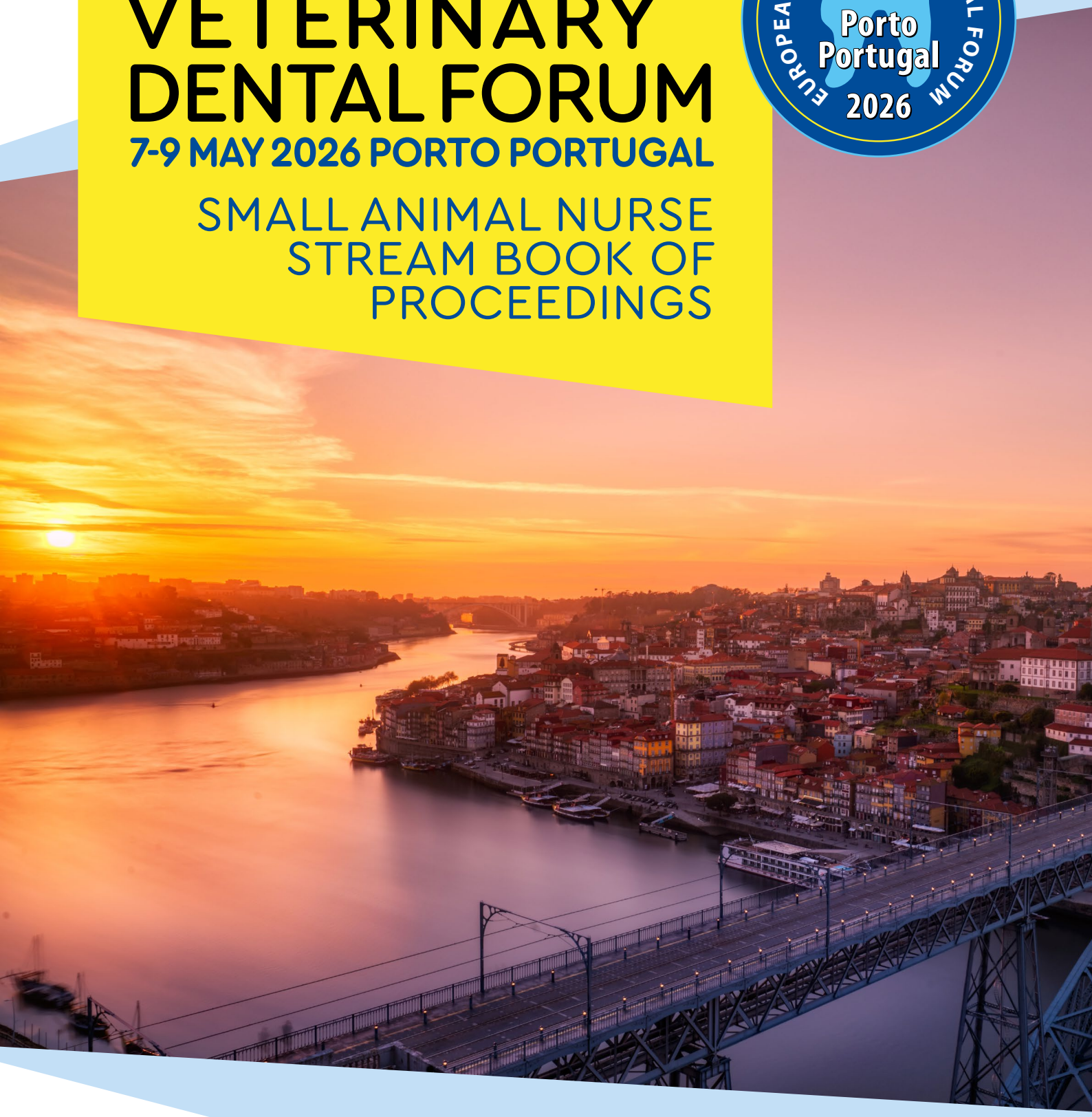
33RD EUROPEAN VETERINARY DENTAL FORUM

7-9 MAY 2026 PORTO PORTUGAL

SMALL ANIMAL NURSE STREAM BOOK OF PROCEEDINGS

EUROPEAN VETERINARY DENTAL FORUM
EVDF
Porto
Portugal
2026



EVDF European Veterinary Dental Foundation

EVDC EUROPEAN VETERINARY DENTAL COLLEGE

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ALFÂNDEGA CONGRESS CENTRE

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A Charity dedicated to study, science and education in Veterinary Dentistry.
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A lighter way to care for teeth

DENTASTIX™ introduces PEDIGREE® DENTASTIX™ Light to support oral health in dogs, particularly useful for dogs on a calorie-controlled diet.

Dental care in overweight and obese dogs

More than 80% of dogs over three years of age are affected by periodontal disease.

It can lead to painful abscesses and tooth loss, and it is linked to complications such as heart, liver and kidney conditions.[1] Despite this, periodontal disease is often overlooked by dog owners.[2]

At the same time, more than half of dogs are overweight or obese[3] and subsequently in need of a calorie-restricted diet. To reduce the risk of overfeeding, owners may not consider incorporating dental chews into their dogs' daily oral care routine.

As such, the availability of low-calorie dental chews is paramount to help maintain oral health in overweight and obese dogs.

Dental chews can play an important role in supporting a dog's oral health by providing a convenient way for owners to care for their dog's teeth and by helping to reduce plaque and tartar build-up.

Because as we know, if left alone, plaque and tartar can lead to periodontal disease.[REF]

SMALL ANIMAL NURSE STREAM

SPEAKERS

Benita Altier
Line Vadstein Bleken
Claire Harrison
Kimi Kan-Rohrer
Brook Niemiec
Stacey Parker
Hollie Rose Heidi Richards
Denise Rollings
Stephanie Waite

PROCEEDINGS FRIDAY

PROCEEDINGS SATURDAY

SMALL ANIMAL NURSE STREAM | SPEAKERS

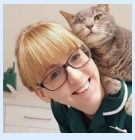
Benita Altier
Benita Altier is a Licensed Veterinary Technician and a Veterinary Technician Specialist in Dentistry. She started her career in 1988. Benita is the Past President of the Academy of Veterinary Dental Technicians and the President-Elect for the Arizona Veterinary Technician Association. She has co-authored textbooks, published articles, and provides dental education through Pawsitive Dental Education LLC worldwide.

