Ferrets are now routinely seen in most veterinary clinics. This means that veterinary technicians’ professional knowledge must be expanded to ensure that every ferret patient receives a thorough physical examination and appropriate medical treatment. As with cats and dogs, periodontal disease may go unnoticed by owners; therefore, many ferrets end up silently suffering from oral pain. Although it may be a challenging task, all ferrets need an annual oral examination, and ferret owners need education on oral care for their pet.

FERRET FACTS
Domesticated ferrets (Mustela putorius furo) are in the family Mustelidae, which includes weasels, polecats, and non-domesticated ferrets. Their name is derived from the Latin word furittus, meaning “little thief.”

Diet
Ferrets are obligate carnivores that need a high-protein diet containing fatty acids and amino acids found only in animal sources. In the wild, their natural diet is small prey; however, domestic ferrets are frequently fed high-quality cat foods. Recent research has lead to the creation of ferret-specific diets, which are now preferred. Ferret diets can also be supplemented with (or can simply consist of) small prey such as frozen pinkies, mice, and chicks.1,2

Dentition
Ferrets are classified as having a brachyodont dentition. A brachyodont tooth has a short crown and well-developed roots that contain a narrow pulp canal. Ferrets have 28 to 30 deciduous teeth and 34 permanent teeth. Permanent teeth erupt completely by 9 months of age.2

Dental formulas for ferrets are as follows:

Deciduous teeth: 2(i3-4/3 c1/1 m3/3) = 28 to 30

Permanent teeth: 2(l 3/3; C 1/1; P 3/3; M 1/2) = 34

Like cats and dogs, ferrets have highly specialized teeth, including incisors, canines, premolars, and molars (TABLE 1). A ferret’s canine teeth have a tight dental interlock (FIGURE 1). This means that the maxillary canine rests behind the mandibular canine within the interdental space, with interdigitation (“pinking-shear” interlock) continuing to the maxillary/mandibular premolars/ molars. Ferret molars have a distinct hourglass shape to maximize grinding action.

CLIENT EDUCATION AND PREVENTIVE CARE
Many new ferret owners do not expect to pay for expensive dental procedures. After all, a ferret is so small, and the owner may have paid only $20 for it, so why would veterinary care cost so much? A ferret’s first veterinary visit
should, therefore, involve arming the client with knowledge, such as a ferret care book that details what “could” happen and sample treatment plans of periodontal therapies, to allow the client to prepare financially for future care. Creating such a book can be a great client education asset for the clinic. Pain score sheets that demonstrate how ferrets show pain can be useful in discussing oral care with owners, as ferrets with dental disease may continue to eat and behavior cues may otherwise be too subtle for owners to notice or perceive as oral pain.

As with all species, preventive care is always the best measure to prevent periodontal disease. The gold standard is daily brushing with a soft-bristled toothbrush. Topical cleansing gels that can be placed on the gum lines, such as TDC and Maxi/Guard (Addison Biological Laboratory, addisonlabs.com), are also available. However, given ferrets’ mischievous behavior, water additives such as healthy mouth (Healthy Mouth, healthymouth.com) or cat dental treats may be suitable off-label options. Sealants such as OraVet (Merial, merial.com) or Sanos (Allaccem, allaccem.com) can be applied, but may be difficult to start early in life because application requires the ferret to be anesthetized. An oral examination, including a pain score that may be associated with periodontal disease or trauma, should be part of every annual examination.

No matter how diligent an owner is about home care, such measures cannot prevent oral trauma, nor can they address disease that is already present in a newly adopted ferret. When professional dental care is needed, cost is usually the biggest factor that may prevent owners from pursuing the most appropriate option. To encourage acceptance of the recommended treatment plan, it may be helpful for the clinic to create “prepackaged” estimates based on reasonable clinic expenditures for appropriate procedures that do not compromise treatment. Then, before showing the owner the bottom line, a team member should go through each step of the proposed treatment, explaining its importance and why it is necessary. Once owners understand each step and what is involved, they should be more ready to see and accept the cost of treatment.

