Chapter 12: Dental Mythology

Being in referral practice, I see only those cases that general practitioners choose to send my way. Often, the reason for the referral is that the G. P. has been managing a problem that is not responding well. In many instances, both patient and client would have been better served if more aggressive treatment had been instituted or the case referred much earlier in the course of the condition.

It occurs to me that one reason for the delay in instituting definitive care or referring the case is that there are still a number of myths concerning veterinary dentistry and referral services. I cannot speak for all veterinarians accepting dental referrals, but I will try to dispel some of the more common misconceptions with some illustrations taken from my own case files. If it seems I am being critical of my friends and colleagues, consider that the wise learn not only from their own mistakes but also from the mistakes of others. By sharing these observations, I am not attempting to fix blame but to share information for the common good.

Myth #1: "Dogs and cats do not feel dental pain the way people do. They have a higher pain threshold."

Basis for Myth

It is common for serious dental problems to be detected as incidental findings during routine examination. When questioned, the owners may say that they have observed no indication that the animal is uncomfortable. The animal still eats and may even still chew on hard toys.

The Truth

Dogs and cats feel dental pain in the same way and to the same degree as humans. A series of articles on pain perception and management published in the Compendium on Continuing Education in January, February, May and June of 1991 indicated that dogs and cats have the same pain thresholds and tolerances as humans. They react and withdraw/defend at the same level of stimulation and have the same physiological reactions to pain as humans. This was true across all categories of pain, including dental pain.

The explanation for this apparent paradox is actually very logical. If a dog has a sore tooth, that is one problem. If the dog allows that sore tooth to keep her from eating, she now has two problems, a sore tooth and hunger. From her perspective, it is better to eat with a sore tooth than to go hungry. Also, dogs live in an outwardly co-operative but internally competitive, hierarchical society. A pack member seen as weak or distressed will lose social status and may even be cast out as a liability to the pack. Therefore, nature has taught dogs to mask their pain and pretend everything is fine. Finally, the pet animal has no way of knowing that by complaining, she can increase her chances of getting relief. Therefore, she has no reason to complain and a few reasons not to.

Cats are not socially co-operative, so that argument does not hold for them. However, being small animals, they are subject to predation. Therefore, they too have a dis-incentive to advertising their distress.

Often, under further questioning pre-operatively, the owners will agree that the animal has been showing signs that might well be related to dental disease. There may be a history of a change in preference toward softer food and toys, chewing on one side (as evidenced by excess calculus accumulation on the unused side), a general decrease in vigor, drooling, pawing or rubbing at the mouth, decreased enthusiasm for food and games, ocular discharge, sneezing...

Time and again, I have had owners state pre-operatively that their pet was showing no signs of pain but once the problem has been treated, they realize that the pet had been suffering. The improvement in attitude and well-being after successful dental treatment is often very dramatic.

Recommendation

If you see a condition that would cause pain in your mouth, assume that it is causing pain for the pet. If you see a condition that would cause you to seek dental care for yourself, recommend dental care for the pet.

Myth #2: "If a broken tooth does not seem to be bothering the patient, there is no need to treat it."

Basis for Myth

Often patients will present with a fractured or worn tooth in which the pulp has been exposed but the owner will state categorically that it is not bothering the animal. They point out that the dog or cat is still eating and chewing normally and shows no signs of discomfort (see Myth #1). On physical examination, there is often no evidence of oral swelling or gingival inflammation.

The Truth

If a tooth has been broken or worn to allow pulp exposure (or near exposure), it is a problem that must be treated. A tooth with an open pulp chamber becomes a direct pathway for bacteria to enter the periodontal ligament space around the root tip and the body is powerless to stop this. The result will be a chronic inflammatory response (periapical periodontitis) at the root tip. This causes a chronic, dull ache with periodic episodes of acute pain as well as acting as a source of septicemia. Occasionally, these periapical inflammations will fenestrate through the alveolar bone and allow the infection into the surrounding tissues. This is the situation with infra-orbital swelling associated with fourth upper premolar fractures. However, only about 10% of endodontically diseased teeth will provide such an obvious indication for treatment. The other 90% of periapical lesions will remain encased in bone or fistulate to a less obvious site (nasal passages or oral cavity). Only in rare and extreme cases with there be any gingival inflammation or tooth mobility as a result of endodontic disease, so lack of these signs is of no significance in evaluating fractured teeth.

