, feline herpesvirus (FHV-1), feline calicivirus (FCV) and *Aelurostrongylus abstrusus* being among the most common pathogens.¹ Thoracic computed tomography (CT) in a restraining device (VetCatTrap™) allows fast, high-quality imaging of dyspnoeic conscious or sedated cats in a minimal-stress environment.² Aims of this study were to characterise typical CT features of feline bronchopneumonia and to investigate potential correlations between CT features and specific pathogens.

Methods

Institutional archives were searched for thoracic CT studies of cats with bronchopneumonia, confirmed by culture, cytology or PCR. Studies were scored for bronchial and pulmonary abnormalities in different lung areas. Statistical evaluation included frequency distribution of CT features of bronchopneumonia and correlation analysis between single-genus-*Mycoplasma*-pathogen bronchopneumonia (group 1) and mixed-or-single-other-pathogen bronchopneumonia (group 2) regarding their CT features.

Results

Thirty-three cats met the inclusion criteria. CT features included normal (60.9%) and abnormal lung areas (39.1%). Abnormal lung areas were most presented by bronchial wall thickening (31.6%), parenchymal subpleural bands (13%), ground-glass opacity (8.5%), lung collapse (7.5%), consolidation (7.3%), plate-like-alveolar pattern (5.3%) and hyperlucent enlarged lungs (4.3%). For single-genus-*Mycoplasma*-spp-pathogen bronchopneumonia, there was weak correlation with reticulonodular lung pattern (0.303), cavitory nodules (0.268), and broncholithiasis (0.225).

Discussion

Typical CT features of feline bronchopneumonia are generalised bronchial wall thickening and parenchymal changes in a few lung areas. This is different from other species, where parenchymal changes are often seen

more widespread.³ Single-genus-*Mycoplasma*-bronchopneumonia is not significantly different from other types of bronchopneumonia.

References

1. Foster SF, Martin P, Allan GS, Barrs VR, & Malik R Lower respiratory tract infections in cats: 21 cases (1995–2000). *Journal of Feline Medicine and Surgery*, 2004;6(3), 167–180.; 2. Oliveira CR, Mitchell MA, O'Brien RT. Thoracic computed tomography in feline patients without use of chemical restraint. *Vet Radiol US* 2011;52,368-376; 3. Constantinescu R, Istrate A, Sumping JC, Dye C, Schiborra F, Mortier JR. Computed Tomographic Findings in Dogs with Suspected Aspiration Pneumonia: 38 Cases (2014-2019). *J Small Anim Pract* 2022 epub