

Dental Equipment and Instruments

Heidi B. Lobprise, DVM

Diplomate, American Veterinary Dental College

Kerrville, Texas, USA

The Operator

- Good surgical lighting
- Adjustable table
- Ergonic chairs
- Matts

Operator Equipment

- Personal Protection
 - Mask
 - Eye shield
- Magnification and light

Peri-operative

- Pain management
- Regional and local blocks
 - Skulls for anatomy
 - Bupivacaine with epinephrine
 - Lidocaine
- CRI – www.VASG.org

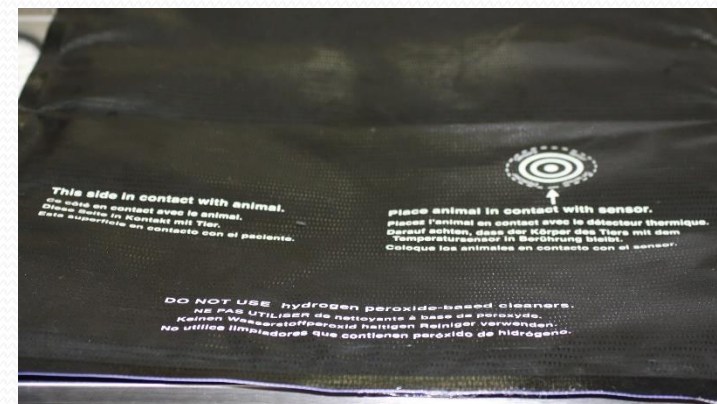


Peri-operative

- Patient monitoring
 - HR, RR, BP, End CO₂
 - Body temperature
- Patient support
 - Fluids
 - Body temperature
- Good support staff!



Patient Support



Complete Dental Assessment

- Dental chart
 - Full page, two views of dentition
- Visual assessment
 - Plaque and calculus
 - Level and region of inflammation
- Tactile assessment – mobility
- Attachment loss assessment
 - Gingival recession/root exposure
 - Pocket depth

CANINE DENTAL CHART

Dulles Dental Service Animal Clinic, 12001 Oak Road, Dulles, Va. 22021, PH 975-210-2111, FAX 975-991-0118
Robert F. Major, DVM, Dipl. AVDC, Alton A. Lofgren, DVM, Dipl. AVDC
Assoc. C. Altom, DVM, Assoc. Dental Residents, James H. Hays, DVM, Dental Residents

Owner: _____

breed _____

Presenting Complaint: _____

Size: M / M, F / F Age: _____

Referring Veterinarian: _____

Date: _____

URGENT ALERT

Histories/Signs: _____

Diagnosis: _____

Treatments: _____

Prophylaxis/Polishing _____ (Routine) (Focused)

Tooth Root Plating/Coverage/Packing _____

Tooth Extraction _____

Restorations _____

X-rays _____

Current Recommendations (See History) _____

Anesthetic protocol: _____

Pain medication: _____

Diet: _____ (Routine) (Bx. TD)

(Soft - 24-48 hours) (Soft - exclusively for _____)

Check Type: _____

Visual care - training _____

Sedation/anal _____

Reactions _____

(Euphoric/active) (In) (Depressed) (In) (Anxious)

