

**ProtonVet**  
VETERINARY RADIOLOGY

## COMPUTED TOMOGRAPHY REPORT

### REFERRING CENTER

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Referring hospital: [REDACTED]

Referring vet:

E-mail:

Tel:

### PATIENT INFORMATION

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owner: [REDACTED]

Patient: [REDACTED]

Species: Equine breed: X Sex: Age:

History: Chronic right sided malodorous nasal discharge and inspiratory noise. Previous history of progressive ethmoid haematoma that has been injected with formalin. A month ago an emergency tracheostomy was performed

Region: head

### INFORME RADIOLÓGICO

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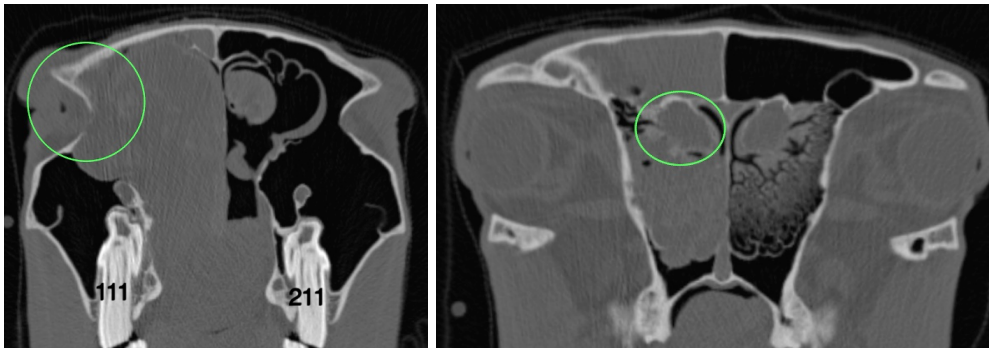
Technical comments: 6 series of the head (standing), with soft tissue and bone algorithms.

#### Description:

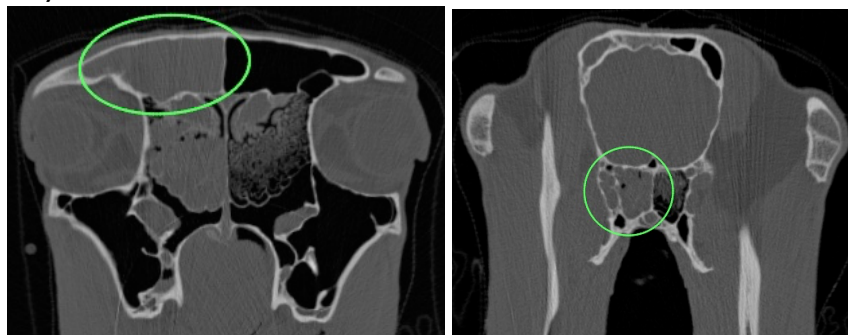
There is a large, expansile, space-occupying, multilocular soft tissue attenuating mass that is involving the right ethmoid region. It shows a heterogeneous high attenuation (110 HU) with a swirling pattern. It extends rostrally along the right nasal passage up to the level of 108, completely obliterating the lumen of the nasal cavity and displacing slightly the nasal septum towards the left side. The lateral aspect of the mass causes marked compression of both dorsal and ventral right nasal conchae and their corresponding dorsal and ventral conchal sinuses, that are completely obliterated. In addition, it also obliterates the rostral aspect of the right frontal sinus and narrows the ipsilateral frontomaxillary aperture. The caudal aspect of the mass extends along the choana, which is completely occluded, displaces the rostral aspect of the soft palate ventrally and reaches the nasopharynx up to the level of the salpingopharyngeal plicae. Maximal dimensions of this mass are approximately: 14x8x18 cm; DVxMLxRCd.



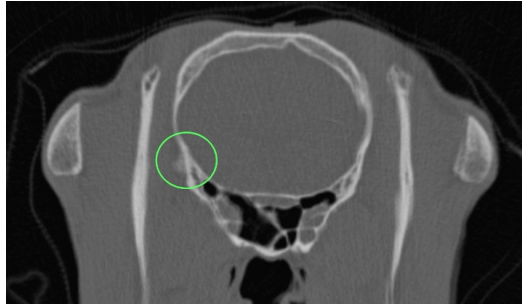
The right lacrimal and the rostroventral portion of the frontal bones, at the level of the rostral aspect of the orbit from the aperture of the nasolacrimal duct, are thinned and poorly defined with areas of lysis and periosteal reaction at the sinusal border of the bone. The mass also contacts the right cribriform plate, which is mildly irregularly margined.



