

## **THE FRANKENSTEIN HORSES. CLINICAL AND DIAGNOSTIC IMAGING FINDINGS IN HORSES WITH SUTURE LINE PERIOSTITIS**

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Swellings of the equine frontal area can be caused by inflammation of the craniofacial sutures. Suture line periostitis (colloquial term “suturitis”) results in a firm, usually non-painful swelling in the nasofrontal, maxillary and zygomatic region accompanying epiphora. Instability of the craniofacial suture lines, facial trauma and surgical sinusotomy could be predisposing factors. A definitive diagnosis can be reached with radiography and computed tomography (CT). This study describes clinical, CT and radiographic findings of craniofacial suture lines periostitis in two horses with facial swelling. Two horses developed craniofacial suturitis and were presented with a moderate painful facial swelling, epiphora and mild hyperthermia. A 10 year old, Italian saddle horse, gelding developed clinical manifestation after sinuscopy and positioning of a Foley catheter in the concho-frontal sinus for local treatment of a micotic sinusitis. A 16 year old, Wielkpolska, stallion, developed symptom after frontal sinusotomy for the removal of a cystic mass in the left maxillary sinus. A latero-lateral radiographic view of the head in the first horse allowed to recognize bony proliferation, sclerosis and periosteal new bone formation on both sides of the nasofrontal suture. Computed tomography findings in both horses consisted in an intense, irregular periosteal thickened bony wall that affected the frontal, lacrimal, zygomatic and maxillary bone. In one case, there was a necrotic bone sequestrum upon the nasofrontal suture line, not detectable on radiographic views. In the second case, the reaction was more intense near the cerclage wires used to fix the nasofrontal flap associated with osteolysis. In both cases the diagnosis was suture lines periostitis. Horses were treated with surgical removal of the necrotic sequestrum in the first case and the removal of the cerclage wires of the nasofrontal flap in the second one. Sample materials were submitted in both cases for a microbiological testing and resulted sterile. Horses were administered anti-inflammatory drugs for one week with

improvement of the clinical signs. At the 30 weeks follow-up, the owners reported that the nasofrontal swelling and epiphora were no longer detectable. In conclusion, suture line periostitis should be included in the differential diagnosis in case of facial swelling especially in horses underwent to sinus surgery or after a head trauma. In our cases, CT allowed a more accurate assessment of the bony structure and identification of the underlying causes of inflammation.

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