Line Vadstein Bleken
Dyrepleier, Veterinary Nurse, VTS(Dentistry), Fag.VSP tannbehandling, Oral Care Nurse. Graduated from Hansenberg, Denmark 2013. Has mainly worked with dentistry since, at Evidensia Lørenskog Dyreklinikk, Anicura Dyresykehus Oslo and Empet Dyresykehus Nydalen in Oslo. She has various continuing education in the field of dentistry. She provides lectures to nurses and veterinarians. She has lectured in mostly in Norway but also in Dublin at iM3 ACE. She is currently on the board for the Norwegian dental society Norsk Forening for Dyretannhelse.

Claire Harrison
Claire graduated with her veterinary nursing degree in 2005 and gained a Veterinary Technician Specialty in Dentistry in 2013 from the Academy of Veterinary Dental Technicians. She has worked in veterinary dentistry specialty and general practice. From 2018 to 2025, Claire worked as a registered veterinary nurse at the Hospital for Small Animals, Royal (Dick) School of Veterinary Studies. Claire is a Teaching Fellow in Veterinary Dentistry at the RDSVS. She provides in-clinic training in the UK for iM3 Veterinary Dentistry and dentistry education for other CPD providers.

Kimi Kan-Rohrer
Kimi Kan-Rohrer, BS, BSDH, RDH, RDHAP (ret) is a licensed dental hygienist and graduated from University of the Pacific, CA in 2006. In 2014, she joined the Dentistry and Oral Surgery Service of the UC Davis Veterinary Medical Teaching Hospital, sharing her dental knowledge and teaching veterinary students and residents diagnostic and preventative techniques through clinical rotations, lectures and labs. Kimi is the recipient of the 2023 Rachel Smith Employee of the Year award.

Brook Niemiec
Dr. Niemiec is a 1994 graduate of the University of California, Davis. He is a Diplomate of the American and European Veterinary Dental College as well as a Fellow in the Academy of Veterinary Dentistry. He is Chief of Staff of Veterinary Dental Specialties and Oral Surgery with 16 practices. He runs the veterinary dental training center as well as the premier telemedicine site vetdentalrad.com.



Stacey Parker
Stacey is an RVN based in the UK and has gained the NCert in both Anaesthesia and Dentistry, the Advanced NCert in Anaesthesia and is the only Lead Vet Nurse Practitioner in Anaesthesia in the UK. Stacey also holds the BVNA Oral Care Nurse Certificate, BSAVA Merit in Anaesthesia and Emergency Critical Care, and ISFM certificate in Feline Nursing, and is a qualified RECOVER CPR rescuer. Stacey works clinically with Rachel Perry, both a RCVS and European Veterinary Specialist in Dentistry at Perry Referrals and since October 2023 runs her own CPD company- Burty's Boutique.

Hollie Rose Heidi Richards

Hollie qualified as a Registered Veterinary Nurse in March 2022, following three years of experience as a Veterinary Care Assistant. Since then, she has been working at Willows Veterinary Centre, where she initially joined as a consulting nurse. She soon developed a strong interest in dentistry, moving into the department where I now run and manage the service. This role has allowed her to gain extensive knowledge and hands-on experience, and she is working towards pursuing a VTS in Dentistry next year. In 2024, she completed my ISFM Certificate, further strengthening her skills and knowledge in feline care.

Denise Rollings

Denise is a Veterinary Technician Specialist (VTS) who is dedicated to improving the oral health of animals since 2014. Denise's commitment to excellence in dentistry was recognized in 2020 when she received the "Rising in Dentistry Leadership" Award from the AVDT. She also served as the Director at Large Board Member of the Academy, furthering her impact on the profession. Denise is also the honored recipient of the Viticus Group 2024 Veterinary Technician Speaker of the Year Award. Denise is now the Practice Development and Improvement Specialist for iM3, Inc

Stephanie Waite

Stephanie Waite graduated from Harcum College in 2001, after completing her clinical year at the University of Pennsylvania large and small animal teaching hospitals. She focused nearly 2 decades on emergency and critical care medicine at some of the top veterinary clinics and teaching hospitals in the USA. She had a great interest in polytrauma, head trauma, and critical care nutrition while working clinically. She is currently working with and collaborating with a number of veterinary dental surgeons and orthopedists in her role with VetWelding, AG, which is located in Switzerland.

SMALL ANIMAL NURSE STREAM | FRIDAY

Pain management in Canine dental cases

Hollie Rose Heidi Richards

Canine oral discomfort is a commonly underdiagnosed condition and it can manifest in different ways. Luckily there are ways we can identify and manage this discomfort. During this lecture we will touch upon the different oral disease processes which are associated with oral discomfort as well as take a detailed look at how we can manage this pain. We will look at what considerations we need to consider in these cases as well as look at a case example at the end.

A lot of our cases are very stoic and tend to show very minimal signs of pain, continuing to eat and play as normal, which can make diagnosis very difficult. In these cases, we rely on more subtle signs such as they may eat on one side more than the other or they are preferring a soft diet over a hard diet. Behavioural changes such as aggression and anxiety have been seen in these cases as well as the dogs appearing to have reduced activity levels similar to an older dog. Some cases can present with more obvious signs such as rubbing at their faces and anorexia. With most of these cases, a lot of the changes are noticed following treatment, where a lot of clients realise that there was something wrong prior to the treatment and they note that their dogs appear to have regained their youth. This shows how detrimental oral discomfort can be. There are multiple conditions of the oral cavity which can cause oral discomfort which we will discuss in detail. These include inflammatory conditions such as periodontal disease and canine chronic ulcerative stomatitis, traumatic injuries, malocclusions as well as abscessation and oral tumours. We will also cover tooth resorption and whether it is considered painful in dogs.

