THE UNIVERSITY of EDINBURGH
Royal (Dick) School of Veterinary Studies

ROSLIN

Best Practice Dentistry for Our Canine and Feline Patients.

Claire Harrison BSc (Hons) RVN VTS (Dentistry) AFHEA
Royal (Dick) School of Veterinary Studies, University of Edinburgh & iM3 Dental Ltd; Email: Claire.Harrison_vtsdent@yahoo.com

Dentistry Procedures in General Practice

- Professional Dental Treatment.
- COHAT- Comprehensive Oral Health Assessment and Treatment.
- CORE- Complete Oral and Radiographic Evaluation

What is a Dental?

- Avoid using this poor terminology.
- Can lead to lack of understanding from pet owners.
- Dental Procedure or Professional Dental Treatment much more descriptive.

Managing Dentistry in General Veterinary Practice

- Implement practice protocols/ standard operating procedures.
- Consider anaesthesia and analgesia requirements.
- Antibiotic use.
- Utilising Registered Veterinary Nurses
- Staging procedures to allow planning.
- AAHA Dental Guidelines 2019.
- Early intervention and regular dental assessment and cleaning under GA.
- Dental and oral health nurse led clinics.
- CPD and training.

Staging of Dentistry Procedures

- Stage 1-
- General Anaesthetic
- Oral Assessment/Chart
- Ultrasonic Scaling (Nerve Blocks)
- Full mouth Radiographs (timings)
- Complete periodontal therapy
- Polishing
- Extract mobile/painful teeth

- Stage 2-
- Further and surgical extractions.
- Re-scale and polish if needed.
- When?
- 2-4 weeks after initial procedure.

- Time Limits!

Viscotears®
Liquid Gel
Carbomer
(polyacrylic acid)
2mg/g
Sterile eye drops
for dry eyes
10 g
BAUSCH + LOMB

The Dental Cleaning

Dental Radiography.

Mastering dental radiography will be the single biggest factor that will improve your ability to diagnose and treat dental cases.

It is a core skill for any dentistry

Essential Radiographs- All Clinical Findings

- All "missing" teeth
- All perio pockets >4mm deep
- All damaged teeth
- Full mouth survey of cats

when TR lesions found in 307/407

- Or….. All teeth?

