

Maxillary Extractions in Cats

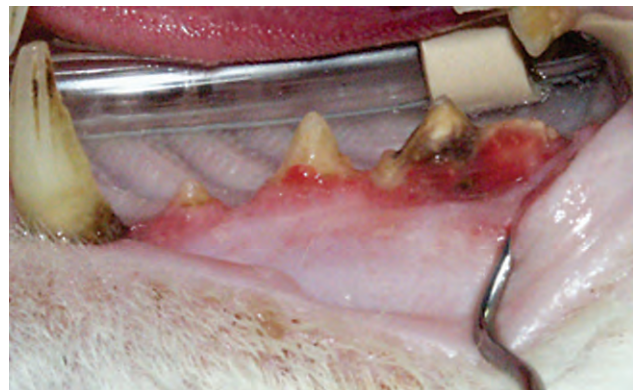
Mark M. Smith, VMD, DACVS, DAVDC, AVDC and ACVS Founding Fellow of Oral & Maxillofacial Surgery

*Center for Veterinary Dentistry & Oral Surgery
Gaithersburg, Maryland*

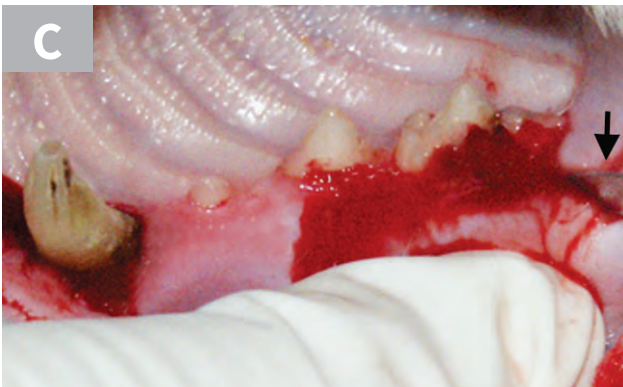
Full-mouth tooth extraction is indicated in cats that have stomatitis, generalized tooth resorption, and/or severe periodontal disease. Each tooth, including the entirety of the root, must be completely removed. Surgical extraction requires familiarity with the following techniques:

- ▶ Mucoperiosteal flap development
- ▶ Buccal bone removal (ie, alveolectomy)
- ▶ Crown sectioning of multirooted teeth
- ▶ Crown–root segment elevation and removal
- ▶ Removal and contouring of rough bone margins (ie, osteoplasty) at extraction sites
- ▶ Debridement of diseased periodontal tissue
- ▶ Lavage of extraction sites with dilute chlorhexidine
- ▶ Mobilization of mucoperiosteal flaps
- ▶ Wound apposition using absorbable suture in a simple interrupted pattern

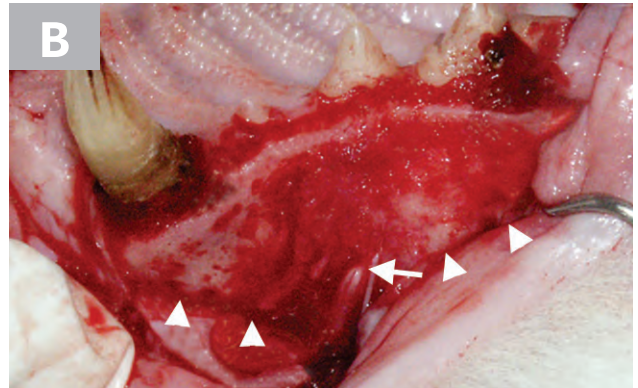
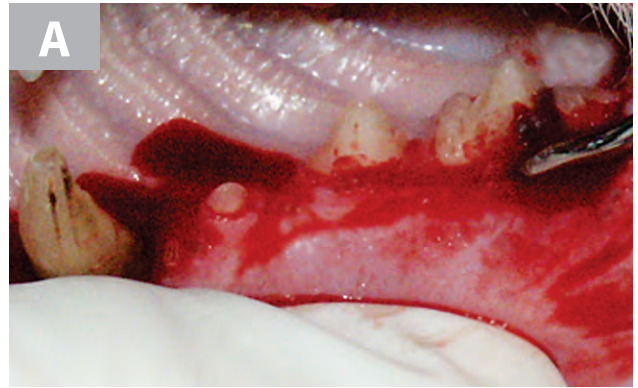
The following images show full-mouth tooth extraction in the maxillary quadrant of cats.