In veterinary dentistry we have access to a range of different forms of analgesia which work on different areas of the pain pathway. These include opioids, non-steroidal anti-inflammatory drugs, α2 agonists, acetaminophen (paracetamol), GABA analogues and NMDA antagonists. We use these in combinations and at different doses depending on each patient whether it be pre-, post- or during the procedure. By using combinations of medications, we can ensure that the patient remains pain free and we can lower the amount of anaesthetic agents used. In some cases, we cannot use high doses of systemic analgesia and therefore, we also use local anaesthetic nerve blocks. We will discuss all of these analgesics in detail.

Finally, we will look at a real case and our approach to managing its pain pre-operatively, during and post-operatively. This case involved resection of a large maxillary mass and had some complications which we will discuss. We will also focus a lot on the post-operative nursing care for this case. This case is a great example of the use of multimodal analgesia for oral pain management.

The aim of this lecture is to help you identify key signs of oral pain and how to manage them effectively using a multimodal analgesia approach. By effectively managing each patient's pain, the anaesthetic and recovery process will be improved.

Regional Anesthesia for Oral Surgery

Brook Niemiec, *DVM*
Diplomate, American Veterinary Dental College
Diplomate, European Veterinary Dental College
Fellow Academy of Veterinary Dentistry

Oral/dental disease (especially periodontal) is typically a slowly progressive and chronic disease process. Human studies suggest that periodontal disease is actually only painful in a small number of affected patients. However, some patients report dull, localized and radiating deep jaw pain due to periodontal disease. In addition, pain is consistently reported where root exposure has occurred secondary to cementum destruction. Food impaction also causes varying degrees of discomfort (but can be significant). Further, there are numerous painful conditions which are common in veterinary patients including tooth fractures, caries, tooth resorption, attrition, enamel hypocalcification, and traumatic malocclusions.
In humans, periodontal disease is more prevalent in compromised socioeconomic areas where oral hygiene is not routinely practiced. From the standpoint of oral neglect, our patients resemble this human subset. A recent study revealed that 96% of the homeless people in Hong Kong had periodontal disease. The dental problems most frequently reported in this population were bleeding gums or drifting teeth (62%), dental pain (52%) and tooth trauma (38%).iv
Although direct assumptions of the source of pain cannot be made, there is likely a higher prevalence of pain in our animal patients.

Several species differences must be considered when viewing oral disease in veterinary patients.
1. Canine small breeds often present with profound soft tissue destruction and bone loss.
2. Food and other foreign body impaction are significantly more likely due to severity and size of the periodontal defects in veterinary patients.
3. Cementum destruction results in root exposure creates sensitivity.

Chronic pain

Veterinary patients with severe or unusual types of periodontal disease (e.g caudal stomatitis) *are* suffering from chronic pain. Special preparation and techniques should be used when managing these cases surgically. Recognizing not only the pain at the site of inflammation, but also the often neglected central pain mechanisms, is important when managing these patients. **Initiating acute surgical pain to chronically diseased painful tissue heightens the pain response creating a patient that is difficult to manage post-operatively.**

Management strategies

Preemptive analgesia is more effective than post-operative, and it is therefore important to administer the drugs **before** the painful procedure. Depending on patient health, a multimodal approach should be employed, as this provides superior analgesia.

Regional nerve blocks

An additional, critical method of pain management is regional anesthesia (also known as local nerve blocks). **When correctly administered, regional nerve blocks provide not only elimination of pain perception in the innervated tissue but also positive systemic effects.** Proper blockade of oral tissues prior to surgical manipulation eliminates central perception allowing anesthetic planes similar to that for non-painful procedures. This reduction in the percentage of inhalant anesthetic will have positive effects on intraoperative physiology.

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This includes minimizing:
- Hypotension
- Hypoventilation
- Bradycardia.

If proper perfusion is maintained, normothermia becomes easier to achieve. Blood pressure, heart rate and respiration rate should remain stable upon surgical insult if blocks have been administered properly and adequate onset time from administration has elapsed. If these parameters increase, the block is not effective or insufficient time to onset was allowed. If the proper time has definitely passed, the block may be repeated *providing that the maximum total dose is not exceeded.*
Intravascular administration ***must*** be avoided. Aspirating prior to injection will ensure that the agent was given outside the vasculature. Excessive systemic uptake or intravascular administration could cause CNS or cardiovascular complications.
There are two agents which are commonly employed for regional anesthesia: lidocaine and marcaine. Lidocaine has the distinct advantage of fast onset (1–2 minutes) but only lasts 30–60 minutes. Therefore, it does not provide adequate analgesic duration in lengthy procedures. In addition, it offers only minimal if any pain relief in the postoperative period. Conversely, bupivacaine's analgesic effect is significantly longer in duration (6–8 hours). The concern with its use has been that it was thought to have a longer onset of action, however, recent studies reveal efficacy in as little as 4 ½ minutes. The desire of short onset with longer duration made combining the products a popular option. However, recent research has shown that the combination may result in decreased efficacy.
All local anesthetic agents are vasodilative, and therefore create faster removal from the area and thus a shorter duration of action. Adding epinephrine to local agents has been shown to increase the active time by up to 50%. Adding an opioid such as buprenorphine or morphine to a bupivacaine block may result in a doubling the time of effect of bupivacaine alone. This author utilizes plain marcaine exclusively as 6–8 hours is sufficient time for effect for patient comfort without lasting too long into the post-operative effect that eating may be compromised. While there is some concern with marcaine use and cardiotoxicity in cats, if intravenous injection and overdosage is avoided, this complication should not occur. For this reason, it is critical to aspirate prior to each injection of local anesthetic. If blood is encountered, the needle should be redirected (and reaspirated) to insure that intravenous (or intra-arterial) injection is not inadvertently performed.
Recommended infusion volumes vary from 0.1ml – 1.6 ml from small to large patients. As far as dosage of local anesthetics is concerned, the published recommended maximum total dose of local anesthetics is 2 mg/kg (single agent or combination). This level is easy to reach in small patients when utilizing 2% lidocaine in feline and small and toy breed dogs. For example, a 5 kg patient should receive a maximum dose of 0.5 cc of 2% lidocaine. For this reason, it is advised to dilute this product to decrease the possibility of overdosage. This author has never experienced complications at these dosages. Clinically, prehension and mastication does not appear to be compromised postoperatively in dogs and cats receiving dental blocks even if all four quadrants have been blocked. These guidelines are being reviewed, as the published maximum dose is based on intravenous injection and some anesthesiologists are utilizing much higher dosage for local injection.