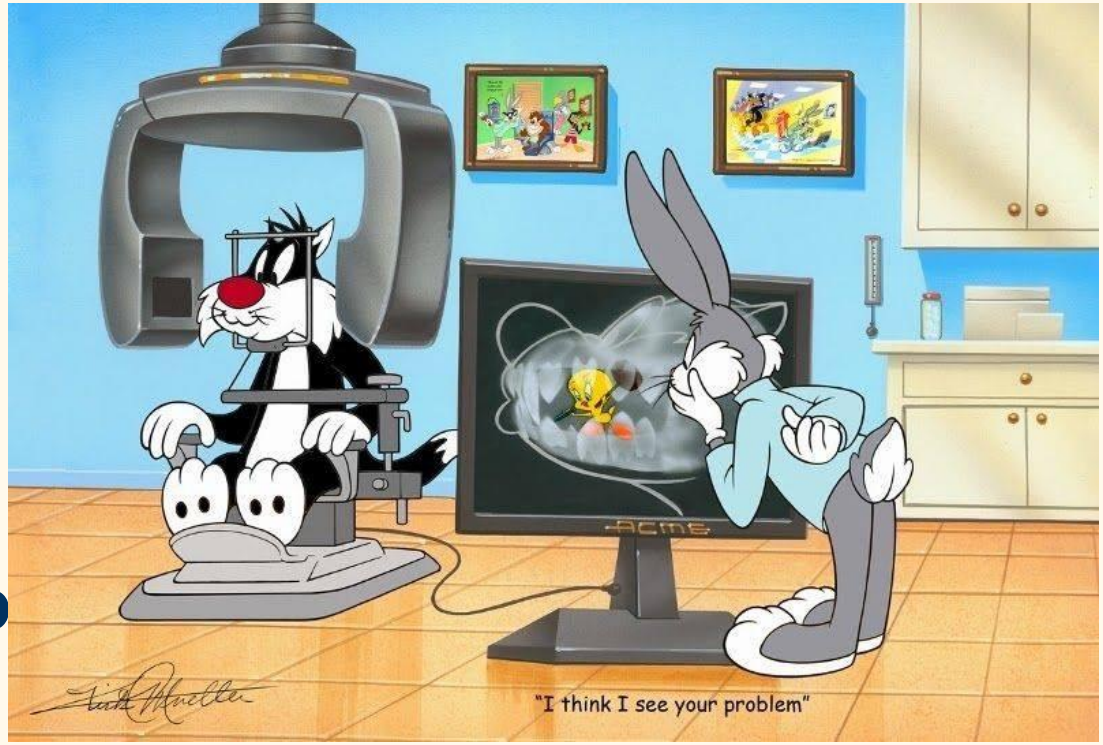
Benefit of Full Mouth Radiographs

- **Reveals *clinical hidden pathology* in 28% dogs & 42% cats in otherwise "normal" mouth ***
- **Reveals *additional pathology* in 50% dogs & 54% cats in mouths with abnormal findings ****

*Verstraete et al 1998 Am J Vet Res: ** Kim et al 2013 J Am Anim Hosp Assoc

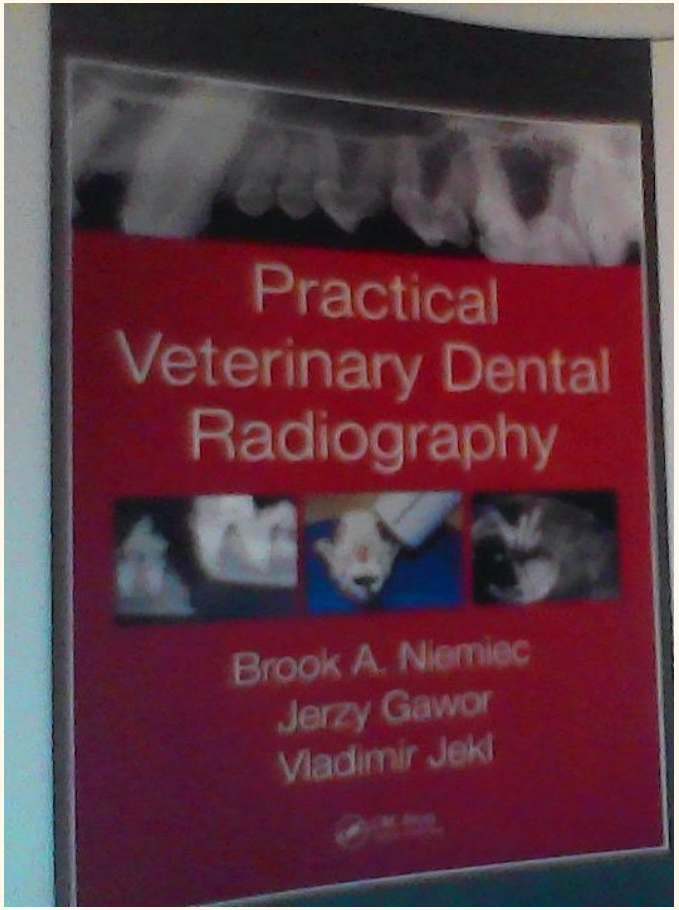
Mastering Dental Radiography

- Quick
- Easy
- Available
- Confident & diagnostic
- Good enough to show clients



Further Reading

- Simplified Positioning for Dental radiology, Woodward, TM.
- Dental radiology. Woodward, TM. Top Comp Anim Med 2009; 24(1):20-36



Maxillofacial Nerve Blocks

Choices: Lidocaine, Mepivacaine, Bupivacaine. Bupivacaine/lidocaine combo not necessary.

