



CASE REPORT: MAXILLARY BONE CYST IN THREE HORSES: DIAGNOSIS AND TREATMENT USING INTRALESIONAL FORMALIN INJECTION

Introduction: Cystic lesions occurring in the equine skull mainly include paranasal sinus and maxillary cysts. Due to their location and the expansive character of these lesions, surgical treatment by excision is often recommended^{1,2,3,4,5,6}.

Aim of the study: To describe a minimally invasive technique to treat maxillary bone cysts where conventional surgical treatment could not be performed.

Material and Methods: Three horses presented with unilateral progressive swelling of the maxilla at the department of Surgery and Anesthesiology of Large Animals at Ghent University. Other clinical signs were nasal airway obstruction and weight loss.

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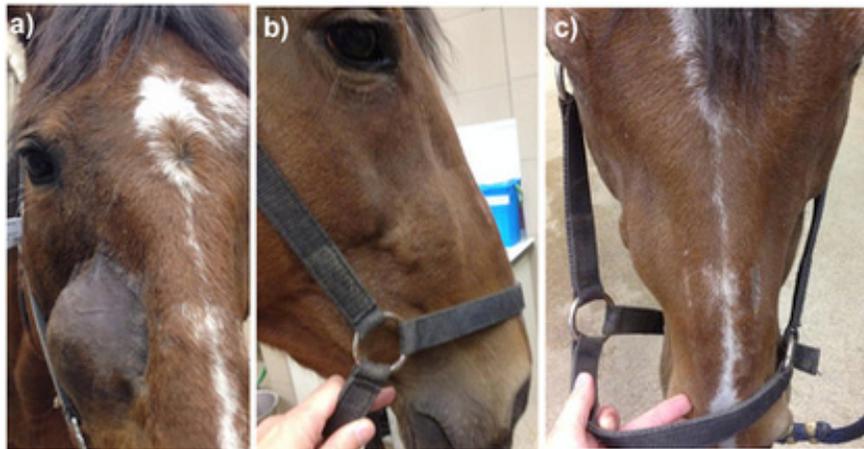


Fig. 1: Case 2. Swelling on the right maxilla prior to treatment (a). Lateral- and dorso-ventral view of the swelling five months after formalin injection (b and c).

Oral examination showed bulging of the hard palate in 2 cases. Diagnosis of a maxillary bone cyst was based on radiography, computed tomography (cases 1 and 2) and histopathological examination. As complete surgical excision was not possible because of the anatomical location and the extensiveness of the lesions, the cysts were infused with a 4% formalin solution to chemically debride the cystic lining. Additional treatments included partial curettage (case 1), cyst drainage (all), and tooth extraction (cases 2 and 3). Results and Conclusions: Follow-up was available for 4 to 18 months. The external swelling decreased substantially in size in two cases (Fig. 1 and 2). These horses returned to their previous level of activity without any further complaints. In a 3rd case, the swelling remained stable for 3 months after which it increased again. Owners declined further treatment. Conservative management of bone cysts using formalin proved to be successful in 2/3 cases.

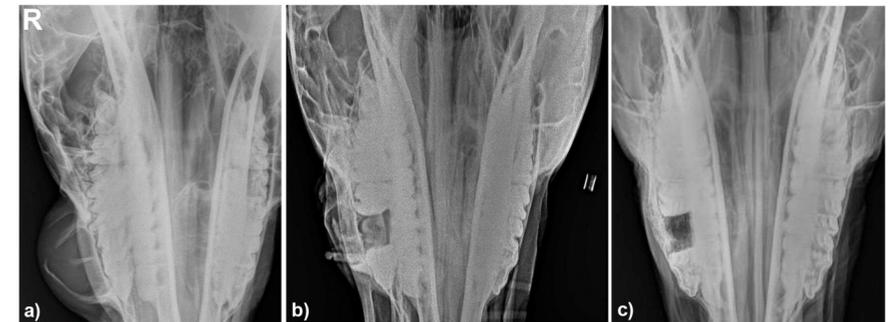


Fig. 2: Case 2. Pre-operative (a), two months (b) and five months post-surgery (c) dorso-ventral radiographic projection of the skull. The pre-operative radiograph showed a severe soft-tissue swelling at the right maxilla centred on the premolars of the first dental arcade with the presence of smooth, well-delineated and regular mineral septa within the soft-tissue swelling. Note the thinning of the maxillary cortex. There is also a mild widening of the periodontal space of Triadan 107. Dorso-ventral radiographic projection at two months post-surgery where Triadan 107 was extracted (b) revealed a marked reduction of the lesion. The mineral septa are still visible. Five months post-surgery (c) revealed a thickening of the cortical bone on the buccal side of the alveolus of the extracted Triadan 107.

References

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