The three major blocks are the infraorbital, mental, and mandibular. Some dentists/anesthesiologists utilize the caudal maxillary block, but this author does not recommend it due to the increased possibility of orbital penetration. If properly performed, the infraorbital block can effectively anesthetize the entire ipsilateral maxillary quadrant.

The depth to which the needle is placed within the foramen is one of significant debate. Some dentists recommend that the foramen be barely or not entered, while others will place the needle very deep within the infraorbital canal to block the molar teeth. I tend to be somewhere in between (see individual blocks below).

Infraorbital block
The infraorbital block is highly effective for the ipsilateral maxilla and teeth as well as the associated soft tissues. The infraorbital canal runs rostrally just above the apices of the maxillary fourth premolar and exits the maxilla over the distal root of the third premolar. To approximate the dorso-ventral location it is helpful to imagine the fourth premolar as being approximately the same size mesio-distal as corono-apical. Therefore, measure the width of the tooth and then measure that distance dorsally from the cusp tip. The infraorbital canal is just apical to this point. The foramen is easily palpated, especially in cats and large breed canines. Manually retract the lip and the infraorbital neurovascular bundle dorsally. Advance the needle in a caudal direction close to the maxillary bone and just ventral to the retracted bundle to a point just inside the canal (and up to the medial canthus of the eye). The needle should pass into the canal without engaging bone. In feline patients, the infraorbital canal is VERY short, which allows for orbital penetration. For this reason, we recommend that the foramen be barely entered and the needle directed ventrally. In dogs, do not advance past the medial canthus of the eye. The block will diffuse distally to the molars if a finger is placed over the foramen for 30–60 seconds after injection.

Mental Block:
The middle mental foramen is located apical to the mesial root of the second premolar in the dog, and in the halfway in the diastema between the canine and third premolar in the cat. It is approximately 2/3 of the way down from the dorsal border of the mandible. This will anesthetize from the ipsilateral mandibular third premolar to the central incisor and the surrounding bone and associated soft tissue. The mandibular labial frenulum is retracted ventrally and the needle is inserted at the rostral aspect of the frenulum and advanced at an approximate 45 degree angle along the mandibular bone to just enter the canal.

Mandibular Block
The inferior alveolar nerve enters the mandibular foramen on the lingual aspect of the caudal mandible. The caudal mandibular block is performed by infiltrating the nerve at this level prior to its entry into the canal. This author tends to perform this block intraorally. The patient is placed in dorsal recumbancy and the mouth opened. With the index finger of the non-dominant hand, feel the notch on the ventral aspect of the caudal mandible. Then slide the finger a bit dorsally on the lingual aspect. Measure the width of the third molar and enter the mucosa right on the lingual aspect of the mandible at a point that far back from M3. Insert on a 45 degree angle advancing along the bone until the needle is felt moving through the tissues and inject at this point. If correctly performed, all mandibular teeth, bone, and soft tissue on the treated side are affected by this block. Exceedingly rarely, patients who are not monitored postoperatively can cause severe trauma to the tongue during the recovery period. Whether this is specifically associated with regional anesthesia or recovery from any procedure is not reflected in the literature. To wit, this author has seen it twice in 15 years, both were boxers, and one did not even have blocks performed. In any case, proper patient monitoring during recovery should preclude this problem.

Conclusions
The vast majority of veterinary dental patients have some to significant oral pain which is acutely worsened with therapy (especially extractions). Proper pain management will decrease MAC and the secondary negative effects of increased inhalational anesthetics as well as smooth recovery. A multimodal approach, including regional anesthesia, is ideal. Finally, pre-emptive analgesia is superior to attempting to manage pain which has already been perceived.

SMALL ANIMAL NURSE STREAM | FRIDAY

Ice, Ice... Maybe? Not on My Dental Table!

Stacey Parker

Patients undergoing dental or oral surgery are known for suffering from hypothermia for numerous reasons.
Hypothermia brings with it many negative effects including:

- Increased oxygen requirements, by 40% when shivering
- Prolonged recoveries
- Painful to shiver after surgery
- Reduces MAC requirements, by 5% for every 1c dropped
- Overdose more likely
- Will not respond to anticholinergics
- Blood viscosity increases
- Arrhythmias with nonresponsive bradycardia
- Delayed wound healing
- Increase infection rates
- Death

All patients can suffer from hypothermia, so we must be pre-emptive in how we try to prevent this from occurring. This session will cover multiple ideas as to how we can avoid this, or indeed treat it, if hypothermia occurs. We will also cover what to be careful of when 'heating' patients, and the importance of avoiding hyperthermia, which, yes can happen when we implement good patient warming and hypothermia prevention!

Tooth Done? Now What? The Art of a Smooth Recovery

Stacey Parker

It is easy to put on our blinkers and just focus on the tooth or the oral surgery involved, but what happens when you have done an amazing job in surgery? The patient care does not, and should not end there. Recovery starts the moment you turn off the inhalant and start to bring your patient around to consciousness, right through until they have been signed off from their surgical procedures, which could be 3, 5, 10 days or more, depending on the treatment they required. This session will guide us through how to ensure our patients make it through the initial recovery period safely, how we should be monitoring them, pain scoring, post op instructions for owners, completing immediate post op checks, and what to expect for different procedures. We will also include examples of when interventions have been needed post operatively. The recovery of a patient requires a collaborative approach between the surgeon, nursing team, client facing team and the client themselves.

Veterinary Dental Equipment, Instruments and Care

Kimi Kan-Rohrer, *BS, BSDH, RDH, RDHAP(ret)*

There are many things to consider when implementing dentistry procedures into a veterinary general practice, such as supplies, instruments and equipment. Dentistry can be a very profitable part of the practice, but a large initial investment must be made in order to provide the best possible care for patients. Large items are required, such as the dental unit, dental radiography, high speed handpieces, and periodontal and surgical instruments. Routine maintenance and cleaning are needed to keep all of these items in proper working order and to increase longevity before replacement is necessary.