Recommendation

If you see a fractured or worn tooth with pulp exposure (or near exposure), you must recommend either extraction or root canal treatment. To recommend neither could be considered negligence.

In the case of a facial swelling or draining fistula associated with an abscessed tooth, antibiotics will often bring temporary relief, but the problem will recur after the medication is discontinued. Giving antibiotics for a few days pre-operatively is a good idea, but antibiotics should never be offered as a substitute for surgical treatment.

If the owners wish to save the tooth through root canal treatment, this should be done as soon as possible. If the condition is left untreated for long enough, the inflammatory process can destroy the root tip making standard root canal treatment impossible.

Figure #12.1. This radiograph of the right maxillary fourth premolar (tooth 108) clearly shows periapical bone demineralization and evidence of external root resorption due to chronic infection of endodontic origin. There was no gingival inflammation, the tooth was not loose and the dog was still eating, but you will never convince me that this tooth was not bothering the dog. Without radiographs, you have no way of knowing what is going on below the surface.

Myth #3 "Problems with deciduous teeth (fracture, traumatic malocclusion) require no treatment as these teeth will fall out shortly anyway."

Basis for Myth

I do not know where this one comes from. It is true that deciduous teeth are lost within the first few months (should all be gone before six months of age). However, I can see no reason to ask a patient to put up with dental pain and infection for even a few days, let alone a few weeks. It may be that the anesthetic risks for puppies and kittens used to be considered unacceptable, but now there is no excuse.

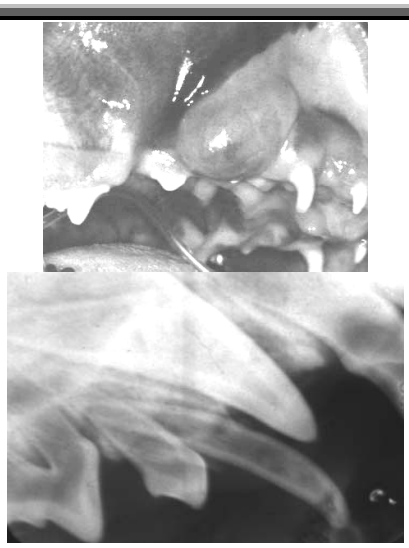

Figure #12.2. The photo is of a 10-week-old dog with a fractured deciduous right maxillary canine tooth. The large swelling is the result of the periapical infection, osteomyelitis, bone fenestration and subsequent cellulitis that resulted from the pulp exposure. The radiograph is of a 5-month-old dog who was presented for a persistent right maxillary canine tooth, but the film illustrates how long and thin-walled the root of the deciduous canine tooth is and how closely associated it is with the developing permanent teeth.

The Truth

Deciduous teeth are thin-walled, with large pulp chambers and open root apices. Being thin-walled, they are subject to fracture when puppies and kittens get playing exuberantly. Once the crown of the tooth is fractured, the pulp is exposed to oral bacteria and it quickly becomes infected and dies.

In a mature animal with a narrow pulp chamber, closed apex and dense alveolar bone, it may take months to develop a significant periapical osteomyelitis and facial swelling. In an immature animal with a large pulp chamber, open apex and thin, immature alveolar bone, such pathological changes can occur much faster.

A fractured deciduous tooth is painful to the patient and can quickly lead to the development of a dental abscess, causing damage to the adjacent developing permanent teeth.

Traumatic malocclusions are ones in which there is abnormal tooth-to-tooth or tooth-to-soft tissue contact. These conditions certainly cause discomfort, but they can also cause abnormal dental interlocks, which can impede the normal craniofacial development and alter the eruption pathways of the permanent teeth.

Recommendation

Fractured deciduous teeth should be extracted immediately to alleviate the pain associated with tooth fracture and to prevent damage to the permanent teeth. Since the root must be considered contaminated, leaving a portion of the root in place is not an option.