### TABLE 1 Function and Structure of Ferret Teeth

<table>
<thead>
<tr>
<th>TOOTH</th>
<th>FUNCTION</th>
<th>ROOTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incisor</td>
<td>Gathering and grasping</td>
<td>1 root</td>
</tr>
<tr>
<td>Canine</td>
<td>Puncturing</td>
<td>1 root</td>
</tr>
<tr>
<td>Premolar</td>
<td>Shredding and cutting food</td>
<td>2 roots (maxillary carnassial)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 roots (maxillary molar)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>May have a supernumerary root</td>
</tr>
<tr>
<td>Molar</td>
<td>Grinding and crushing</td>
<td>3 roots (maxillary molar)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 roots (mandibular carnassial)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 root (last mandibular molar)</td>
</tr>
</tbody>
</table>

| FIGURE 1. (A) Normal interdigitation or pinking-shear dental interlock. (B) Recessed second lower incisors. This is a common finding in ferrets. |

| FIGURE 2. Calculus formation and slight extrusion of the canine. |
ORAL EXAMINATION

On an awake ferret, an oral examination may prove to be a daunting task; however, with patience, it is possible. A basic outline of the steps involved in an oral examination of an awake ferret is provided in BOX 1. In some cases, general anesthesia may be required to obtain a full oral examination.

Periodontal disease is the most typical pathology seen in the oral cavity. Using the same grading system as for cats and dogs, the varying levels of gingivitis, plaque, and calculus observed should be documented (FIGURE 2). Carious lesions and resorptive lesions are rare and typically not seen in ferrets. Ferrets’ mischievous behavior, such as chewing on cage bars or falling from higher altitudes, may result in trauma to the maxillary canines. In an outwardly intact tooth, trauma can be observed as the presence of intrinsic staining and brown or gray portions of the tooth (FIGURE 3). More complex trauma may cause tooth fracture. Fractures can range from affecting only the tip of the crown (FIGURE 4) to exposure of the pulp canal or chamber. All fractures need to be evaluated by radiography to determine the treatment options: root canal or surgical extraction.

The lips should also be evaluated for any signs of trauma that may be a result of extruded canine teeth. Common malpositions of the mandibular canines are mesioversion (i.e., the tooth is angled more to the midline) and distoversion (i.e., the tooth is angled away from midline), which can cause the mandibular canine to rub or even puncture the maxillary lip.

Finally, the facial region should be examined for any abnormal growths. Although mast cell tumors are common and are generally benign, any abnormal growth should be surgically excised and submitted for histopathology. Although rare, squamous cell carcinomas and odontomas are sometimes found.

A more thorough examination, as outlined in BOX 2, can be performed if the patient is anesthetized. Any abnormal findings should be documented on a dental chart (FIGURE 5). Several ferret dental charts are available, and the version used tends to be based on personal preference. The dental chart should be large enough to allow recording of examination findings and all treatments performed. Dental charts should be kept in the patient’s medical record, but copies can be given to owners to help increase the perception of monetary value of services rendered.

---

BOX 1 Basic Oral Examination in Awake Ferrets

1. Perform extraoral and facial examination.
   a. Assess the face and infraorbital region for any swellings, abrasions, or growths.
   b. Palpate submandibular lymph nodes.
   c. Examine lips for trauma and growths.
   d. Examine eyes and nose; these should be clear and absent of discharge.
2. Note initial gingivitis, plaque, and calculus indices as outlined in BOX 2.

---

FIGURE 3. Intrinsic staining due to trauma.