Objectives

- Compile a list of necessary supplies and equipment for dentistry procedures.
- Create a maintenance schedule for all equipment.
- Determine when to repair/replace dental instruments.

Beyond What the Eye Can See: Lighting, Magnification, and Seating for Veterinary Dentistry

Benita Altier

Description

Providing professional dental care requires a sharp sense of vision during the procedure. Attempting this without magnification and proper lighting hinders our ability to deliver the necessary level of care, preventing us from accurately observing our actions and increasing the risk of causing harm through poor head, neck, and back postures. This lecture aims to outline the essential factors for making informed decisions about purchasing and using magnification and personal lighting systems for professional veterinary dentistry, as well as the risks associated with poor postures and inadequate lighting. A discussion on ergonomic seating and the importance of adjustable table heights will also be included.

Objectives

1. Learn the fundamentals of magnification lenses and how to choose a system that meets your needs as a veterinary dentistry provider.
2. Understand which light source is the safest and most suitable for veterinary dental applications. Identify and evaluate essential components for ergonomic seating in the dental operatory.
3. Develop strategies to create an ergonomic focus for your dental workspace and personal requirements.
4. Determine what will work best for you by integrating adjustable tables, seating, lighting, and magnification to prevent work-related musculoskeletal disorders.

Items Learned

The need for magnification, safe and proper lighting, ergonomic seating, and adjustable tables cannot be overstated. Dentistry involves repetitive motions that can cause operator pain and lead to time lost at work. Using the right equipment and fixing poor ergonomics can help reduce these risks, improve procedure outcomes, shorten procedure times, and enhance patient safety.

SMALL ANIMAL NURSE STREAM | FRIDAY

Assisting Root canal treatment
Line Vadstein Bleken

In order to be efficient and work properly when doing a root canal treatment, having the right equipment on hand and knowledge of how to take care of it is of utmost importance. It is also a great addition to the team if the nurse/assistant know what is needed and when so the veterinarian can save time and work in an aseptic manner. There is an array of equipment and materials that can be used in a root canal treatment. Usually there is need for dental radiographs, instruments for assessing the fracture, gain access to the canal, clean and prep it, and obturation and restoration of access point and crown and local blocks.In order to work as sterile as possible when working in the mouth, a rubber dam should be applied. This can sometimes be a little tricky but with good clamps and practice it is possible. Before starting the procedure make sure that all instruments, equipment and materials are present, clean and ready to be used. A good routine is to have sets for these procedures, then you know that what you need should always be ready. All fractured teeth require treatment! But not all fractures need root canal treatments. Before gaining access to the root canal, we need to assess the fracture both clinically and with dental radiographs to make sure what treatment is the right treatment. The veterinarian will assess both fracture and radiographs to check for symmetry of the canal, if there is any opening into the canal from the crown.
1. access canal
2. debridement and shaping canal
3. clean and dry canal
4. measure canal length and width (write this down)
5. Obturation of canal
6. restoring access and crown

During the procedure there are several dental radiographs taken in order to make sure everything is going to plan. There should be at least 3 radiographs pre, master files to apex, and post.
After procedure the tooth is ready to be used, but we always recommend to keep a close eye on it, and control with radiographs after 4 months and then annually. Owner should also reach out if they notice anything changes post treatment. For dogs in active service like police, military, dogs with large buccal musculature (staffies and such) and search and rescue dogs placement of a titanium crown might be recommended. Root

Shiny Isn't Sharp – Instrument Sharpening for Veterinary Dentistry
Benita Altier *LVT, VTS (Dentistry)*

Program Description
The lecture aims to teach attendees how to identify dental instruments that need sharpening. Videos will demonstrate a simple sharpening technique for maintaining dental tools, including winged or straight dental elevators, dental luxators, periosteal elevators, curettes, and hand scalers.

Learning Objectives
a. Recognize dental instruments that require sharpening.
b. Evaluate instruments before and after sharpening to recognize the original design and how to maintain the instrument's integrity through the sharpening process.
c. List the items needed to sharpen dental instruments.
d. Create a standard operating procedure around instrument sharpening protocols.

SMALL ANIMAL NURSE STREAM | SATURDAY

Contextualised Care in Veterinary Dentistry: The Role of Veterinary Nurses in Optimising Patient Care

Claire Harrison

The reasons pet owners decline, or delay dentistry treatment are multifactorial and include their perception of dental disease and treatment, fear of anaesthesia, personal circumstances and finances. For example, periodontal disease is the most prevalent condition in cats and dogs, but many pets fail to receive timely treatment. Contextualised care is currently a significant focus within the veterinary profession. It acknowledges there are different ways to provide treatment, and this should be tailored to the individual patient and owner's needs. Although diagnosis and treatment recommendations lie with the veterinary surgeon, veterinary nurses have a crucial role in veterinary dental care. The lecture will explore how utilising veterinary nurses in dentistry can increase the availability of care, improve standards and efficiency, and facilitate client education and communication through dentistry consultations. Therefore, optimising patient care for all dentistry patients.

Intended Learning Outcomes:
Define contextualised care in veterinary dentistry and its requirement in modern veterinary medicine. Analyse nurse-led dentistry and its contribution to patient centred care and improving the management of dental conditions such as periodontal disease. Discuss if effective utilisation of veterinary nurses increases the opportunity for providing transparent, standardised dentistry care in your practice. Understand how veterinary nurses educating pet owners through dentistry consultations leads to improved communication and transparency.

Clinical Nutrition in the Post Trauma or Post Operative CMF Patient: Tube Feeding

Stephanie Waite

Appropriate nutritional support is important for healing from trauma or surgery. In head trauma or post-operative CMF surgical cases, the use of feeding tubes (nasogastric or esophageal) is sometimes needed in order to keep up with the patient's caloric need. This lecture will focus on NG and E-Tube placement, care, and the various forms of nutritional support that can be utilized with these feeding methods. We will learn how to calculate RER for the healing patient, as well. Trouble-shooting of obstructed feeding tubes will be discussed, as well as pros and cons for both.

