



Elke Pollaris, MSc;  
Katrien Vanderperren, PhD,  
DVM,  
Guy A.M. De Pauw, DDS,  
PhD,  
Lieven Vlamincq, PhD, Dipl.  
ECVS\*, Dipl. EVDC Eq.

Elke Pollaris, Department of  
Surgery and  
Anaesthesiology of Large  
Animals, Faculty of  
Veterinary Medicine, Ghent  
University, Salisburylaan  
133, 8920 Merelbeke.  
Belgium.

elke.pollaris@ugent.be

## SPONTANEOUS ORTHODONTIC MOVEMENT TO NORMAL OCCLUSION AFTER EXTRACTION OF A SUPERNUMERARY TOOTH

### Case Report

Spontaneous orthodontic movement to normal occlusion after extraction of a supernumerary tooth.

### Introduction

A supernumerary tooth (polydontia) is a tooth that is additional to the normal series and can be found in almost any region or the dental arch. When clinical problems arise (e.g. malocclusion, periodontal disease, overgrowths, etc.) a treatment plan should be implemented<sup>1,2</sup>.

### Case description

A 6-year old Arabian gelding showed problems during ridden exercise. Clinically, a firm, sensitive, swelling was present at the level of the right cheek adjacent to 106. Oral, radiographic and computed tomographic examinations revealed a supernumerary tooth in the right maxillary arcade (106bis). One tooth with a normal morphology, at the level of 106 was displaced towards buccal whereas the second tooth (106bis) on the palatal side was placed horizontally and had an amorphous appearance. This latter tooth was extracted.

### Results

Four months after surgery the external swelling was strongly reduced by repositioning of the 106. The extraction site was covered with healthy gingiva. Oral and repeated CT examination revealed that the tooth on the buccal side was repositioned nearly to its normal position due to tipping of the crown (Fig. 1). The horse showed no clinical symptoms and returned to its normal work. Follow-up was available until 1,5 year after surgery and the horse was still performing without any complaints.

### Conclusion

With current possible treatment options for different dental diseases, the goal should be to preserve teeth and obtain normal molar occlusion when possible. In this case,



*Fig. 1: Cast models of the right maxillary premolar region. (a) Cast model 4 days after extraction of the amorphous tooth. Element 106 is clearly moved towards buccal and defect due to the extraction of the supernumerary tooth is visible. (b) Cast model 6 months post extraction. The tooth (106) is clinically almost aligned in a physiological position. The bone defect in the palate is decreased. (c) Cast model 19 months post extraction. There are no significant changes in the position of the tooth. The defect in the hard palate has further decreased, especially in depth.*

six months after extraction of the tooth, the tooth showed a spontaneous dental drift towards the hard palate, hence its normal position. This supports the assumption that, as in humans, each force executed on the crown of a tooth by mastication and forces of muscle tonicity produce a pressure-tension reaction in the periodontal ligament which results in a spatial arrangement of the dentition<sup>3</sup>.

### References

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