SonoPath Teleradiology

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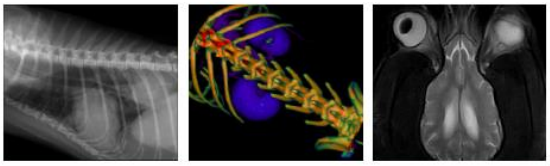

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Allison Harris

SPECIES

Canine

BREED

Great Pyrenees

SEX

FS

AGE

2 Years

INTERPRETED BY

Sebastian Schaub, DVM
Dr. med. vet. DipECVDI

HOSPITAL NAME

Animal Emergency Hospital Volusia

REFERRING VET

Dr. Van Nieuwal

INVOICE

53971

DATE

9-7-22

PRESENTING CLINICAL SIGNS

p presented for trouble breathing and acting abnormal was at doggy day care during the day but separated from other pets history of eating foreign objects subcutaneous emphysema noted in chest, neck, and front legs
Abnormal PE/Chem/CBC/UA Results: Radiology Consult Conclusion: 1-Severe emphysema, cervical region with extension along the fascial planes into thoracic inlet 2-Pneumomediastinum 3-Mild diffuse broncho-interstitial lung pattern 4-Moderate to severe subcutaneous emphysema, cervical region and right left thoracic body wall Recommendations: The large amount of emphysema could be due to a puncture wound or puncture/laceration of the esophagus or trachea. The pneumomediastinum is likely due to gas tracking along the fascial planes of the cervical and thoracic inlet region into the mediastinum. The differential diagnosis for the mild diffuse broncho-interstitial lung pattern includes age-related pulmonary changes in addition to bronchitis/airway disease. Read By: Graham Burns, DVM, DACVR

COMPUTED TOMOGRAPHY OF THE THORAX

A high resolution pre- and post-contrast CT study of the thorax is provided for review.

COMPUTED TOMOGRAPHIC FINDINGS

Along the fascial planes of the skull, neck and thoracic wall, a significant amount of free gas is appreciated. The mediastinum is moderately distended by gas, accentuating the margins of the mediastinal anatomical structures. The mediastinal gas is dissecting through the aortic hiatus up into the retroperitoneal space.

Level with the cranial esophageal sphincter, the esophageal wall presents with an intramural gas inclusion with possible laceration of the mucosal lining. Small intramural gas inclusions are seen along the wall of the entire esophagus.

The sternal, cranial mediastinal and tracheobronchial lymph nodes are small elongated with a normal short-to-long-axis-ratio is < 0.5, the attenuation and contrast enhancement pattern is uniform and considered within normal limits.

The cardiovascular structures including the pulmonary vasculature are within normal limits.

The bronchial tree presents with regular branching and tapers uniformly towards the periphery as expected, the bronchial walls are thin and smooth. The bronchus-to-artery ratio is within normal limits.

The lung parenchyma presents the expected architecture and attenuation behavior.

Small incidental gas pockets are seen within the esophageal lumen, there is no evidence of abnormal dilation.

COMPUTED TOMOGRAPHIC DIAGNOSIS

- Advanced pneumomediastinum & emphysema along the fascial planes of the skull, neck and thoracic wall & pneumoretroperitoneum
- Possible laceration of the esophageal wall distal to the cranial esophageal sphincter
- No evidence of pneumothorax

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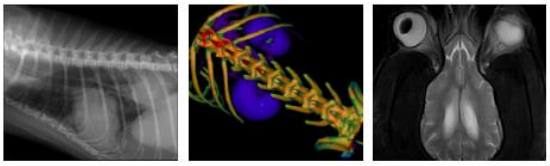