Dental Aspirating syringe – access to glass vials & 27g x 35mm needles

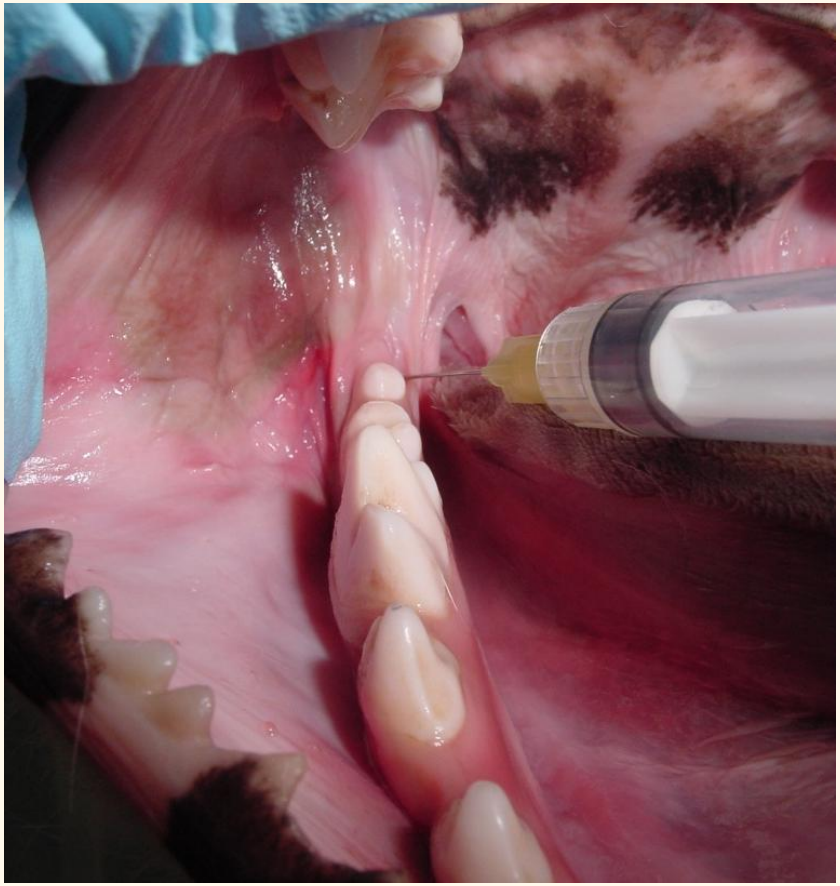
Or Syringe with 27g needle

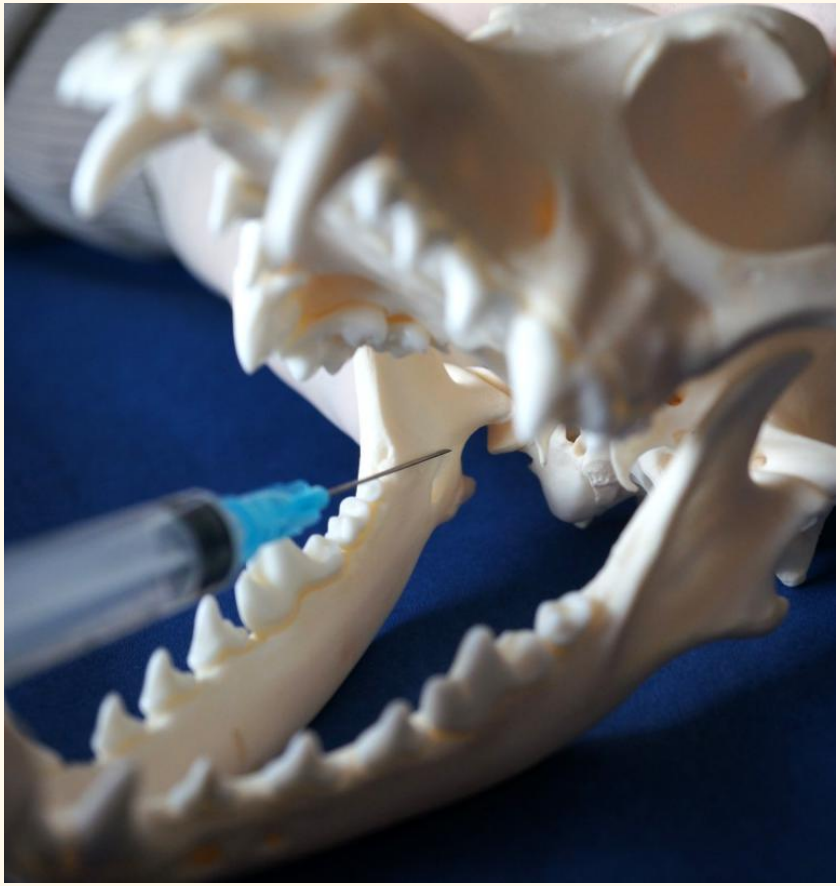
Maximum dose & site volume

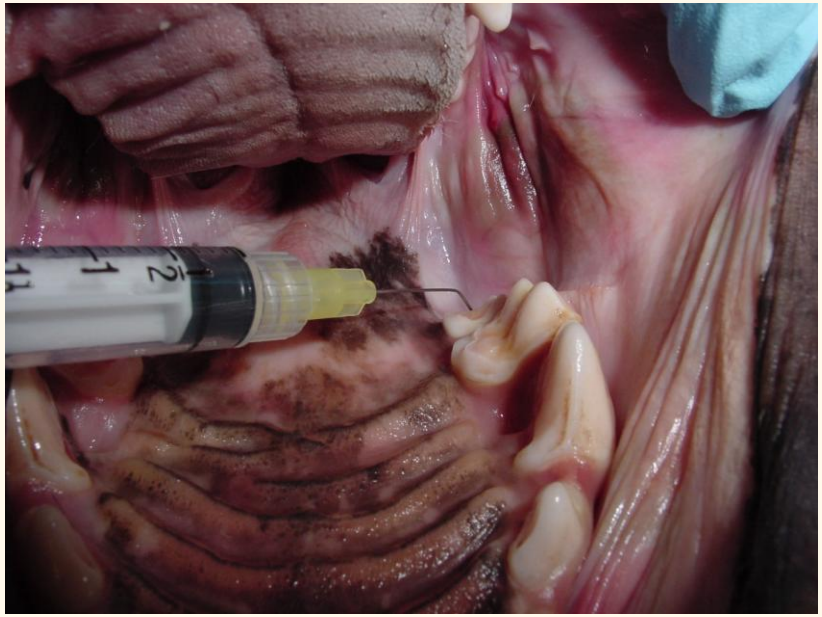
- Mepivacaine: dogs 5mg/kg & 2.5mg/kg cats
- Bupivacaine: dogs 2mg/kg & cats 1.5mg/kg
- Combo – lidocaine 0.2ml & bupivacaine 0.8ml- Not Recommended!
- **Site volume** depends on patient size & not dose of analgesic 2ml large dogs to 0.25ml cats/small dogs