ADDITIONAL COMMENTS

1. Allergies _____

2. Dental history _____

3. Current _____

4. Current _____

5. Current _____

6. Current _____

7. Current _____

8. Current _____

9. Current _____

10. Current _____

11. Current _____

12. Current _____

13. Current _____

14. Current _____

15. Current _____

16. Current _____

17. Current _____

18. Current _____

19. Current _____

20. Current _____

200. General Exam _____

201. Oral Exam _____

202. Radiographs _____

203. Fluoride _____

204. Anesthesia _____

205. Anesthesia _____

206. Anesthesia _____

207. Anesthesia _____

208. Anesthesia _____

209. Anesthesia _____

210. Anesthesia _____

211. Anesthesia _____

212. Anesthesia _____

213. Anesthesia _____

214. Anesthesia _____

215. Anesthesia _____

216. Anesthesia _____

217. Anesthesia _____

218. Anesthesia _____

219. Anesthesia _____

220. Anesthesia _____

221. Anesthesia _____

222. Anesthesia _____

223. Anesthesia _____

224. Anesthesia _____

225. Anesthesia _____

226. Anesthesia _____

227. Anesthesia _____

228. Anesthesia _____

229. Anesthesia _____

230. Anesthesia _____

231. Anesthesia _____

232. Anesthesia _____

233. Anesthesia _____

234. Anesthesia _____

235. Anesthesia _____

236. Anesthesia _____

237. Anesthesia _____

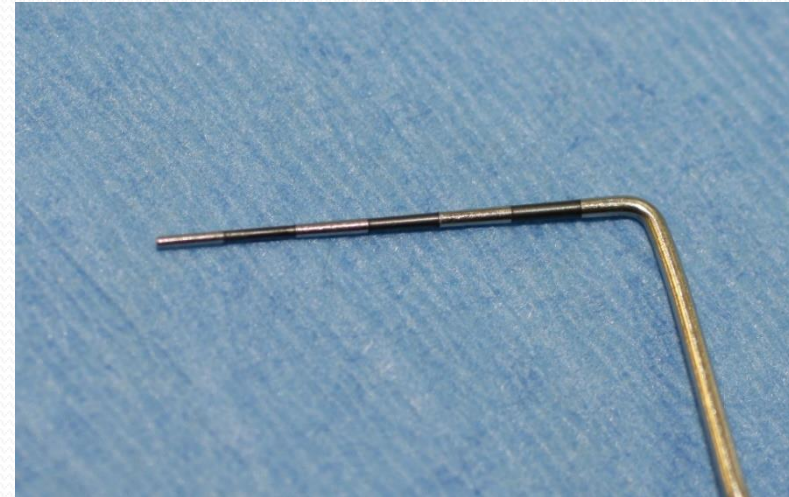
238. Anesthesia _____

239. Anesthesia _____

Maxilla

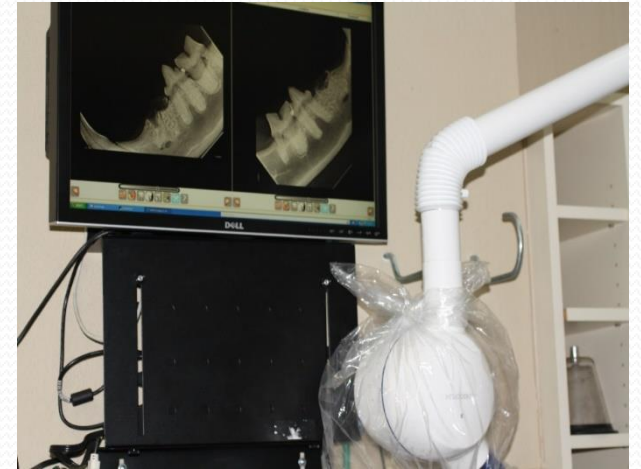
Complete Dental Assessment

- Periodontal probe and explorer
 - Probe – GR and PP
 - Furcation exposure of multi-rooted
 - What do your marks measure?
 - Explorer – open canals, tooth resorption



Complete Dental Assessment

- Dental radiographs
 - Intraoral imaging
 - DR – Digital radiography
 - Immediate image on computer
 - One size sensor, expensive



Complete Dental Assessment

- Dental radiographs
 - CR – Computed radiography
 - Phosphor plates digitalized into image
 - Multiple size phosphor plates, takes time to digitalize
- Advanced Imaging
 - MRI, CT
 - Neoplasia, trauma

Complete Dental Cleaning

- Mechanical
 - Ultrasonic scaler
 - Piezoelectric scaler
 - Subgingival cleaning? – not with most units
- Polishing
 - Low speed handpiece
 - Prophy angle
 - Polishing paste



Complete Dental Procedure

- Dental unit – air driven
 - Air generator or compressed air tanks
 - High speed handpiece – burs
 - Sonic scaler
 - Low speed handpiece – polishing
 - Air-water syringe