COHATs in Veterinary Practice: Getting Them Right Every Time

Claire Harrison

Dentistry is performed daily in veterinary clinics and providing efficient case management is beneficial to both the patient and the veterinary team. Implementing Comprehensive Oral Health Assessments and Treatments (COHATs) into dentistry procedures provides much more than a 'scale and polish' for routine dentistry procedures. This lecture will outline the steps involved in performing a COHAT and tips on performing these proficiently whilst highlighting the large role veterinary nurses have during the COHAT procedure.

Intended Learning Outcomes
Discuss the requirement for COHATs during dentistry procedures and their benefits to patient care. Summarise the steps required to perform a COHAT in veterinary dental patients. Investigate the benefits to the veterinary practice following implementation of COHATs during dentistry procedures.

Dental radiographs

Line Vadstein Bleken

Why should this be one of the first skills to learn in a dental department?
Should it be ok to do dentistry without dental radiographs?
In order to do our job correctly and help our patients properly, we need to do dental radiographs. As the story goes «we can only see the tip of the iceberg». On almost all of our canine and feline dentition we can only visualize approximately 1/3 of the tooth surface. And even though we can see the crown of the tooth this does not mean that we can see inside it. For this we need dental radiographs as well. When it comes to extractions, can we save it or does it have to go? When it has to go, do we do post-op radiographs? Do we need to?

One common quote might be: while extracting teeth well I can see that the root is nice and even, so I got all of it out, or it was so loose anyways, so its no need. Or it takes too much time, doing extra images. In our day and age we know better, we have seen fractured alveoli, fractured mandibles, symphyseal separation, etc. We need to do postop radiographs, even though your vet is the best, things can happen. We need to document that we did everything we should have done. When documented we know, and can be confident that everything was in order when we were done with the procedure. When we do radiographs on all our patients all the time, we will get better at it (and so the argument of it takes too long disappears).

We need diagnostic radiographs, not perfect radiographs. As long as all the teeth are documented you are good. And we should be able to separate the roots on our 3 rooted teeth! First survey images cat: 8 images needed. Dog: 8 to 10 depending on the size of film/sensor and size of dog. Extra will be done if needed. Dental radiographs are in 2D format – in order to get a better overview of what we are looking at additional images might be required. When performing dental radiographs or radiographs of any kind, we need to keep our own safety in mind. The supplier of your equipment should be able to provide you with what their equipment requires or local laws and regulation, depending on where you are on our planet. As a general precaution you should always be at a distance of at least 3m in front of the tube (but don't), and about 135 degrees out on either side. When using a handheld device it is recommended to use PPE, as lead apron, gloves and thyroid shield. A personal dosimeter will also give you measurements of your mmSv dose and when there is need for any changes in protocol. One should follow manufacturer's recommendation for servicing the equipment in order for it to work properly and safe.

SMALL ANIMAL NURSE STREAM | SATURDAY

Detecting Malocclusions in Dogs and Cats

Denise Rollings

Name that bite: Recognizing canine and feline malocclusions

A malocclusion is any deviation from the normal occlusion. In a normal occlusion of dogs and cats, the maxillary incisors overlap buccal to the mandibular incisors, the mandibular canine sits between the maxillary third incisor and maxillary canine, the maxillary and mandibular premolars interdigitate in a pinking scissor bite, and the maxillary fourth premolars sit buccal to the mandibular molar.

Malocclusions are treated when they cause any type of trauma whether gingival, mucosal, or tooth to tooth. The rule of thumb is that every patient has a right to a comfortable bite. Malocclusions are generally not treated for cosmetic purposes, especially in breeding or showing animals.

Malocclusions are often inheritable, and these dogs should not be bred. There is no sex predilection. Malocclusions are classified pertaining to the teeth, the jaw position, or both.

MAL1

Class 1 malocclusion is a neutroclusion, meaning that the jaws are in normal relation to each other with one or a few teeth being out of place. This is broken down into further descriptions. A class 1 malocclusion is a dental malocclusion, not a skeletal malocclusion.

- MAL1/BV: Buccoversion- a tooth (or teeth) displaced in a buccal or cheek direction.
- MAL1/DV: Distoversion-a tooth (or teeth) displaced in a distal or away from midline direction.
- MAL1/LABV: Labioversion- a tooth (or teeth) displaced in a labial or towards the lip direction.
- MAL1/LV: Linguoversion- a tooth (or teeth) displaced in a lingual or towards the tongue direction.

Base narrow canines are an example of linguoversed mandibular canines. The mandibular canine can contact the hard palate, causing pain and discomfort. These teeth may be crown reduced with a vital pulp therapy, orthodontically moved with an incline plane, crown lengthened or extracted. Ball therapy may be attempted to move the teeth outward if the patient is young. If the mandibular canines are only slightly malocclueded, a gingivoplasty can be performed on the maxillary gingiva between the third incisor and canine tooth to make more room for the lower canine to fit.

- MAL1/MV: Mesioversion- a tooth (or teeth) displaced in a mesio or towards the midline direction. This is often called a lance tooth. It's often the maxillary canine tooth displaced in a mesial direction and is common in collies and Shetland sheepdogs. A mesioversed canine can cause crowding with the third incisors and periodontal disease at that location is common if left untreated. Mesioversed canines can be extracted or orthodontically moved with a button and masel chain.
- MAL1/PV: Palatoversion- a tooth (or teeth) displaced in a palatal or towards the palate direction.

Crossbite (CB): One or more of the mandibular teeth are displaced in a buccal or labial direction.

- Caudal Crossbite (CB/C): One or more of the mandibular premolars or molars is displaced in a buccal direction sitting buccal to the maxillary tooth. Collies, shelties, and sighthounds are common breeds to have a caudal crossbite. Treatment isn't needed unless there are traumatic contacts and then extraction is often the treatment of choice.
- Rostral Crossbite (CB/R): One or more of the mandibular incisors are displaced labially, sitting labial to the maxillary incisors. The offending teeth may be shortened with odontoplasty and sealed with dentin bonding if trauma is occurring.