- Page 133 of BSAVA Manual of Dentistry & Oral Surgery 4th Ed

Inferior Alveolar, Mandibular Canal





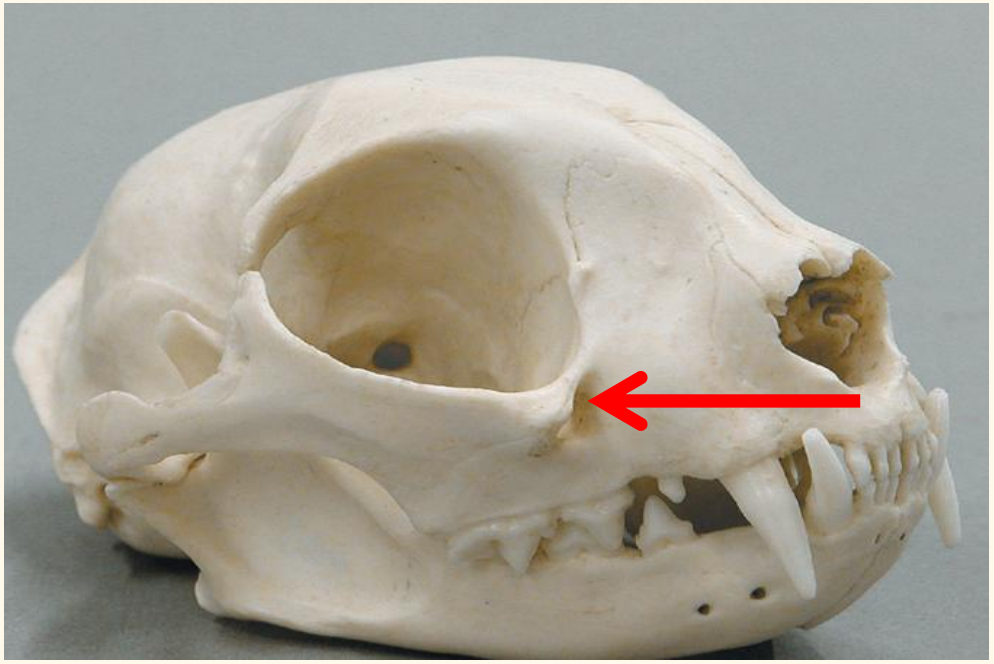


Maxillary Block

Aim for area immediately caudal to last molar.
Pop needle just through mucosa & no more

Maxilla- Infra-Orbital Block

Foramen entry – extreme care.
Point needle to floor of canal
!AVOID IN CATS!



Complications

- **Anthony JA 2008 Proceedings 17th European Vet Dental Forum**
- **12 dogs in study**
- Globe puncture
- Nerve or other foramen content damage.
- Every block had nerve damage if using any needle larger than 27 gauge.
- Mental foramen block 100% damage regardless needle size
- Experienced operator no nerve damage
- Inexperienced operator 80% damage
- If bone hit and needle re-enters canal, all had damage due to the slight bend in the needle tip.

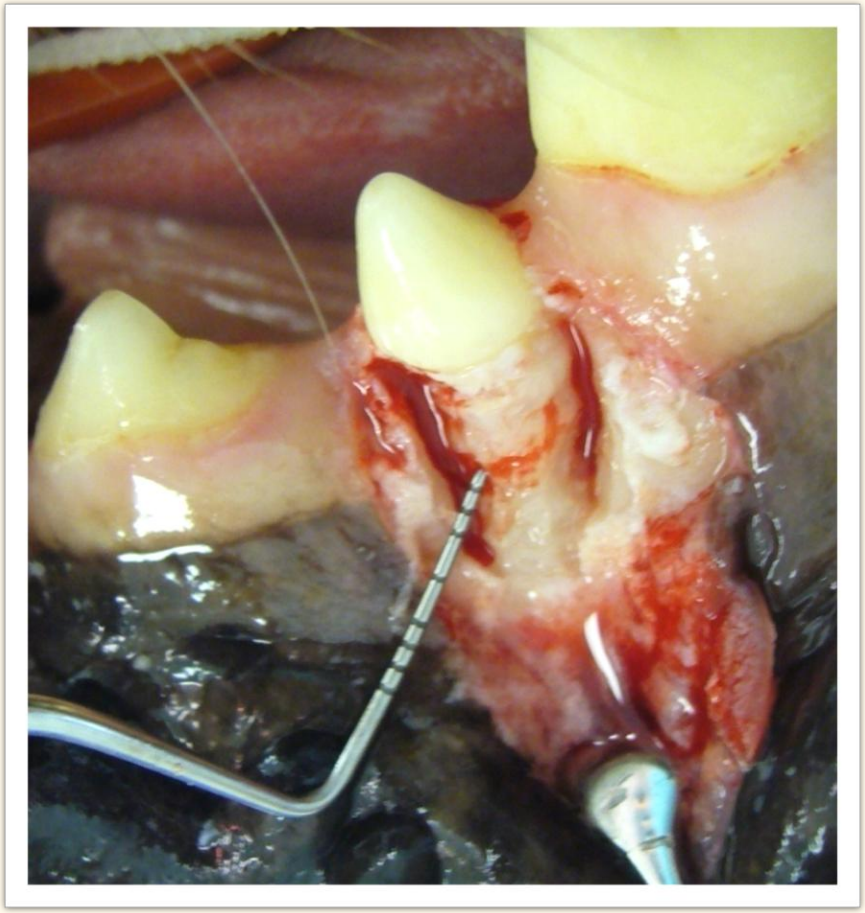
Exodontics- Tooth Extractions

- Multiple reasons for tooth extractions.
- Periodontal disease, tooth resorption, Malocclusions, Trauma/fractures. Unerupted teeth.
- Correct equipment and technique required to ensure performed safely and effectively.