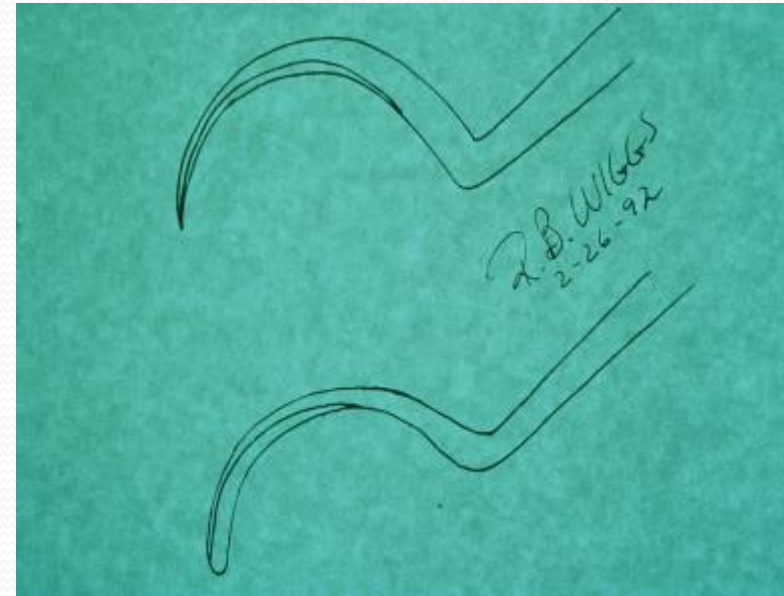
Complete Dental Procedure

- Regular maintenance schedule
 - Unit, handpieces, compressor
 - Daily
 - Weekly
 - Monthly



Complete Dental Cleaning

- Hand instruments
 - Hand scaler
 - Sharp tip – crown only
 - Curette
 - Rounded toe, rounded back
 - Mirror image of curette heads
 - Root planning
 - Needs to be sharpened regularly



Complete Dental Cleaning

- Periodontal kit(s)
- Tray/bag
 - Periodontal probe/explorer
 - Hand scaler
 - Curette(s)
 - Dental mirror
 - W-3 beaver tail
 - Calculus forceps



Sharpening

- Cures

- Working edge on each end of the curette
- Engages tooth surface to plane off calculus and debris
- Face of instrument 'down' toward tooth
- Dull instruments only burnish calculus

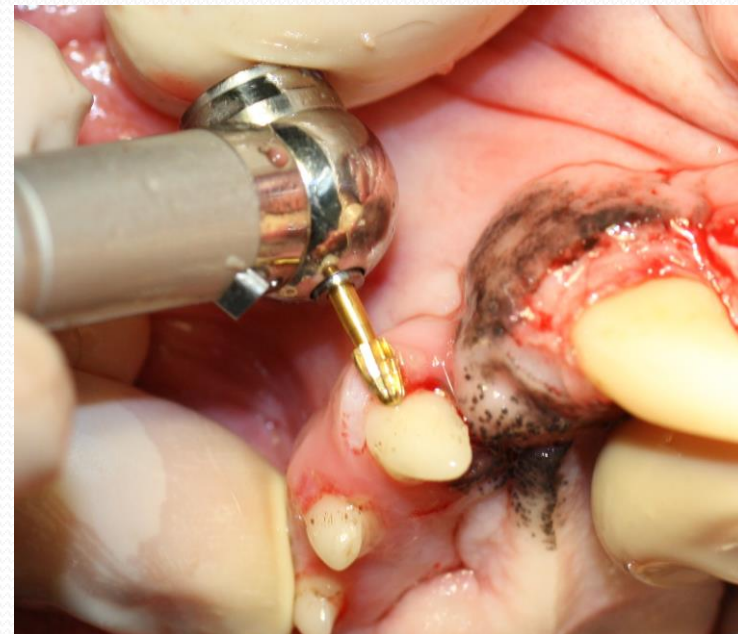
- Sharpening

- Arkansas stone and sharpening oil
- Stationary stone, moving curette
- Stationary curette, moving stone