FIGURE 4. Fractured canine crown due to trauma.
1. Perform oral examination.
   a. Assess tongue, lingual frenulum, hard palate, soft palate, larynx, arytenoids, epiglottis, and tonsils for abnormalities.
   b. Assess occlusion. Class 1 malocclusions of the mandibular incisors, canines, or both are common in ferrets.
      i. Neutral occlusion—Class 1 malocclusion (MAL1): one or more individual teeth are out of position
      ii. Mandibular distocclusion—Class 2 malocclusion (MAL2): maxilla is longer than the mandible (overbite)
      iii. Mandibular mesiocclusion—Class 3 malocclusion (MAL3): mandible is longer than the maxilla (underbite)
      iv. Mandibular canine: mesioversion, distoversion
      v. Attrition (tooth-on-tooth contact)
      vi. Abrasion (tooth-on-object contact)
      vii. Mandibular second incisors are commonly displaced lingually

2. Measure sulcus depth (FIGURE A).
   a. A feline periodontal probe can be used to safely evaluate 4 to 6 points around the tooth for periodontal pockets below the gum line.
   b. Normal sulcus depth in a ferret is 0 to 0.5 mm. Anything more is a significant pocket depth and should be noted in the dental chart.

3. Assess gingivitis, plaque, and calculus.
   a. Plaque index (PI #)
      i. PI 0—No observable plaque
      ii. PI 1—Scattered plaque covering less than one-third of the buccal tooth surface
      iii. PI 2—Plaque covering between one- and two-thirds of the buccal tooth surface
      iv. PI 3—Plaque covering more than two-thirds of the buccal tooth surface

4. Assess tooth mobility.
   a. Grade 1: Small amount of motion
   b. Grade 2: Can be moved in a back-to-front or side-to-side motion
   c. Grade 3: Can be moved in a back-to-front and side-to-side motion

5. Assess tooth furcation. A shepherd’s hook explorer probe may be used in place of a periodontal probe, as the furcation may be too small to allow the latter to pass completely through. This can make determining between grade 2 and 3 difficult.
   a. Grade 1 furcation: Probe can just barely enter the furcation
   b. Grade 2 furcation: Probe can reach halfway through the furcation
   c. Grade 3 furcation: Probe can be completely passed through the furcation

6. Assess tooth extrusion. A periodontal probe can be used.
   a. The canines may be extruded supragingivally and cementoenamel junction may be visible (FIGURE 2)
   b. The measured amount of extrusion is documented as attachment loss
   c. When extrusion is present in conjunction with a periodontal pocket, the total attachment loss should be calculated: Periodontal pocket (mm) + Extrusion (mm) = Total attachment loss (mm)

7. Assess teeth for fracture/trauma, typically associated with the canine teeth.
   a. Enamel fracture (T/FX/EF): Only the enamel has been removed
   b. Uncomplicated fracture (T/FX/UCF): No pulp exposure
   c. Complicated fracture (T/FX/CC): Pulp exposure
   d. Intrinsic staining: Brown or gray color that is result of pulp necrosis or inflammation (FIGURE 3)
**PREOPERATIVE PREPARATION**

As with dental procedures in other species, anesthesia is the biggest concern in ferret dentistry, as many dental patients are older and may have some systemic disorder. A preoperative physical examination, complete blood chemistry panel, and complete blood count should be performed before anesthesia to ensure that the patient is a good anesthetic candidate.

Ferrets have a high metabolic rate, making it crucial to monitor their blood glucose level throughout the procedure. Ferrets should be fasted for no more than about 2 hours before premedication. Owners should not be advised to fast the ferret the night before or, unless the procedure will be started within 2 hours after admission to the hospital, on the morning of surgery. Some patients, especially those with an insulinoma, may need maintenance fluids supplemented with dextrose to prevent a hypoglycemic episode.

To provide maintenance fluids, a 24-gauge intravenous catheter can be placed into a cephalic vein, using sterile technique. In ferrets, the cephalic vein bifurcates closer to the carpus, which can allow for easy placement. I like to apply lidocaine gel to the site before placement and use a 22-gauge needle to make a small cut in the skin. A T-port can be attached to the intravenous catheter to make connecting and disconnecting intravenous fluids easier. Ferrets are notorious for removing intravenous catheters by deliberately pulling on them or by inadvertently applying tension while trying to nest under blankets, so catheters must be taped well, allowing plenty of slack on the administration line between the fluid pump and the stress loop. If necessary, an Elizabethan collar can be applied to prevent the patient from chewing on the catheter.