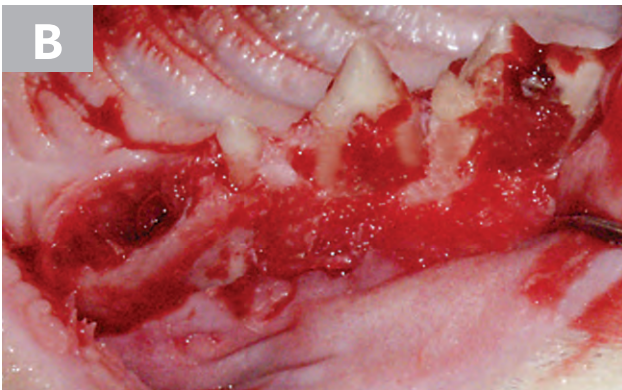
▲ **FIGURE 1** Right maxillary arcade with the patient in dorsal recumbency. Extraction of all teeth was recommended to treat periodontal disease and tooth resorption.



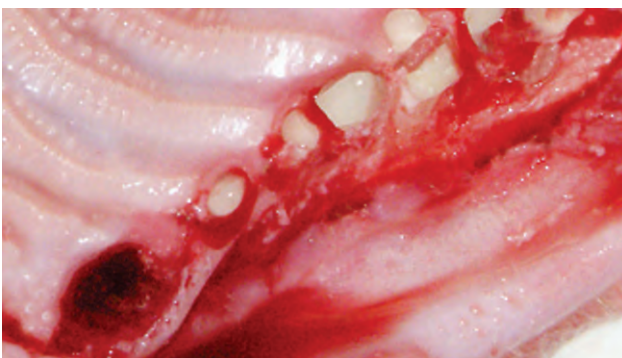
▲ **FIGURE 2** A mucoperiosteal flap is created to extract teeth on the maxillary arcade. A rostral vertical release incision (**A**; **arrow**) is made at the mesial aspect of the maxillary canine tooth. An intrasulcular incision is made along the buccal aspect of the teeth between the maxillary canine and first molar tooth (**B**). A caudal vertical release incision (**C**; **arrow**) is made at the distal aspect of the maxillary first molar tooth.



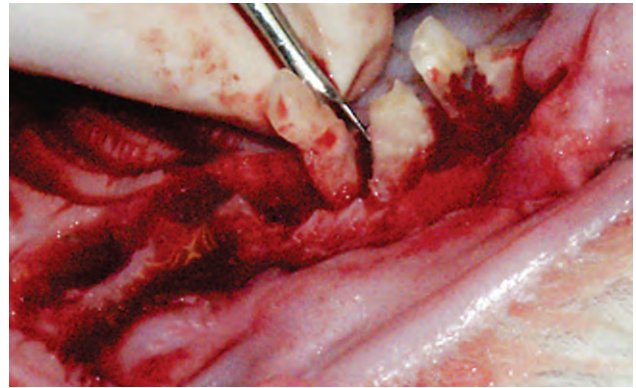
▲ **FIGURE 3** Elevation of the mucoperiosteal flap along the maxillary dental arcade using a small periosteal elevator (**A**). Elevation of the flap (**B**) exposes the cortical bone of the lateral maxilla and may reveal the infraorbital neurovascular pedicle (**arrow**) exiting the infraorbital foramen. Incising the periosteum (**arrowheads**), which tethers the submucosa to bone, is critical to providing flap mobility to ensure tension-free wound closure.



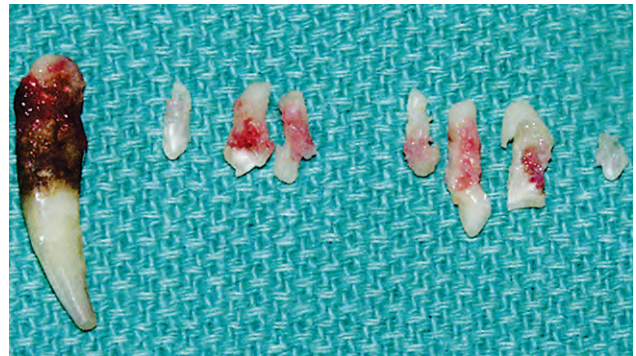
▲ **FIGURE 4** Buccal bone removal (ie, alvelectomy) is used to expose the tooth roots of the maxillary second premolar (**A**) and the remaining teeth of the maxillary dental arcade (**B**) using a high-speed handpiece and a pear-shaped or small round bur. Typically, buccal bone would be removed to facilitate extraction of the maxillary canine tooth. In this case, the canine tooth had grade 3 mobility and was extracted using extraction forceps.