Deciduous teeth involved in traumatic occlusion and abnormal dental interlocks should also be extracted to allow the patient to grow up with a comfortable mouth and to allow unimpeded craniofacial and dental development.

The procedure calls for careful and delicate technique with appropriately sized instruments to avoid iatrogenic mechanical damage to the permanent teeth. A pre-operative radiograph to identify the location of the permanent tooth buds is mandatory. Those not comfortable with or equipped for deciduous extraction should refer the case immediately to someone who is.

Figure #12.3. This lower deciduous canine tooth is lingually displaced, is contacting and traumatizing the hard palate and is involved in an abnormal dental interlock that could hinder the lateral growth of the mandible and ensure that the permanent canine tooth erupts lingually displaced as well. Removal of the offending tooth will immediately alleviate the pain associated with the trauma-induced inflammation (note the darkening of the soft tissue surrounding the buried canine crown tip) of the palate as well as removing the mechanical barriers to proper development of the mouth.

Myth #4: "For minor tartar accumulations and mild gingivitis, a simple scaling without anesthetic will often be sufficient."

Basis for Myth

This myth likely grew from client concerns about the risks involved in general anesthesia. In order to offer some level of dental care at reduced risk, some veterinarians have offered the "Standing Dental". Groomers and breeders have also been known to offer this service. When finished, the visible portions of the teeth look clean to the naked eye and the animal's breath is often less offensive. This, coupled with a much lower fee and no anesthetic risk tends to satisfy the client.

The Truth

Accurate dental evaluation and appropriate dental treatment require a general anesthetic with a properly fitted, cuffed endotracheal tube. For an oral hygiene procedure (prophy) to be therapeutically beneficial, it must involve a total removal of all calculus and plaque supra-gingivally and, more importantly, sub-gingivally. All periodontal pockets must be probed and charted prior to root planing (either with or without flap surgery). All exposed tooth surfaces must be polished after scaling to remove residual plaque and create a smooth tooth surface that will be easier to keep clean. Other concerns such as oral and gingival masses, fractured and worn teeth, orthodontic problems, etcetera, should be investigated, charted and either treated or referred.

In the "Standing Dental", only the buccal surfaces of the crowns are scaled. It is not possible to probe and clean below the gum-line, in between teeth or on the tongue and palatal side of the teeth. It is not possible to polish the teeth in the conscious patient, nor is it possible to conduct a thorough oral and dental examination. I challenge anyone to prove me wrong on this.

"Standing Dentals" leave plaque and calculus in places where the owners cannot see it, so the owner is given a false sense of security that the mouth is healthy. "Standing Dentals" scratch the enamel surface but do not allow polishing so the tooth is left even more plaque retentive than before. "Standing Dentals" are unpleasant for the animals and so can make them head-shy, which makes instituting an effective home-care program much more difficult. "Standing Dentals" often lead to damage to the gingiva as the animal wiggles about while there is a sharp instrument in the mouth. "Standing Dentals" do not allow for a thorough oral examination and so subtle problems are left undetected and untreated until they become serious and obvious problems which are usually much more difficult to treat. "Standing Dentals" also put the animal at risk of aspirating a piece of calculus.

I once saw a very sweet, 14 year old sheltie owned by a very dedicated and capable owner. This owner would do anything for her dog if she felt it would improve his health and well-being. Unfortunately, the advice she had received over the years was that her dog needed only coronal scaling with sedation. This had been done many times throughout the dog's life. By the time I saw the dog, he had such severe periodontal disease that I had to extract 24 teeth (2 canines and all his remaining posterior teeth). The good news is that, within two weeks, the owner reported that the dog was chasing squirrels like he had not done in years.

If this dog had received appropriate dental treatment from an early age and had the owner been given proper instruction regarding home-care, the extractions and the years of suffering from dental infection would have been prevented.

Figure #12.4. This eight-year-old greyhound had been the victim of 'standing dentals" for some years (photo taken after gross calculus removal). The result was that when I finally saw him, I had to extract 34 teeth. All of this could have been prevented with proper dental care under general anesthesia followed by dental home care. It troubles me deeply to think of the years of needless suffering this dog endured.