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### Adult Ferret Dental Record

<table>
<thead>
<tr>
<th>Animal name</th>
<th>Age</th>
<th>Weight (Kg)</th>
<th>Quadrant</th>
<th>Disease Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
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<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

### Quadrant Disease Scores

<table>
<thead>
<tr>
<th>Disease</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plaque</td>
<td></td>
</tr>
<tr>
<td>Calculus</td>
<td></td>
</tr>
<tr>
<td>Gingivitis</td>
<td></td>
</tr>
<tr>
<td>Resorption</td>
<td></td>
</tr>
<tr>
<td>Mobility</td>
<td></td>
</tr>
</tbody>
</table>

### Key to abbreviations

- **C** = Calculus deposits
- **G** = Gingivitis score
- **R** = Recession depth (mm)
- **P** = Probing depth (mm)
- **Fr** = Fissure involved (0 - 3)
- **Mo** = Mobility score (0 - 3)
- **A** = Abscess
- **Cu** = Cavity (caries/endod access)
- **ONF** = Oro-nasal fistula
- **ORL** = Odontoclastic resorption
- **PF** = Pulp exposed (A or B)
- **Dento** = Persistent deciduous tooth
- **RC** = Root canal therapy
- **S** = Supernumerary tooth
- **ST** = Sinus tract
- **U** = Ulcer
- **W** = Wear facet
- **X** = Extracted
- **O** = Tooth not present
- **T** = Tipping/positioning
- **L** = Length relationship
- **F** = Fracture (jaw or tooth)

---

**FIGURE 5.** In this dental chart, documentation of skull type, jaw relationship, and canine angulation is incorporated into an overall assessment of the ferret’s occlusion. Subjective indices—calculus (C), gingivitis (G), resorption (R), periodontal pocket depth (P), furcation (F), and mobility (M)—can be recorded for each tooth. Overall quadrant indices for plaque, calculus, gingivitis, periodontal disease, and tooth wear are also included. Courtesy of Dr. David Crossley
PREMEDICATION, PAIN CONTROL, AND ANESTHESIA

Gone are the days of masking exotic patients with inhalant agents for induction and surgical maintenance of anesthesia. Studies have been done to enable safe use of injectable premedications, allowing for a well-balanced anesthesia episode that includes many of the same opioids, benzodiazepines, alpha-2 agonists, and nonsteroidal anti-inflammatory drugs (NSAIDs) used for dogs and cats (TABLE 2). As for all species, premedication protocols for ferrets should be patient specific to create a synergistic anesthetic plan.

A typical premedication for a healthy ferret would be an opioid, such as oxymorphone or fentanyl, in combination with midazolam or dexmedetomidine. Once the premedication has been administered, the ferret should be placed in a kennel that allows it to maintain body temperature during preoxygenation. Preoxygenation is crucial to increase oxygen reserves in advance of an apneic period. A good premedication allows for the use of less induction agent (propofol or alfaxalone) and causes the ferret to lose jaw tone quickly, enabling rapid intubation. Using an induction agent that can cause apnea, such as propofol, makes the ability to intubate quickly a necessity. All intubation supplies (FIGURE 6) should be ready to hand before induction.

Intubation of a ferret is similar to that of a cat. A cotton-tipped applicator with a small amount of lidocaine gel can be used to suppress the tongue and visualize the tracheal opening. A cuffed 3-0 endotracheal tube is used. A tie is needed to secure the tube; however, the tie will typically not stay behind the ferret’s ears, so an additional loop behind the arms and around the sternum is often needed. To prevent bruising and compromised respiration, it is imperative to make sure that the tie is not too tight around the neck and sternum. The endotracheal tube cuff should be inflated cautiously to avoid overinflation and leak tested to ensure that it is not underinflated, which can present a risk for aspiration. For procedures that can be expected to cause severe pain, a constant rate infusion with an opioid can be used for intraoperative pain control and continued for postoperative pain control. Continued