Simple/Closed Extractions

- Suitable for single rooted or severely mobile teeth.
- No incision required (except gingival sulcus incision)
- Suture closed using simply interrupted pattern.

Open Surgical Extractions



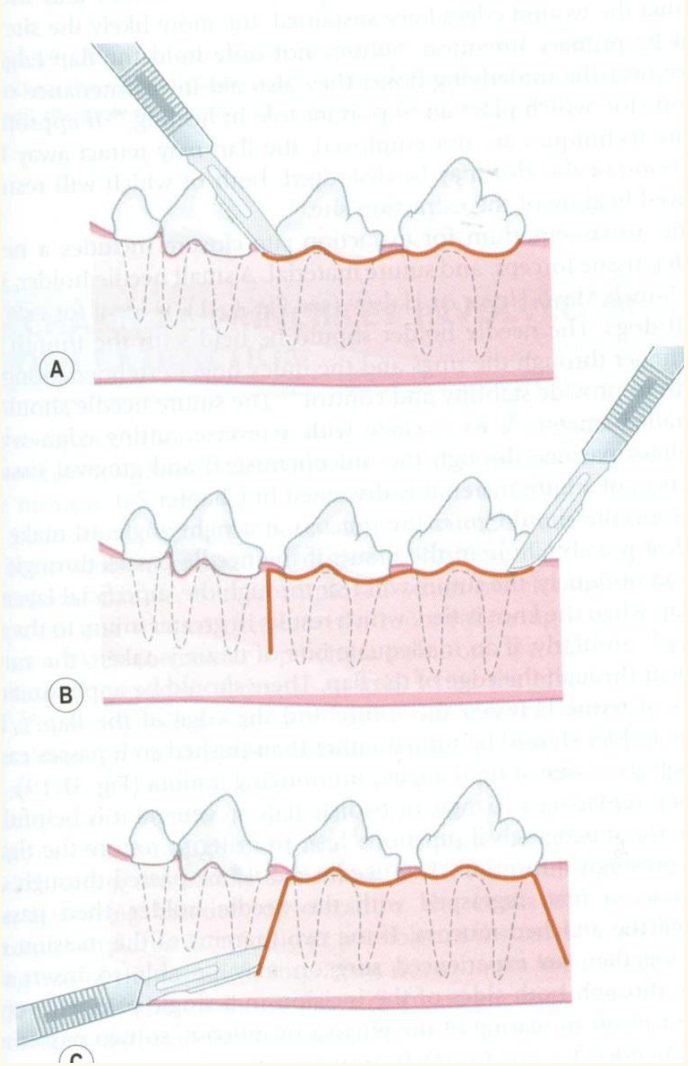
- Requires gingival incision and bone removal.
- Sectioning in multirooted teeth
- Open technique- create mucogingival flap.

Access for extraction

- Plan access before starting
- Be in control from the start - analgesia/instruments/technique/time
- Closed extraction only good for loose teeth or severe attachment loss
- Converting from a closed to an open technique - not good planning