I wish I could say that this patient was an isolated case, but I have had many patients with similar histories and similar outcomes.

Recommendation

Since "Standing Dentals" do more harm than good, refuse to offer this service. A "Standing Dental" is bad for the patient (there are risks with no benefit), bad for the owner (who pays for worthless, potentially harmful treatment) and bad for the profession (as it under-cuts those offering proper dental care and undermines our recommendations). In my view, standing dentals constitute mal-practice, fraud and theft.

Myth # 5: "Old animals are not suitable candidates for dental treatment."

Basis for Myth

Generally, older patients have higher anesthetic risks and so some veterinarians feel the benefits of treatment do not justify these risks. In the past, anesthetic risks were higher and the level of dental treatment available lower and so the risks might not have been justified. Things have changed!

The Truth

It is true that some patients are too systemically ill to be candidates for a general anesthetic, however, I feel that no animal should be denied the benefits of proper dental care merely because they were born a long time ago.

As veterinarians, we are sworn to prevent and relieve animal suffering. Many dental conditions are not only sources of chronic pain, but also serious sources of chronic septicemia. These situations have significant negative impact on both the quality and quantity of life for the patient. With our present resources for pre-operative diagnostics, intra-operative risk management and post-operative care, the risk of losing a patient to a general anesthetic has been greatly reduced (there is always a risk with any procedure in any patient). Also, the level of dental care available, particularly through referrals to veterinary dentists, has increased incredibly over the past ten years. It is now safe to say that the risk to the quality and quantity of life associated with dental treatment is less than the risk associated with dental neglect.

Recommendation

If you hear yourself thinking that an animal is too old for a needed dental procedure, offer a referral.

Myth # 6: "Periodontal disease is an inevitable consequence of aging."

Basis for Myth

Many old dogs and cats have severe periodontal disease.

The Truth

Periodontal disease is almost entirely preventable. Through the judicious use of abrasive foods and toys (nothing too hard), appropriate home-care programs (daily brushing of the teeth) and timely professional oral hygiene procedures, it is very possible for a dog or cat to live a long life and lose no teeth to periodontal disease. Any time a dog or cat does lose a tooth to periodontal disease, it can be seen as a failure on our part to affect an appropriate preventative program. (This comment is exclusive of Dental Resorptive Lesions and animals with immune mediated and systemic conditions such as Lymphocytic/Plasmocytic Stomatitis).

Recommendation

Adopt a preventative approach to oral health by starting dental care *before* disease is established. There is great variability between patients with regard to their susceptibility to periodontal disease. Therefore the level of preventive care must be tailored to the needs of the individual patient.

Myth #7: "My clients will think less of me if I suggest a referral. Referring a case is an admission of inadequacy and has a negative monetary impact on my practice."

Basis for Myth

Most veterinarians are serious Type A, over-achieving personalities. We are used to performing minor or major miracles on a daily basis. Our clients have come to expect this from us and we are hesitant to disappoint them by admitting there are problems that are beyond our personal capabilities.

The Truth

There is just too darn much to know for anyone to be good at all areas of veterinary medicine. Increasingly, the pet-owning public is aware of this. Referrals are common in other areas of daily life (lawyers, human dentists, physicians, contractors, financial service providers...).

Human dentists spend four years of full-time study to qualify. Veterinary Dentists (Fellows of the Academy, Diplomates of the College) have devoted many hundreds of hours over at least five years to the study of veterinary dentistry. While the situation is improving at many veterinary schools, most practicing veterinarians received fewer than ten hours of lecture in dentistry prior to graduation.

Occasionally, I have had clients contact me directly. Clients who seek their own referral invariably harbour some resentment toward their regular veterinarian for not suggesting the referral him or herself.

By offering a referral, you are telling your client that your primary concern is for the well-being of their pet. This can increase the bond your client feels toward you. Regarding future recommendations, the client now knows what your motivation is and knows that if you offer a treatment, you must be confident in your abilities to provide it effectively. They are more likely to listen to your recommendations if they trust and feel warmly towards you.

Recommendation

When faced with a situation, in any discipline, that you feel may be beyond your abilities for any reason (knowledge, experience, equipment, time…) offer to refer the case.