▲ **FIGURE 5** Crown sectioning of the multirooted teeth of the maxillary arcade. The crown is sectioned at the furcation and through the crown. In general, the maxillary first molar tooth is not sectioned based on its common fused-root morphology.

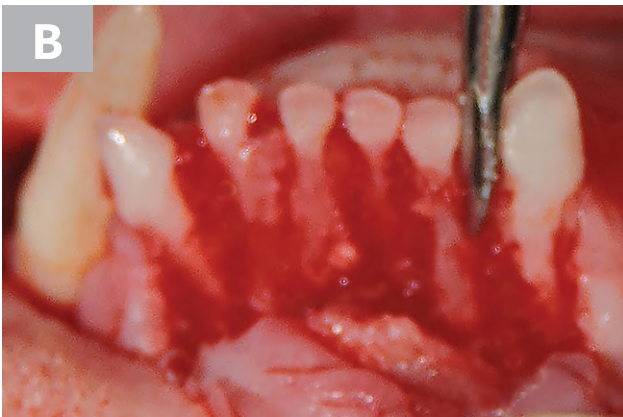
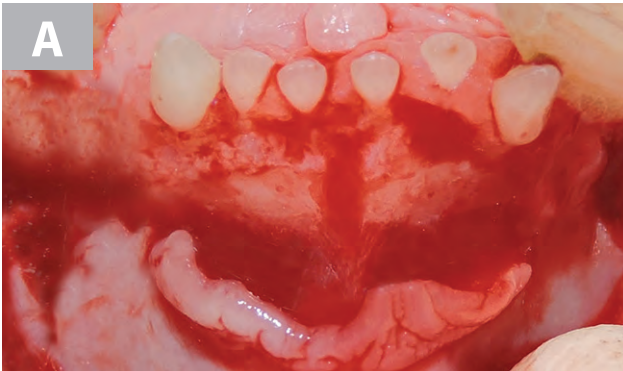


▲ **FIGURE 6** A small periodontal elevator is used to mobilize the crown–root segment. The elevator is placed parallel to the long axis of the root and twisted to disrupt the remaining attached periodontal ligament and mobilize the root. The displaced root is held in its new position by the elevator for 10 to 15 seconds to fatigue the periodontal ligament. This maneuver is repeated multiple times around the crown–root segment to mobilize the segment and enable extraction using extraction forceps.

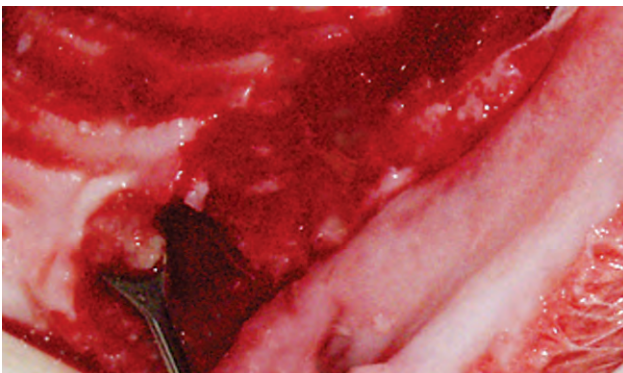


▲ **FIGURE 7** Extracted crown–root segments of the teeth of the maxillary arcade. Tooth segments should be checked for intact apices, and complete extraction of the entire tooth should be confirmed on postoperative intraoral radiographs.