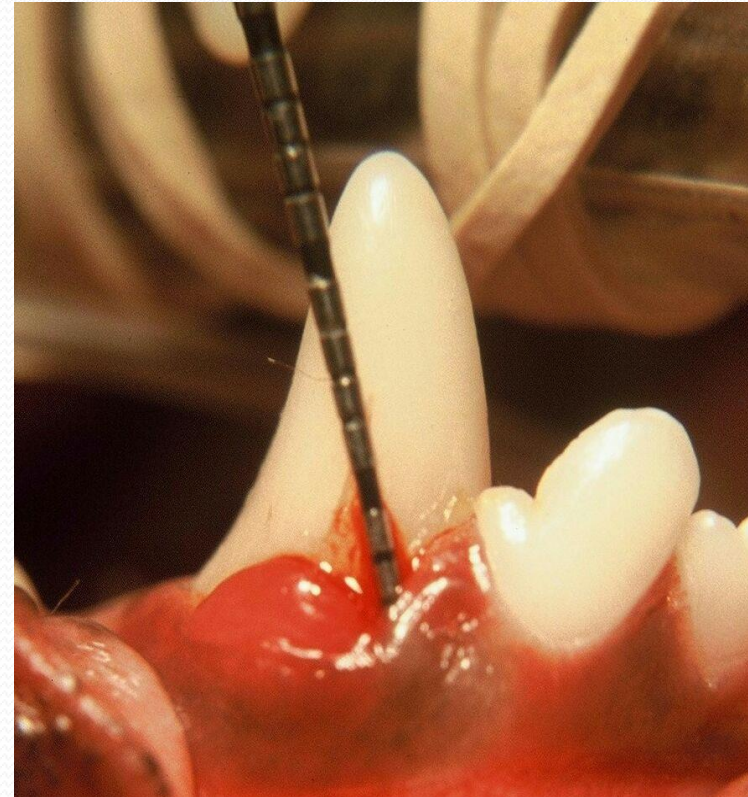
Periodontal Disease

- Assessment
 - Probe-explorer
- General dental cleaning
 - Mechanical scalers
- Subgingival cleaning
 - Curette
 - Root planing
 - Gingival curettage
- Minor gingivectomy – 12-fluted bur



Periodontal Disease

- Non-surgical periodontal therapy
 - Moderate pocket depth
 - Up to 5mm depth
 - Suprabony (above alveolar crest) – soft tissue only
 - Closed root planning
 - Sharpened curette
 - Polish and irrigate



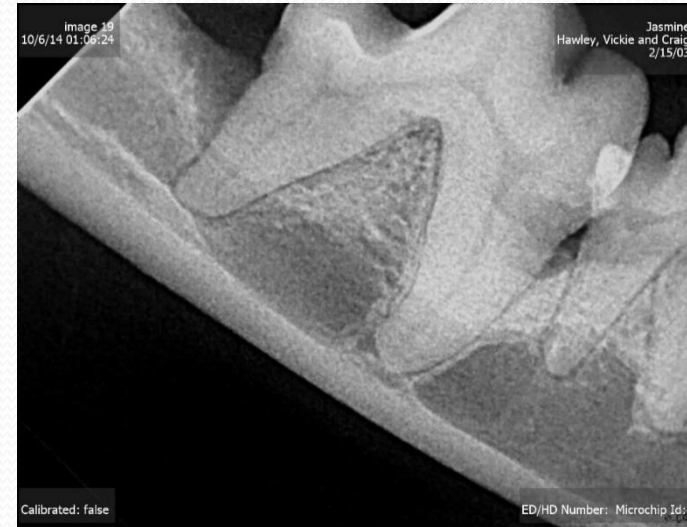
Periodontal Disease

- Non-surgical periodontal therapy
 - Perioceutic – Doxirobe
 - Antibiotic directly at site
 - Doxycycline also provides anti-collagenase
 - W-3 beaver tail to help pack