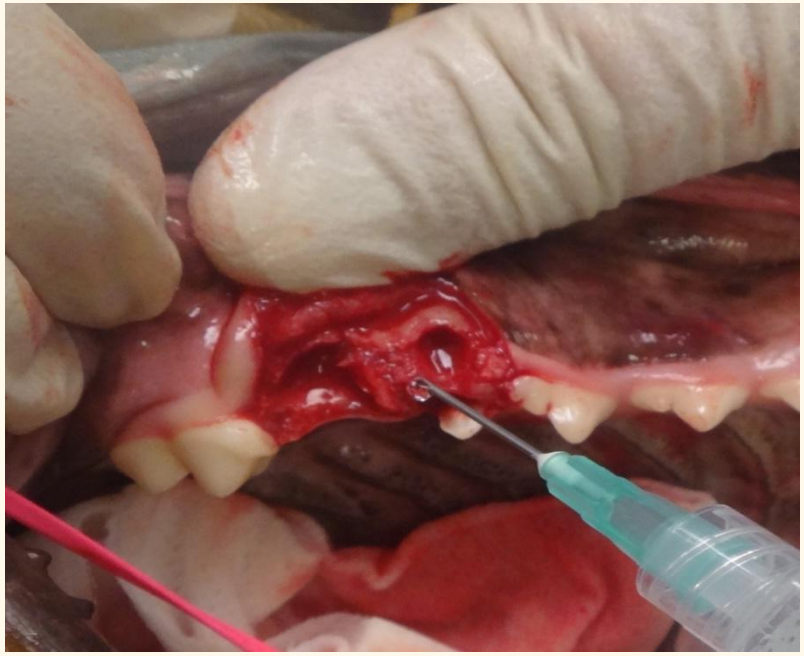
Mucogingival flap types

- **Envelope Flap – sulcus incision only. Usually target tooth & one either side**
- **Mucogingival Triangular Flap - One vertical release**
- **Mucogingival Pedicle Flap - Two vertical releases**