Class 1 malocclusions are treated if there is trauma to the surrounding tissues including other teeth, gingiva, palatal, or mucosa. Crowded teeth, or malaligned teeth, may predispose a patient to periodontal disease. Interceptive orthodontics is the extraction of maloccluded deciduous teeth. The goal is for the permanent dentition to erupt in its normal position. Extraction of maloccluded permanent dentition causing trauma is a very common treatment option. Orthodontic movement is an option for some patients and involves multiple procedures. Crown reduction with vital pulp therapy, or dentin bonding, is another treatment option to prevent or treat traumatic contacts.

MAL2
Class 2 malocclusion is when the lower jaw is short in relation to the upper jaw, or mandibular distoclusion. In the case where the deciduous teeth are causing bite interlock where they have punctured the soft tissues and are now "stuck", the deciduous teeth can be carefully extracted with the thought that the short jaws would unlock and potentially grow to normal lengths. This should be done as early as possible to allow the jaws to grow as normally as possible. The permanent teeth should be monitored regularly for their growth path. If the permanent mandibular teeth are causing trauma, the canines can be crown reduced with vital pulp therapy. Orthodontic movement with an incline plane is a possible treatment choice if the mandibular canine teeth are not traumatizing the palate. The mandibular incisors may need to be extracted if they are traumatizing the palate.

MAL3
Class 3 malocclusion is when the lower jaw is long in relation to the upper jaw, or mandibular mesioclusion. Brachycephalic breeds such as bulldogs, boxers, Boston terriers, and pugs normally have a class 3 malocclusion. This doesn't mean that their bite is "normal" and doesn't need intervention. If the malocclusion is not causing any trauma, then treatment or intervention is not necessary. If the maxillary incisors are causing trauma to the gingiva, lingual to the mandibular incisors and/or canines, they should be either shortened with odontoplasty and dentin bonding or extracted if shortening wouldn't resolve the trauma. Maxillary teeth can also cause attrition of the mandibular teeth. Any tooth-to-tooth contact should be corrected as well. A class 3 malocclusion can occur with both deciduous and permanent dentition.

MAL4
Class 4 malocclusion is skeletal asymmetry in a caudoventral, left to right (side to side), or dorsoventral direction. This malocclusion used to be called a wry bite.

- MAL4/DV: Known as skeletal asymmetry in a dorsoventral direction. This is when there is an open bite creating an abnormal space between the maxilla and mandible.
- MAL4/RC: Known as skeletal asymmetry in a rostrocaudal direction. This is when the maxilla and mandible are in normal relation on one side and either too short (distoversed) or too long (mesioversed) on the opposite side.
- MAL4/STS: Known as skeletal asymmetry in a side-to-side direction. This is when the middle of the mandible and the middle of the maxilla do not align.

A class 4 malocclusion requires treatment such as extraction or crown reduction if there is trauma.

SMALL ANIMAL NURSE STREAM | SATURDAY

Pediatric Veterinary Dentistry – They Are Not Just 'Baby' Teeth

Benita Altier

The presentation will cover the recognition of pediatric dental anatomy in canine and feline patients, including the normal transition to adult dentition, along with potential complications during this critical developmental stage. It will also address occlusal evaluation, classification of malocclusions, identification of tooth and soft tissue injuries, and available treatment options.

Learning objectives

1. Memorize dental formulas, tooth numbers, and deciduous tooth morphology for pediatric dentition in the dog and cat.
2. Understand typical eruption schedules for deciduous and adult dentition in dogs and cats.
3. Create a deeper understanding of dental malocclusions and recognize ways to advocate for patients' comfortable and pain-free mouth closure.
4. Gain a basic understanding of the angle classification system to classify occlusions in veterinary patients. Using the angle classification system creates a better understanding of evaluating and documenting canine and feline patients for malocclusions.
5. Understand the distinction between atraumatic and traumatic occlusions and their implications for the patient.

Dead Patients Don't Need Dentals: Mastering CPR in Veterinary Dentistry

Stacey Parker

Dentistry requires general anaesthesia, and although the risks for this are much lower, and continue to improve with advanced monitoring and training, the risk is never zero. Patients presenting to dentistry commonly fall into the geriatric period of their life span, which although not a risk in itself, does make them slightly more predisposed to morbidities, which can increase their risk of fatality under general anaesthesia. Clients are often reluctant to allow dentistry or oral surgery on their pets who are geriatric or have co-existing disease, because of the perceived increased risk factors. Whilst we can offer reassurance, and keep up to date with training of anaesthesia management and safety, we unfortunately cannot reduce the risk of death to zero. What we can do, is be as well trained, diligent and prepared as possible, and this should include being current, up to date, and well trained, in the most up to date Cardio Pulmonary Resuscitation (CPR) guidelines.

This needs to be more than just having a chart in the room or on your anaesthetic form of what to do, this is such an important element of Veterinary Care, and we all need to be up to date, and prepared, should we find ourselves in a position of a patient requiring CPR whilst under our care for any dental or oral surgery. In October 2024 the Recover guidelines were updated, using evidence based studies and information, to improve the outcome of animals who experience Cardio Pulmonary Arrest- whether that be from a conscious state, or under general anaesthesia. This session will talk you through patients that may be a higher risk, how to discuss this with the owners, how to help mitigate these risks, but predominantly, what to do if your patient does suffer CPA whilst undergoing oral/dental surgery.

The session will cover Basic Life Support, Advanced Life Support, expectations, how to utilise the team, compressions for different breeds of dogs and felines, how to ventilate these patients, what monitoring should be used and how, and the current drug protocols thought to be most effective given the recent studies.

Busting Dental Myths: Fact vs. Fiction in Animal Oral Health

Denise Rollings, *CVT, VTS (Dentistry)*
iM3 – Practice Development and Improvement Specialist

The first step in understanding animal oral health is to become educated on what is fact and what is fiction. There are a lot of dental misconceptions that pet parents may believe and we may believe in ourselves. It is our job to learn and convey the truth and help us understand what is best for our patients.