### TABLE 2 Drugs for Pain Management in Ferrets

<table>
<thead>
<tr>
<th>AGENT</th>
<th>DOSE</th>
<th>PURPOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxymorphone</td>
<td>0.05–0.2 mg/kg q8h</td>
<td>Analgesia</td>
</tr>
<tr>
<td>Buprenorphine</td>
<td>0.01–0.03 mg/kg q8–12h</td>
<td>Analgesia</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>0.3 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Fentanyl CRI</td>
<td>1.25–5 mcg/kg/h (postoperatively)</td>
<td>Analgesia</td>
</tr>
<tr>
<td>Dexmedetomidine</td>
<td>0.04–0.1 mg/kg</td>
<td>Sedation</td>
</tr>
<tr>
<td>Midazolam</td>
<td>0.25–0.3 mg/kg</td>
<td>Mild sedation</td>
</tr>
<tr>
<td>Propofol</td>
<td>1–3 mg/kg</td>
<td>Induction</td>
</tr>
<tr>
<td>Etomidate</td>
<td>1 mg/kg</td>
<td>Induction</td>
</tr>
<tr>
<td>Meloxicam</td>
<td>0.2 mg/kg</td>
<td>Analgesia</td>
</tr>
<tr>
<td>Gabapentin</td>
<td>3–5 mg/kg</td>
<td>Analgesia (neuropathic pain)</td>
</tr>
</tbody>
</table>

*FIGURE 6. Intubation supplies, from left to right: Cotton-tipped applicator, cuffed endotracheal tube, lidocaine gel, and tie.*

*FIGURE 7. Scaler set to the lowest intensity.*
hospitalization may be needed to allow appropriate pain scoring to evaluate the need for further pain management with an opioid.

**SCALING AND POLISHING**

Before scaling, the oral cavity should be rinsed with a chlorhexidine solution to reduce aerosolization of bacteria. Ferret teeth are smaller than feline teeth; therefore, the scaler’s intensity setting should be reduced to avoid iatrogenic trauma (FIGURE 7).

Scaling can be performed with an ultrasonic scaler, using a smaller version of a crosshatch technique and limiting scaling time to 5 to 7 seconds per tooth. With smaller teeth, it is tempting to use the tip of the scaler; however, the tip’s jackhammer motion can create dents in the enamel, so this practice should be avoided (FIGURE 8). Care must be taken to avoid excessive contact with the gingiva to prevent bruising and burns. Curettes can be used to perform subgingival cleaning, again taking care to avoid damaging the gingiva. Dental mirrors may be helpful with visualization.

A fine prophy paste is used to remove microetches produced by the scaler (FIGURE 9). Fluoride- and flavor-free paste is preferred, to avoid residual taste that may cause salivation upon recovery. Polishing should take no more than 5 seconds per tooth. The mouth should then be rinsed with a chlorhexidine solution to remove any debris (e.g., paste, calculus) as well as to aerate the gingiva.

**DENTAL RADIOGRAPHY**

Radiography is the final step needed to complete the oral examination. Dental radiographs are needed to determine the stage of any periodontal disease present, as probing may not reveal the true depth of bone loss. Dental radiographs also help in evaluating potential treatment options (root canal versus surgical extraction) and provide necessary guidance for surgical extractions. FIGURES 10 and 11 show patient positioning for basic dental radiographic views in ferrets. Clinics that use a digital number two sensor can have difficulty with the thickness of the sensor. Thinner phosphoric plates are available in a number 1 size and offer the same high definition as digital radiography.

**FIGURE 8.** (A) Incorrect scaling technique using the scaler tip! (B) Correct technique with scaler lying flat.

**FIGURE 9.** Use fine, unflavored, fluoride-free paste to polish. Go slowly to avoid traumatizing the tooth from too much heat.

**FIGURE 10.** Maxillary radiographs can be obtained with the ferret in sternal recumbency. The angle of the tube head is 45°, and the sensor/film is lying flat above the tongue. (A) Positioning for maxillary canine. (B) Positioning for maxillary premolars/molar. (C) Radiograph showing canine to molar teeth.
NERVE BLOCKS
Nerve blocks can be intimidating even on larger patients; however, the ability to offer preemptive pain control with a local anesthetic means that the pros of nerve blocks in ferrets far outweigh the cons. The required supplies (BOX 3) are minimal in cost—$0.26 per patient—but offer the ability to further decrease the use of inhalant agents and the maintenance fluid rate, thereby preventing use of hypotensive treatments and further reducing the clinic’s overhead cost. In addition, preemptive pain control lasts 6 to 8 hours, so postoperatively, the patient will be more inclined to eat, rest comfortably, and take medications more readily.

