

## IT'S YOUR CASE

Species: Canine

Breed: Maltese

Sex: Female Neutered

Age: 5 years

### Clinical History:

She was transferred from her vet for continued care following being attacked by a larger dog (BDLD- Big Dog Little Dog). The owner reports that she was attacked by the neighbor's Rottweiler earlier in the day. Her vet reports that she was vomiting blood.

She was completely normal prior to this event.

Sedated oral examination during these radiographs reveals a very large laceration between the base of the tongue and the epiglottis. Part of the hyoid bone is visualised.

**Anatomic regions:** Head and neck, Thorax

### Details of study and technical comments:

- Head and Neck: Right Lateral, Left Lateral and Ventrodorsal radiographs
- Thorax: Right Lateral, Left Lateral and Ventrodorsal radiographs

The study is of diagnostic quality.

### Diagnostic interpretation:

#### HEAD AND NECK:

There is marked soft tissue swelling ventral to the pharyngeal region (white arrowheads) with reduced oropharyngeal air space and with marked emphysema in the pharyngeal area (blue arrowheads); this is likely secondary to the reported tongue base laceration. On the right lateral there is an apparent separation between the epihyoid and ceratohyoid bones (red arrowheads) raising concern for a fracture/luxation of the hyoid apparatus – this separation is less marked on the left lateral.

No further skeletal injuries are seen. On the right lateral there is apparent soft tissue swelling in the orbital region (pink arrowheads) but this cannot be further localised on the ventrodorsal. No further changes are seen.

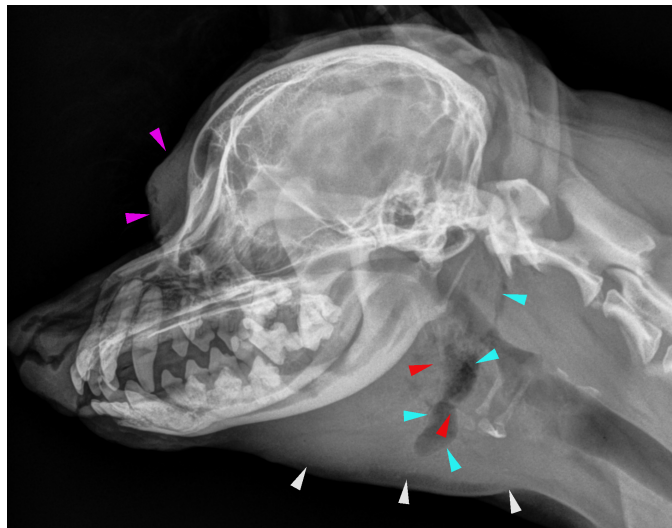


Reported by VetCT

t. +44 (0)1223 790 439    www.vet-ct.com    e. info@vet-ct.com

Co Number 6955449    Registered Office: Broers Building, 21 JJ Thomson Avenue, Cambridge, CB3 0FA, UK  
ABN 24601862220    Registered Office in Australia: Unit 3, 6 Riseley Street, Applecross, WA 6153, Australia  
CRN 6241529    Registered office in US: 3505 Lake Lynda Drive, Suite 200, Orlando, Florida, 32817, USA

This report is based on the available history and radiographic interpretation only and not on a physical examination of the patient. It has been prepared specifically for interpretation by the currently licensed and registered veterinary surgeon responsible for the care of this patient.



## THORAX:

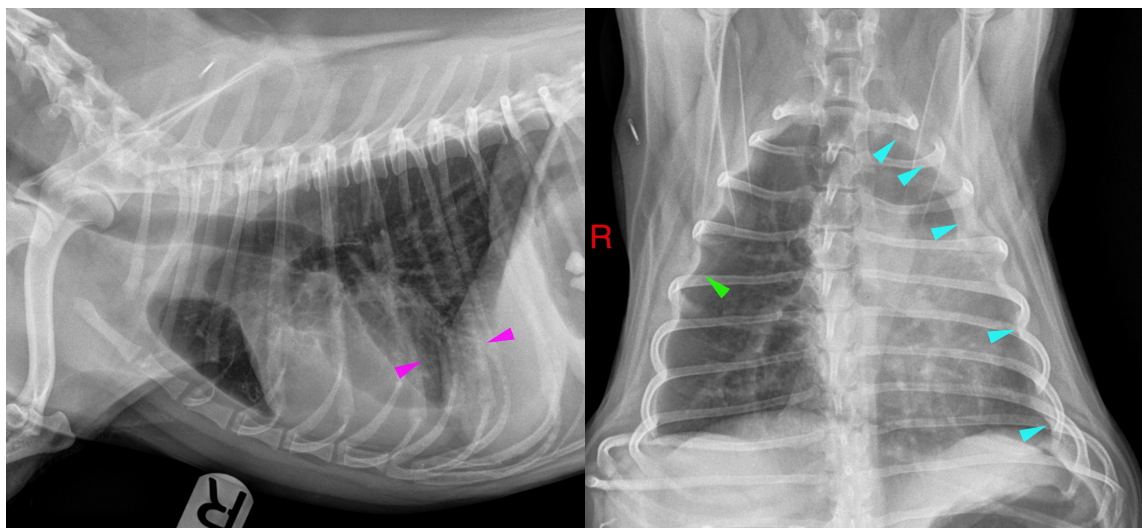
There is a mild left lateralised pleural effusion (blue arrowheads) with an equivocal faint pleural fissure between the right cranial and middle lobes on the ventrodorsal (green arrowhead). On the ventrodorsal there is increased opacity of the left hemithorax with ipsilateral shift and loss of clarity of the heart. On the right lateral there is mild alveolar consolidation of the ventral region of the left caudal lung lobe (pink arrowheads). No pneumothorax is seen.