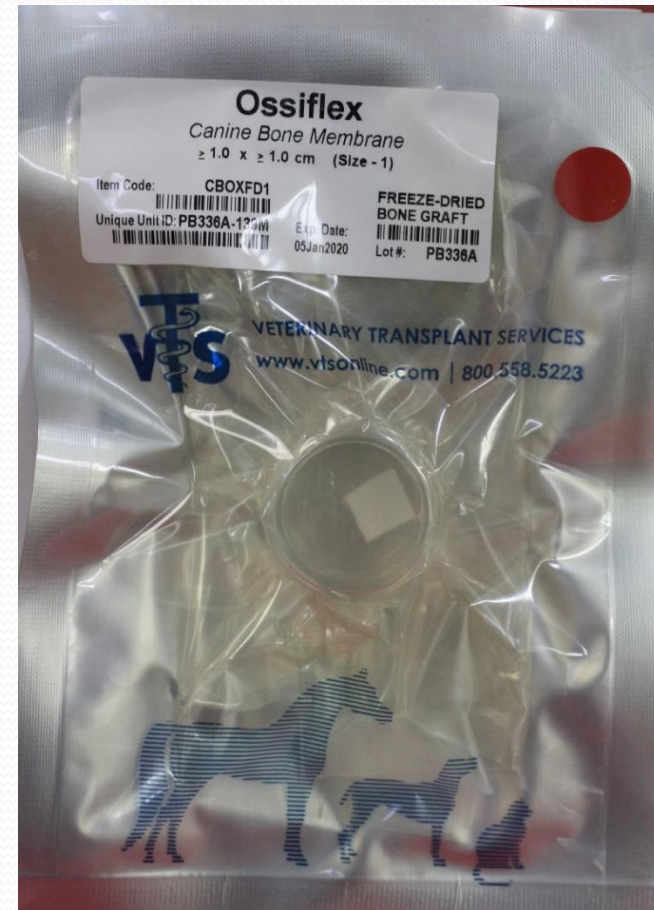


Periodontal Disease

- Surgical therapy
 - Infrabony pocket (behind first molar)
 - Gingival flap (or extract adjacent tooth)
 - Curette all debris and tissue – serrated periosteal elevators
 - Place bone graft material
 - Close



Bone Graft Materials



Extractions

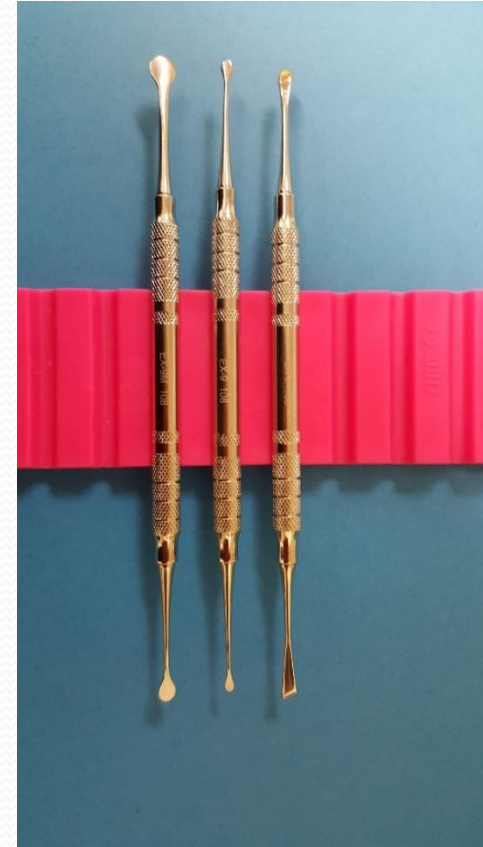
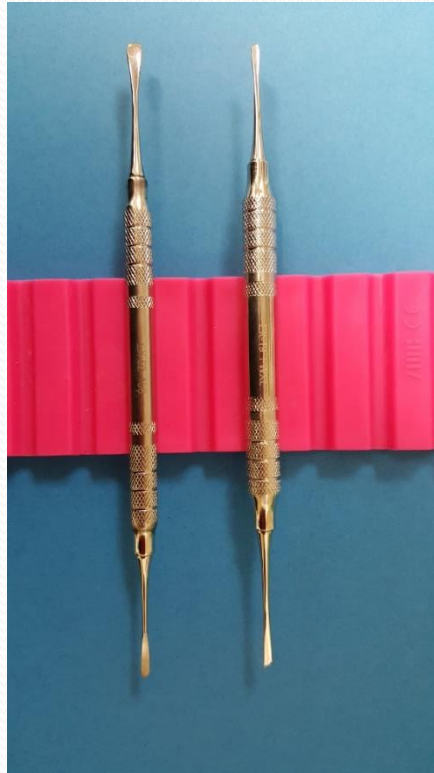
- Extraction kits – for different sized patients
 - Scalpel blade +/- handle – 15c
 - Periosteal elevator – EX 20/21 – plain and serrated
 - Dental elevators – thin edge to fit PDL space
 - Flat blade (luxators) – initial release, flatter surfaces
 - Winged elevators – cupped edge to fit size of root
 - Dental extraction forceps – small breed
 - Root tip picks
 - Burs for sectioning – 699, 700, 700L, 701, 701L
 - Burs for alveoloplasty – round 1,2,4