Practice is necessary to perfect nerve block techniques and administer local anesthesia safely. Routine practice for every nerve block should involve aspiration, followed by rotating the needle in one direction 4 times. This is extremely important to avoid injecting bupivacaine into the blood vessel. A helpful rule of thumb is to start with the numbers of the syringe facing you and the bevel of the needle facing the foramen. This will allow you to know, after turning 4 times, where you started and in what direction the bupivacaine will migrate.

**Infraorbital**
A nerve block at this site (FIGURE 12) anesthetizes the infraorbital nerve and the rostral maxillary alveolar nerves, offering analgesia from to the fourth premolar to the incisors, including surrounding soft tissues such as gingiva and alveolar bone. The infraorbital foramen, which can be palpated with a delicate touch, is typically located between the mesial and distal roots. The needle is placed close to the opening of the foramen and digital pressure is applied for 20 seconds to allow the anesthetic to infiltrate the foramen. This technique is used to prevent damage to the eye and to the nerves and vessels in the foramen.

**Caudal Maxillary**
A block at this site (FIGURE 13) anesthetizes the branches of the maxillary nerve, offering analgesia from the molars to the incisors, including surrounding soft tissues and maxillary bone. An easy landmark is just behind the last molar, where the hard and the soft palate meet. A slight bend in the needle may enable administration in a smaller space.

**BOX 3 Supplies for Performing Nerve Blocks**

- 1 cc syringe
- 27-gauge needles
- 0.5% bupivacaine

Bupivacaine is dosed at 1 mg/kg; therefore, a ferret weighing 1000 g would receive a maximum volume of 0.2 mL at 0.05 mL per site. For ferrets weighing <800 to 900 g, bupivacaine can be diluted with saline in a 1:1 ratio to avoid overdose and enable easier administration.
**Middle Mental**
A middle mental nerve block (FIGURE 14) anesthetizes the end of the inferior alveolar nerve, offering anesthesia from the second premolar to the incisors, including surrounding soft tissues and mandibular bone. The middle mental foramen is typically located below the second premolar. Application of this block in a dog typically requires pulling the lip and lateral frenulum down and inserting the needle in a rostral to caudal direction; however, in ferrets, the lip and the frenulum are tightly connected and not easily moved, so a caudal to rostral approach is best. Again, digital pressure is applied for 20 seconds to allow the bupivacaine to infiltrate the foramen.

**Caudal Mandibular**
The caudal mandibular nerve block (FIGURE 15) anesthetizes the inferior alveolar nerve, offering anesthesia from the last molar to the incisors, as well as surrounding soft tissues and mandibular bone. Using an extraoral approach will place the needle on the inside of the mandible. This block can anesthetize the lingual nerve, so it is critical to recover the patient in sternal recumbency to avoid chewing damage to the tongue.

**POSTOPERATIVE CARE**
Postoperative care is as important as intraoperative care, and pain control should be continued for at least 5 to 7 days postoperatively. Again, many of the medications

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**FIGURE 12.** Infraorbital foramen block. (A) The foramen lies just above the mesial roots of the upper fourth premolar. Courtesy of SkullsUnlimited.com. (B) Be very cautious with needle placement, as there is not much room from the entrance of the foramen to the eye. Insert the needle just to the foramen opening and then apply digital pressure to allow for diffusion of the agent.

**FIGURE 13.** Caudal maxillary block. (A) The location for this block is just behind the last molar. Again, be very cautious with needle placement, as there is not much room between the entrance of the foramen and the eye. Courtesy of SkullsUnlimited.com. (B) Insert the needle directly behind the last molar, where the hard and soft palate meet, and just below the gum line, and allow diffusion to take place.
used for pain control are similar to those used for cats and dogs. NSAIDs are typically used. Meloxicam, as a suspension, is easily dispensed; however, in patients with renal compromise, NSAIDs should be used cautiously. Gabapentin suspension in conjunction with an NSAID offers synergistic pain control as well as sedation.

