

EQUINE TOMOSYNTHESIS

Teeth (B0030, 17 Jun 2019)

Clinic history: Facial chronic fistula at the left side of the head, at the maxillary region. For a period of time, the horse has had a fistula with a discharge of purulent exudate in the facial area, about 3 cm below the left eye.

Observations: The horse presents a small orifice of 2mm diameter over the left maxillary region which appeared approximately 1 year ago. On physical examination there are no obvious facial asymmetries, no nasal secretion. Nasolacrimal patency is confirmed after injecting saline. Upper airway endoscopy does not show any apparent abnormalities.

Skull radiography and tomosynthesis (3D radiography) reveals 209 dental piece (first maxillary left molar) apical radiolucency and several irregular radiopacity suggestive of cementoma associated with the involved tooth root at the maxillary sinus virtual space. Tomosynthesis examination confirms the radiological findings and confirms the absence of sinusitis, unilateral and singular tooth involvement. The orifice/fistula tract is followed with a tinny urinary tube to evaluate the fistula length/depth, which is 1cm.

Oral examination reveals pulpar decay (tooth cavities) at pulpar cameras 1 and 2 with subsequent decay of the root structure of the first left maxillary molar piece (209). Apical infection with subcutaneous fistulisation of the first left maxillary molar tooth is diagnosed. The presence of radiodense irregular apical structures is suggestive of a benign cementoma secondary to apical infection.

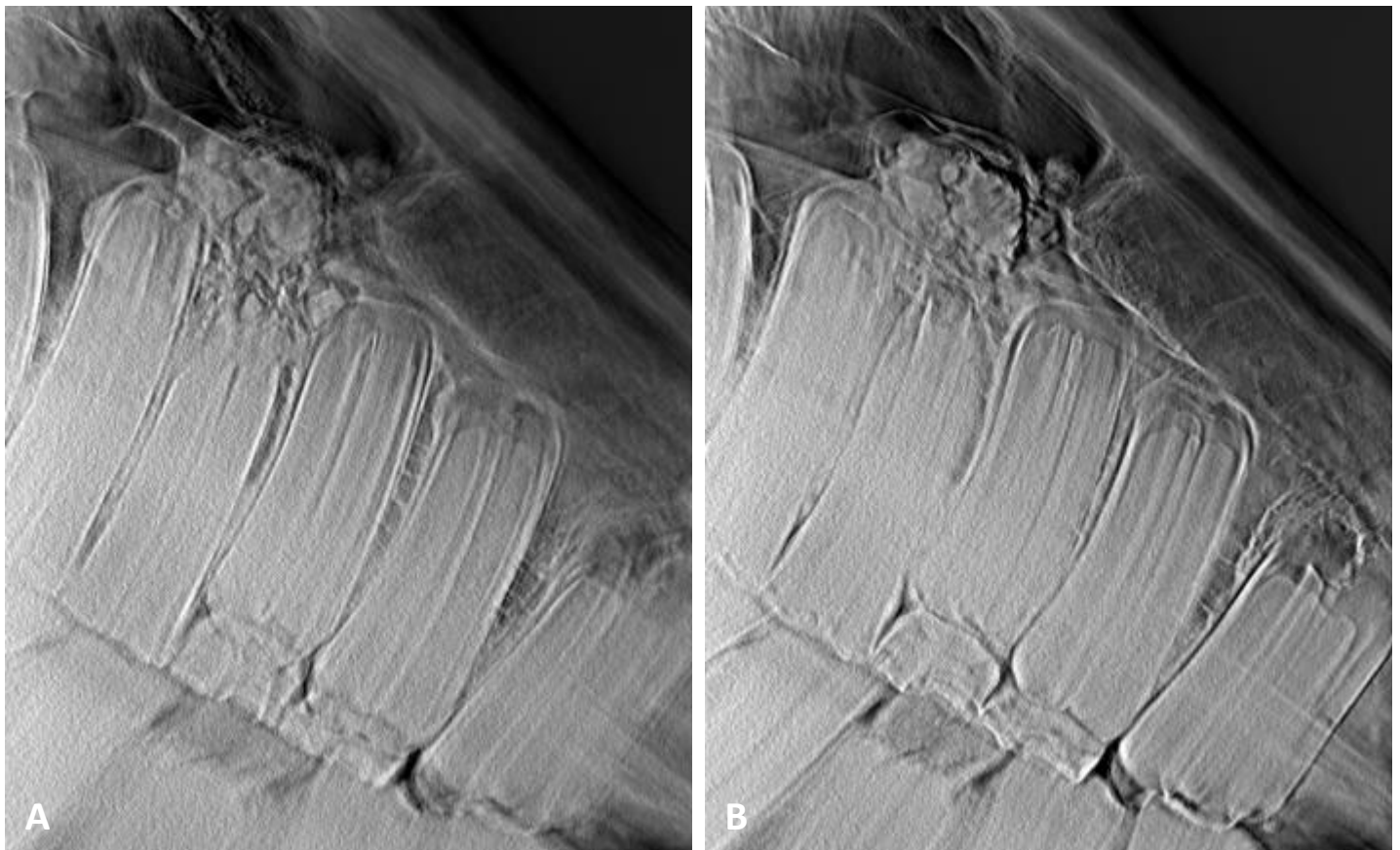


Fig 1. Tomosynthesis lateral view slices of apical infection of the first left maxillary molar tooth (A) and cementoma (B).



Fig 2. DR x-ray lateral view image.

Due to his short age there is still no sinus space which is occupied by the complete molar root. Additionally, the rostral dental tooth is still deciduous (not definitive) and the cap is still present. These are limitation factors which actually interfere with the possibility of performing an adequate minimal invasive oral dental extraction. Our clinical recommendation is to wait at least 6-8 months, re-evaluate in 3 months (perform another 3D XR exam in October 2019) and decide if intra-oral extraction is then possible.

Another option is to perform now a surgical dental extraction via sinus flap and dental repulsion but we strongly discourage this option due to invasiveness and surgical and oral risks at this age, considering his actual clinical discomfort is minimal. The surgical removal of the infected root will be easier in 3 to 9 months.

Diagnosis: Apical infection of the first left maxillary molar tooth (209) with a cementoma and pulpar-cutaneous fistula associated.