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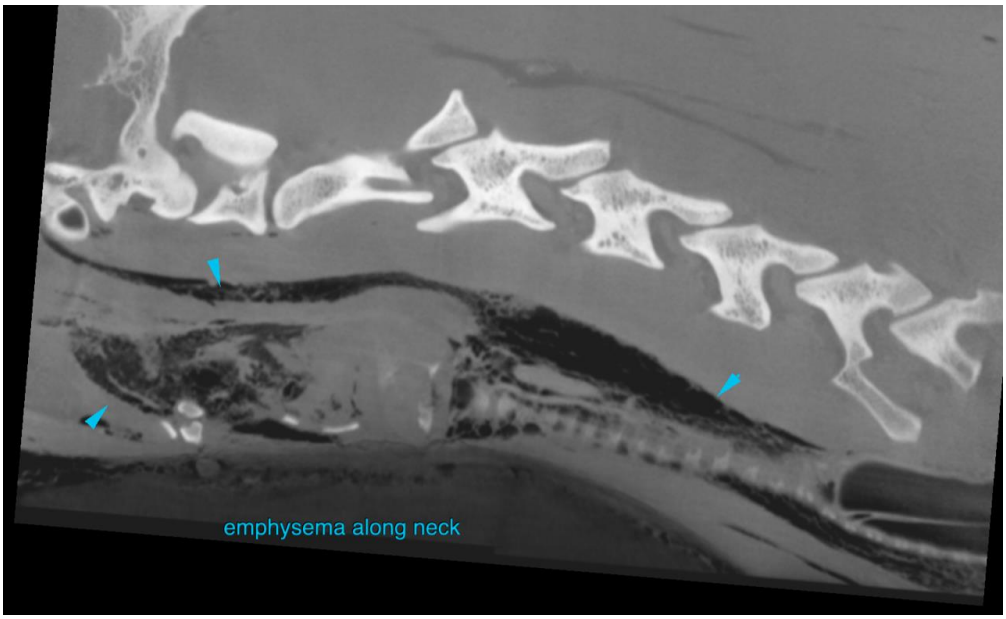
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The findings are consistent with severe pneumomediastinum and emphysema along the fascial planes as the mediastinum is continuous with the fascial planes of the neck. A traumatic (iatrogenic versus accident) laceration of the pharynx, trachea esophagus is the most common underlying cause (e.g., stick injury). The suspected laceration of most cranial segment of the esophageal wall can support the diagnosis of possible perforating trauma.

A perforating soft tissue trauma of the neck or shoulder region must be ruled out as well. Primary disease of the lung, with extension of air along the peribronchial adventitia, has been described as possible underlying cause and possible differentials include chronic cough or ruptured bulla, (paraquat intoxication) – but no overt changes of the lung parenchyma are appreciated..

The CT study should be complemented by endoscopy to screen for defects of the esophageal & tracheal wall and pharynx – with focus on the cranial esophageal segment. Be aware, that small lacerations of the pharynx, esophagus or trachea cannot be ruled out by CT/endoscopy entirely. Further treatment options depend on history and findings of endoscopy – might be self-limiting if no defect is found.



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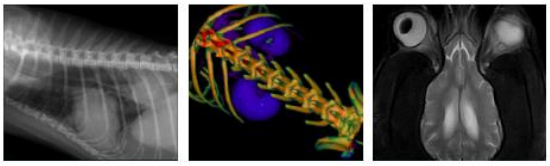

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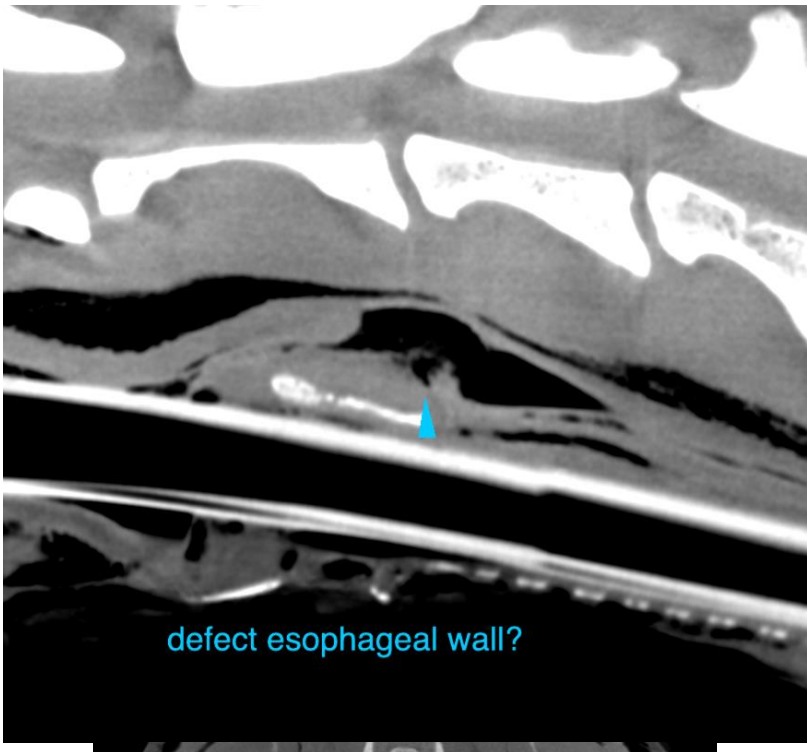

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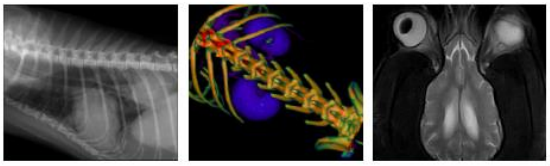

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

Sebastian Schaub, Sebastian Schaub, DVM, Dr. med. vet. DipECVDI
sebast.schaub@gmail.com