The patient’s ability and desire to eat are also important. Depending on the procedure, a soft diet may be necessary to facilitate healing of the surgical site. Ferrets are typically imprinted on their diet by an early age, and change may cause them to become anorectic. Because of their high metabolic rate, anorexia quickly leads to hypoglycemia. To prevent a hypoglycemic episode, a highly palatable liquid diet such as Oxbow Carnivore Care (Oxbow Animal Health, oxbowanimalhealth.com) can be dispensed as a postoperative supplement. The hard food that is the typical ferret diet can be crushed into fine particles or moistened with warm water to encourage eating. Syringe feeding may be difficult to perform safely without traumatizing oral surgical sites.

Detailed written discharge instructions should be provided to the owner to explain what to expect postoperatively as well as all the medication and diet instructions for home care. A medical progress examination at 2 weeks after surgery should be scheduled to ensure that surgical sites are healing as well as to discuss further home care options with owners. A follow-up phone call the day after surgery is important to ensure that the ferret is continuing to eat and that the owner is able to administer medication or to help the veterinary team intervene if the ferret is anorectic or needs further care.

Making sure that the owner perceives the value of dental surgery should be a priority. Pre- and postprocedure photographs should be shown and thoroughly explained to the owner, along with the radiographs obtained. Images help demonstrate the full extent of disease that was treated.

**FIGURE 14.** Middle mental block. (A) The foramen lies just below the mesial root of the second premolar. Courtesy of SkullsUnlimited.com. (B) Because of the tight attachment of the lateral frenulum, a caudal to rostral approach is an easier approach to access the middle mental foramen.

**FIGURE 15.** Caudal mandibular block. (A) The foramen lies on the inside of the vertical ramus. Courtesy of SkullsUnlimited.com. (B) Use the lateral acanthurus of the eye to guide you to the (C) mandibular notch.
CONCLUSION

Oral health is no longer a conversation to avoid with ferret owners. Many veterinary clinics already have most of the equipment needed to perform a complete anesthetized periodontal examination and treatment in ferret patients. With the added research that allows us to offer appropriate pain control in these patients, veterinary technicians should feel confident in learning more about how to increase their level of dental care.

References

CE Test Ferret Dentistry: No Weaseling About It!

The article you have read is RACE approved for 1 hour of continuing education credit. To receive credit, take the approved test online at VetMedTeam.com/tvt.aspx. A $5 fee applies. Questions and answers online may differ from those below. Tests are valid for 2 years from the date of approval.

1. A brachydont tooth has a
   a. long crown with well-developed roots.
   b. short crown with well-developed roots that contain a narrow pulp canal.
   c. short crown with no true root.
   d. none of the above

2. An adult ferret has _____ permanent teeth.
   a. 28
   b. 30
   c. 34
   d. 42

3. A normal sulcus depth for a ferret is _____ mm.
   a. 0–0.5
   b. 0.5–1
   c. 1–1.5
   d. 1.5–2

4. True or false: For ferrets, the ultrasonic scaler should be set to the highest setting.

5. A _____-gauge needle can be used for nerve blocks in ferrets.
   a. 20
   b. 22
   c. 25
   d. 27

6. Teeth should be polished at a slow speed to
   a. reduce heat production.
   b. avoid iatrogenic trauma to the tooth.
   c. cover all surface areas.
   d. a and b

7. In ferrets, the _____ are frequently not in proper alignment.
   a. molars
   b. incisors
   c. premolars
   d. canines

8. True or false: Intrinsic staining is a sign of trauma.

9. Tooth extrusion should be considered as
   a. normal.
   b. a sign of trauma.
   c. attachment loss.
   d. a sign of malpositioning.

10. Preoperatively, ferrets should
    a. be masked for induction.
    b. be fasted overnight.
    c. undergo a physical examination.
    d. b and c