The heart is within normal size limits and no clear mediastinal pathology (including pneumomediastinum) is seen.

No traumatic thoracic wall injuries are identified – the diaphragm is partially obscured by the pleural effusion but no evidence of a loss of diaphragmatic integrity is seen.

The left 13<sup>th</sup> rib is vestigial – no further abnormalities of the included musculoskeletal structures are seen.

The stomach has a normal position and is mildly gas-distended. There are multiple small rounded 3-6mm mineralised opacities in the antrum but no larger antral foreign material is identified.



Reported by VetCT

t. +44 (0)1223 790 439 www.vet-ct.com e. info@vet-ct.com

Co Number 6955449 Registered Office: Broers Building, 21 JJ Thomson Avenue, Cambridge, CB3 0FA, UK  
 ABN 24601862220 Registered Office in Australia: Unit 3, 6 Riseley Street, Applecross, WA 6153, Australia  
 CRN 6241529 Registered office in US: 3505 Lake Lynda Drive, Suite 200, Orlando, Florida, 32817, USA

This report is based on the available history and radiographic interpretation only and not on a physical examination of the patient. It has been prepared specifically for interpretation by the currently licensed and registered veterinary surgeon responsible for the care of this patient.

## Conclusions:

- Marked peripharyngeal soft tissue swelling and emphysema consistent with the reported wound at the base of the tongue
  - Separation between the epihyoid and ceratohyoid bones confirms a hyoid apparatus fracture/disarticulation – this may result in laryngeal instability relative to the base of the skull
- Soft tissue swelling adjacent to one of the orbits, also likely traumatic in nature
- Mild pleural effusion (predominately left sided but with a trace right effusion also suspected) – haemothorax is considered the most likely diagnosis given the history of trauma, with differentials including early pyothorax, chylothorax or transudate
  - No clear thoracic wall trauma is seen
- Mild alveolar change in the left caudal lung lobe – pulmonary contusion is considered the most likely diagnosis, but differentials will include mild/early bronchopneumonia or aspiration pneumonia, or mild atelectasis associated with the pleural disease
  - Some reduced volume of the left lung is seen on the ventrodorsal, and this and the effusion are likely contributing to the increased opacity in the left hemithorax
- Multiple mineralised gastric foreign bodies – these may well be incidental (and some have already passed into the large intestine)

## Additional comments:

The pharyngeal changes are consistent with the reported traumatic injury, and fracture/dislocation of the hyoid apparatus is present. The hyoid apparatus is a suspensory mechanism for the tongue and larynx. The presence of disarticulation may result in laryngeal collapse and severe dyspnoea.

Surgical consultation is advised for this reason. It should be noted that in the circumstance of BDLI injuries, the crushing component can result in tissue morbidity that takes several days to declare.

Further imaging may include CT of the head and neck and T-FAST may be considered to monitor the volume of pleural effusion.

## Literature:

Manchi, G., Brunberg, M. M., Shahid, M., Al Aiyani, A., Brunberg, L., & Stein, S. (2016). Larynx trauma and hyoid bone fracture after bite injury in dog: case report. *Frontiers in Veterinary Science*, 3, 64.



Reported by VetCT

t. +44 (0)1223 790 439    www.vet-ct.com    e. info@vet-ct.com

Co Number 6955449    Registered Office: Broers Building, 21 JJ Thomson Avenue, Cambridge, CB3 0FA, UK  
ABN 24601862220    Registered Office in Australia: Unit 3, 6 Riseley Street, Applecross, WA 6153, Australia  
CRN 6241529    Registered office in US: 3505 Lake Lynda Drive, Suite 200, Orlando, Florida, 32817, USA

This report is based on the available history and radiographic interpretation only and not on a physical examination of the patient. It has been prepared specifically for interpretation by the currently licensed and registered veterinary surgeon responsible for the care of this patient.