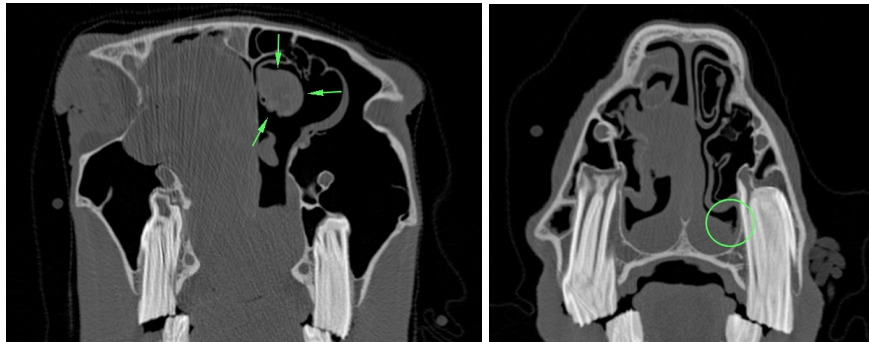
The right frontal sinus is completely filled with homogeneous soft tissue attenuating (50 HU) material. The right sphenopalatine and the most rostral aspect of the right dorsal conchal sinuses are also partially filled with material of similar characteristics.



There is mild to moderate, irregularly shaped and well-defined solid periosteal reaction at lateral portion of the dorsal aspect of the right sphenoid bone, rostral to the level of the temporomandibular joints.



The rostral aspect of the left ethmoid turbinates is distorted and expanded towards the ipsilateral frontomaxillary aperture and the conchofrontal sinus. The left middle conchal sinus is not clearly delineated. At the centre of this area, a well-defined, oval shaped (28 mm diameter) soft tissue attenuating structure (100 HU) with a heterogeneous appearance is seen attached to the lateral aspect of the endoturbinate I.



There is small amount of soft tissue attenuating material with multiple gas bubbles along the ventral meatus of the left nasal passage.

There is a focal mineral attenuating fragment buccal to the distobuccal aspect of the clinical crown of 207.

There is gas within the infundibulum of 109, 110, 209 and 210.

### Conclusions:

1. Large expansile, space-occupying soft tissue mass within the right ethmoid region with extension to the nasal cavity, frontal sinus, choanae and nasopharynx (see comments). DDx: progressive ethmoid haematoma is most likely, sinus cyst or neoplasia are less likely.
2. Right sided conchofrontal and sphenopalatine sinusitis. DDx: secondary to the mass is most likely.
3. Distortion of the left ethmoid region and small soft tissue attenuating mass. DDx: progressive ethmoid haematoma is most likely, sinus cyst or neoplasia are less likely.
4. Presence of fluid in the left nasal cavity, most likely secondary to airways obstruction.
5. Periosteal reaction at the right sphenoid bone. DDx: focal exostosis (post-traumatic, enthesopathy), of unknown clinical significance.
6. Infundibular cement hypoplasia of multiple maxillary cheek teeth, incidental most likely.

### Comments:

In the current examination two independent masses can be seen, a small one in the left ethmoidal region and a large one in the right side of the head. The origin of this one is most likely the right ethmoidal region, however, due to its expansile nature has obliterated completely the ipsilateral nasal cavity, as well as, the choanae and the nasopharynx. It has also occluded the conchal sinuses and partially extended into the frontal sinus. The attenuation pattern shows a high attenuating tissue with a characteristic swirl, which has been frequently associated with multiple bleeding as it occurs in progressive ethmoid haematomas.

The right sided mass has caused lysis of the bones of the ipsilateral orbit and also contacts the cribriform plate, which seems to be slightly eroded. In addition, due to the lack of drainage there is accumulation of material in the right sinusal system, especially in the frontal sinus. Presence of material in the sphenopalatine sinus might represent fluid accumulation, however, extension of the mass into this sinus cannot be excluded.

Gabriel Manso DVM, MSc, PhD, Dip.ECVDI  
European Specialist in Diagnostic Imaging

Contact: info@proton-vet.com | +44 7561 723 819 | 278 Proton Tower | 8 Blackwall way | E14 9G London UK

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