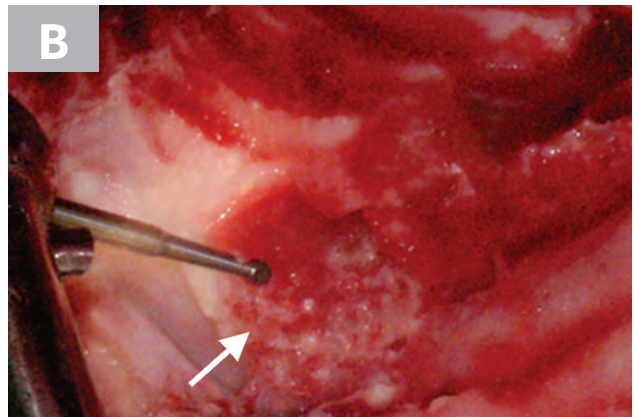
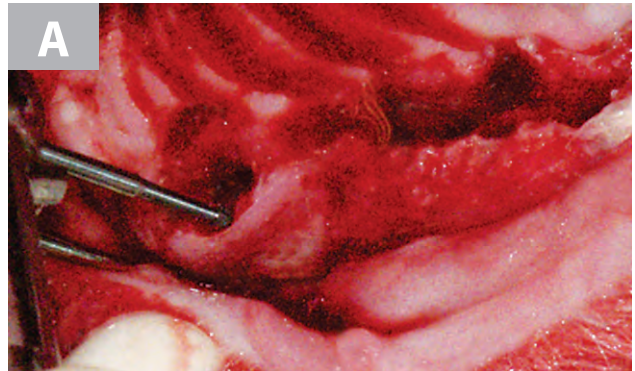
Continues ►



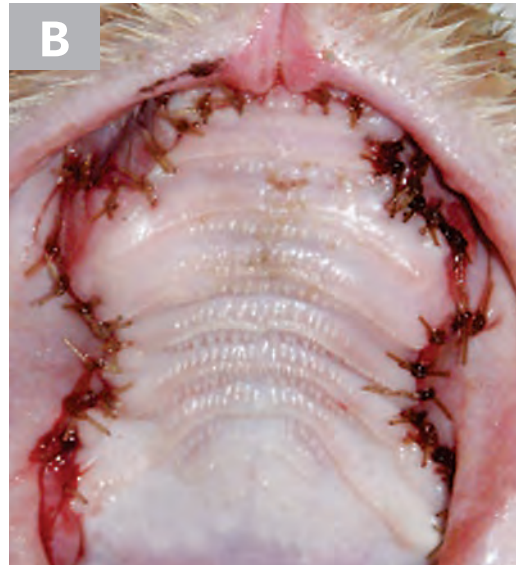
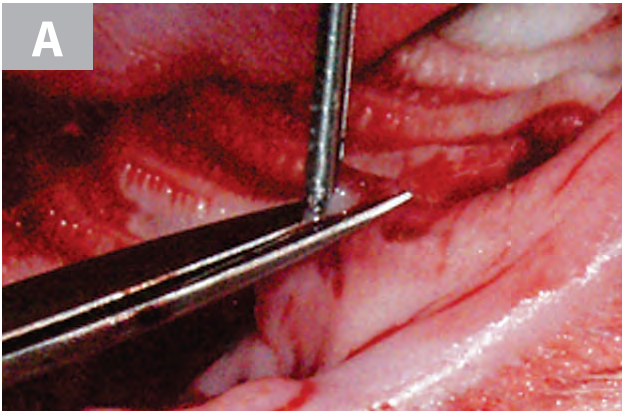
▲ **FIGURE 8** The maxillary incisor teeth are prepared for extraction using the same techniques as described in previous figures. The maxillary rostral quadrant flap release incisions serve as the vertical release incisions for the small mucoperiosteal flap developed for incisor tooth extraction (A). The maxillary incisor teeth are extracted using periodontal elevators and extraction forceps (B).



▲ **FIGURE 9** A bone curette is used to debride alveoli of granulation or diseased tissue and other debris associated with the extraction procedure. Dilute chlorhexidine solution is then used to lavage the alveoli.



▲ **FIGURE 10** Osteoplasty is performed with a large round bur to remove and contour rough bone margins secondary to extraction (A). It is important to remove proliferative bone (B; arrow) associated with osteitis secondary to periodontal disease that is often noted on the buccal aspect of the canine tooth. This maneuver restores anatomic congruity and decreases tension on the apposed mucoperiosteal flap, as there is less surface area for the flap to traverse once it is in its sutured position.



▲ **FIGURE 11** Iris or tenotomy scissors are used to trim gingiva traumatized during extraction (A). Maxillary wound closure in a patient undergoing full-mouth extraction is completed via apposition of the mucoperiosteal flaps using absorbable suture in a simple interrupted pattern (B). ■

RELATED ARTICLE

To read about Mandibular Extractions in Cats, visit cliniciansbrief.com/article/mandibular-extractions-cats or scan the QR code below.



Using QR codes from your mobile device is easy and quick! Simply focus your phone's camera on the QR code as if taking a picture (but don't click!).

A notification banner will pop up at the top of your screen; tap the banner to view the linked content.