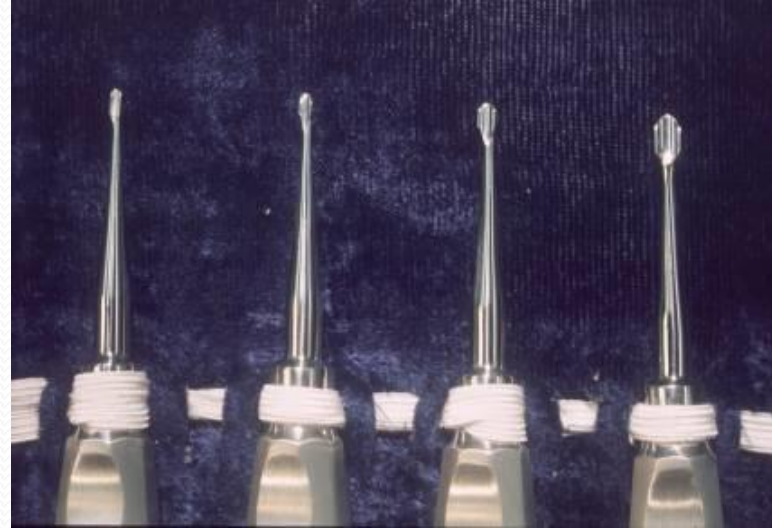
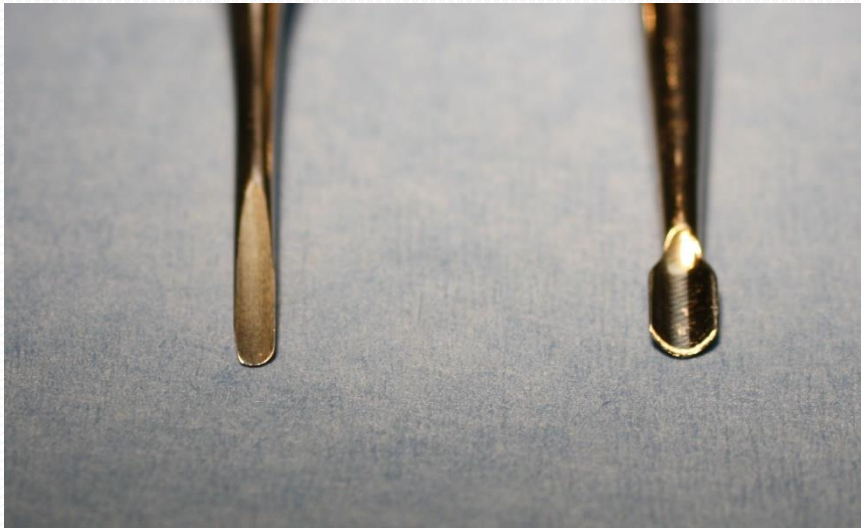
Periosteal Elevators