Fiction:

01. **Plaque and calculus are the same thing.** Plaque is a slimy film on the teeth that can be brushed off. It consists of plaque bacteria, glycoproteins from saliva, and other components. This is the cause of periodontal disease. Calculus is calcified plaque.
02. **Calculus means there's periodontal disease.** Calculus on the teeth does not mean the patient has periodontal disease. Attachment loss means the patient has periodontal disease.
03. **Clean teeth mean the mouth is healthy.** A patient can have calculus free and still have periodontal disease. It is the plaque causing disease below the gumline that determines if the mouth is healthy or not.
04. **Dog breath or cat breath is normal.** Halitosis means there is bad bacteria in the mouth causing pathology.
05. **My client will not take their pet to a veterinary dentist.** Do not make those decisions for clients. Offer them the options available and let them decide.
06. **My clients will not trust me if I refer them.** Most clients will appreciate the honesty and options available.
07. **A loose tooth does not need to be extracted. It can fall out on its own.** A loose tooth is uncomfortable and can be painful. It can be moving while the pet chews and traumatizing other areas of the mouth. It will also leave an open hole after it has fallen out.
08. **Only teeth that are loose need to be extracted.** Teeth need to be extracted for many reasons, and they may not be mobile.
09. **Chunks of calculus can be scraped off while the pet is awake.** The tooth and/or soft tissues may be damaged during this. It is also not helping the disease to just crack chunks off.
10. **Dog mouths are cleaner than people's mouths.** They are not.
11. **We only need to do dental procedures if they are at a grade 3 or 4.** We truly do not know the extent of disease until they are anesthetized, and a complete oral exam and imaging are performed.
12. **Grade 1 dental disease can wait for a procedure.** Prevention is key. We do not want to wait until there is severe pathology in the mouth. We can treat pathology as it happens and help prevent it from getting worse.
13. **Dental treatments, including teeth cleaning, are cosmetic only.** Periodontal disease affects the entire health of the body.
14. **Only radiograph what is going to be extracted.** We need full mouth radiographs.
15. **Only radiographs grade 3 or 4.** We need full mouth radiographs.
16. **Only radiograph pathology or what "looks bad."** We need full mouth radiographs.
17. **We do not need post extraction radiographs.** We need post extraction radiographs to confirm the entire root and tip have been extracted & that the bone is intact. One would not perform a cystotomy or fracture repair without obtaining a post radiograph.
18. **If a pet is fed a raw diet, they do not need dental procedures.** They still need routine dental procedures.

19. **Hard bones, antlers, chews will clean the teeth.** These items will not clean the teeth and may fracture the teeth.
20. **Hard, dry kibble will clean the teeth.** A dental diet will help clean the teeth, but just dry kibble will not.
21. **If a fractured tooth does not seem painful, it does not need treatment.** All teeth fractures involving the pulp are a source of pain and infection and need to either be extracted or have a root canal therapy performed.
22. **A geriatric pet cannot go under anesthesia.** Age is not a disease. It can predispose the patient to have disease. Proper workups can be performed to determine what is best for that patient.
23. **All dental procedures get X, Y, & Z anesthesia protocol.** All anesthesia protocols should be tailored to ensure that patient's health status, disease, procedure, and post op care.
24. **Dental procedures are not necessary; the vet just wants the money.** Periodontal disease is the most common disease found in pets over the age of two.
25. **We cannot detect periodontal disease until it is at a stage 3 or 4.** We can detect stage 0, 1, 2, 3, 4 periodontal disease while performing a comprehensive oral examination including full mouth radiographs with proper training.
26. **Periodontal disease is normal with aging.** Dental disease may progress faster with aging, but it can be managed, treated, and prevented to a point at any age.
27. **My pet is eating so the mouth is fine.** Pets, and people will still eat with oral pain.
28. **My pet is not eating, so it must be the mouth.** It very well may be, but it could also be something else. This is a wonderful opportunity to perform a complete workup to determine the health status of the patient.
29. **It is ok to "watch" pathology and see what happens.** It will get worse and will not resolve on its own.
30. **It is ok to crown amputate cats' teeth with tooth resorption.** Obtain full mouth radiographs and determine if the teeth need to be extracted or if they can have a crown amputation based on the type diagnosed on radiographs.
31. **Antibiotics are a treatment for periodontal disease.** Antibiotics are not a treatment for periodontal disease.
32. **My clients will not perform home dental care on their pets.** Some pet owners will. Take the time to demonstrate home dental care with the pet parent.
33. **It does not matter what grit size of prophy paste I use.** Use fine or pumice prophy paste, or medium. Coarse is too coarse.
34. **I only need to use one ultrasonic scaler tip.** There are perio, universal/standard, and beaver tail ultrasonic scaler tips. Use the appropriate one for the intended use for efficiency and safety.
35. **I can use the ultrasonic scaler tip indefinitely.** They wear down. Check them with the tip wear guide regularly.
36. **Anesthesia free dental cleanings are safer and cheaper.** Anesthesia free dental cleanings are cosmetic only and do not replace anesthetized professional care.

Once we know what the correct information is, we can communicate that to the pet parents of our patients.

Repetitive Musculoskeletal Disorders and Ergonomics in Dentistry and Oral Surgery

Kimi Kan-Rohre*r, BS, BSDH, RDH, RDHAP(ret)*

Musculoskeletal disorders are a common work-related injury in the dentistry field due to the physical demands placed on the clinicians. Dental professionals commonly work in awkward positions and perform repetitive motions during long work hours. There are many ways to help prevent these injuries from occurring, with the first being aware of what causes them. Taking a proactive role in improving your own ergonomics, as well as making appropriate changes to the work environment to promote better ergonomics for the entire team is desirable.

Objectives

- Describe common MSDs
- Recognize office equipment that could provide a more ergonomic environment
- Create a plan to help prevent MSDs for themselves and staff

NOTES

NURSE STREAM BOOK OF PROCEEDINGS

33rd European Veterinary Dental Forum
Published by European Veterinary Dental Foundation
A Charity dedicated to study, science and education in Veterinary Dentistry.
UK Registration number 1211695
www.evdf.org
EVDF president: Yves Debosschere
Congress manager: Marnix Lamberts

ISBN 978-1-0369-5706-3

34TH EUROPEAN VETERINARY DENTAL FORUM

EUROPEAN VETERINARY DENTAL FORUM
EVDF
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Scotland
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3-5 JUNE 2027

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