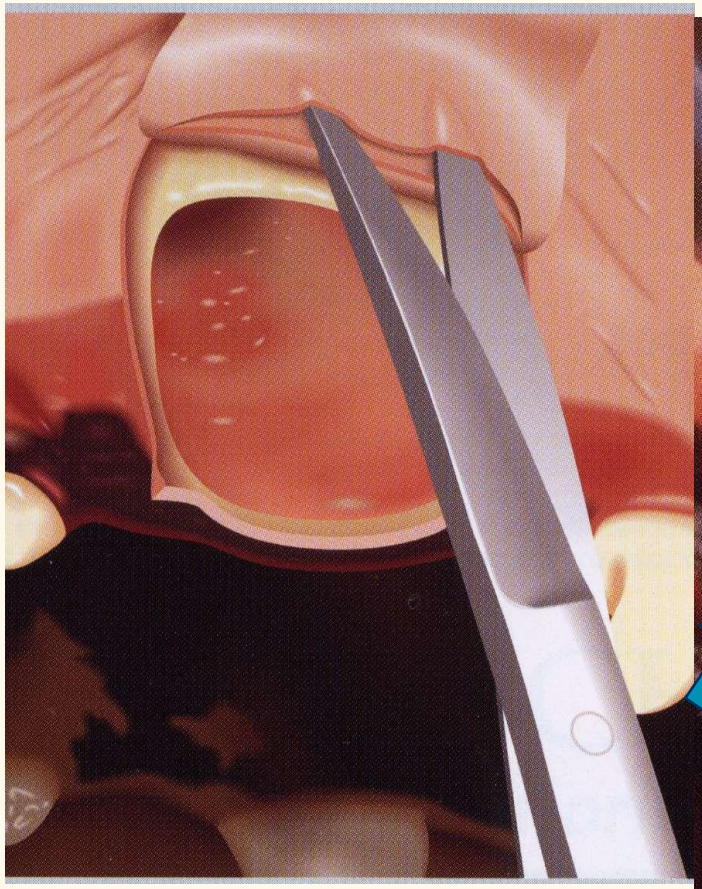


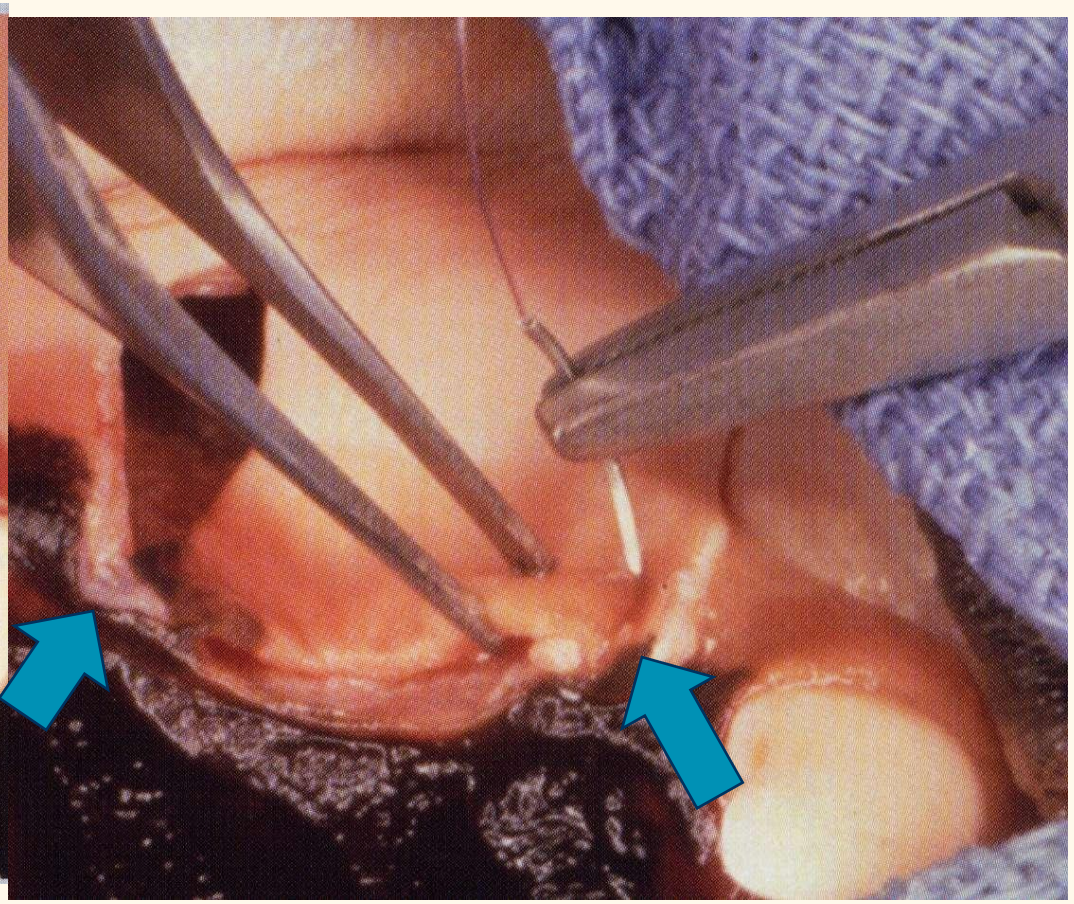
Management Of Alveolus

- Smooth and remove any sharp bone crest.
- Flush out debris & keep tissues moist with sterile saline
- Do not use air/water syringe
- Curette infected granulation tissue carefully



Split Periosteum & Suture





Post-Extraction Radiographs

- Any roots?
- Anything damaged?
- Adjacent teeth OK?
- Take the rads before suturing

Retained Tooth Roots

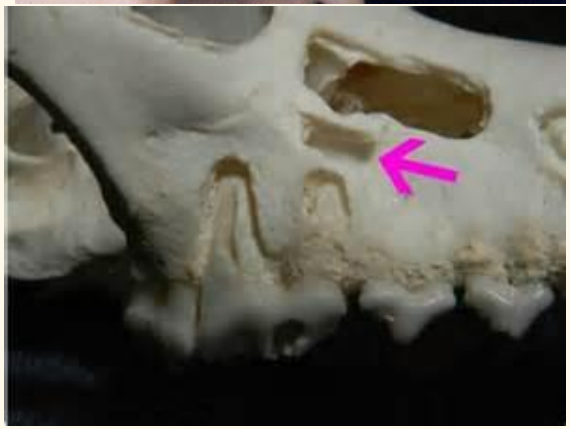
- Study (2014) assessed frequency of retained roots after carnassial tooth extraction
- 72 dogs & 42 cats
- All extractions deemed “successful” at time
- 82% dogs & 93% cats had radiographic evidence of tooth roots

- **Moore JI et al. Evaluation of extraction sites for evidence of retained tooth roots and periapical pathology. J Anim Hosp Assoc 2014; 50; 77-82**

Extraction Complications

- Fractured roots
- Haemorrhage
- Dehiscence
- Iatrogenic Jaw Fracture
- Enamel defects to developing permanent

Instrument Slippage



Orbital Penetration

Ref: Smith et al, J. Vet Dent.
Vol 20 No. 1 March 2003

Alternatives to Extraction- Periodontal Disease.

- Advanced root planing.
- Demineralised Bone Matrix (DBM)
- Regum Vet

Damaged/Fractured Teeth

- Odontoplasty and Fissure seal- uncomplicated crown fractures.

- Root canal treatment- Pulp exposure and non vital teeth.