Molt #4 , Molt #2



Dental Elevators

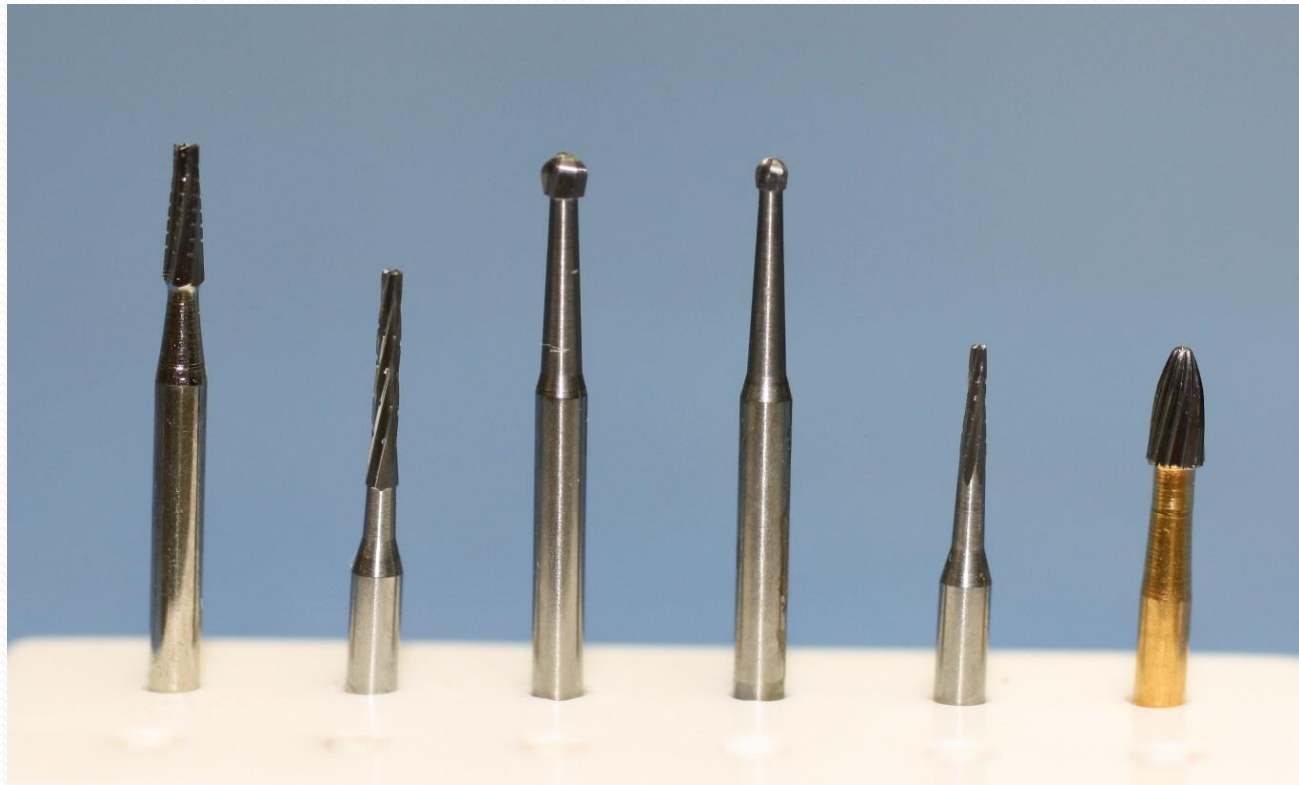


Root Tip Picks - Forceps



Burs – FG – friction grip for high speed

701 700L 4 2 699 12-fluted



Micromotor – Low Speed

- Polishing unit
- Variable speed
- 3000 RPM for polishing
- Increase speed for using base or contra angle with burs for sectioning teeth



Micromotor – Low Speed

- Polishing unit
- Base handpiece
- HP burs
 - Long
 - Thicker shank
 - Cutting tips, round tips
- Need water dripping onto bur to avoid overheating tissues
- Similar to Dremel tool



Micromotor – Low Speed

- Contra angle gear handpiece
- RA burs
 - Ratchett end
 - Cutting tips, round tips
- Some friction type grip
 - Bur tool or push button
- Need water dripping onto bur to avoid overheating tissues



Extractions

- Flaps
 - 15c blade – freshen edge, releasing incisions
 - Periosteal elevator – full thickness flap
 - Elevate palatal/lingual aspect as well
 - Scissors or blade to release periosteum
 - Suture
 - 4-0 monofilament for dogs – small reverse cutting needle
 - 5-0 monofilament for cats – small reverse cutting or taper needle



Sharpen Elevators

- Arkansas stone
 - “Machine out” and rough edges, burs, divots
 - Sharpen edge of instrument to be able to fit into PDL space
 - Broader instruments can't fit into that space
 - Sharpening shortens instrument – eventually replace
 - Sharpen out edge – flat of stone
 - Sharpen inner edge – rounded out edges of stone
 - They dull quickly against tooth and bone, so sharpen often



Small Mammals

- Positioning table
 - Inset mouth gag/opener
- Light source
- Cheek spreaders
- Trimmers
 - Nippers
 - Burs
- Rodent/rabbit elevators
 - Incisors
 - Cheek teeth
- Dental elevators



Small Mammals



Skulls Unlimited International

