

Behavioral indicators of fear, anxiety, and stress in the veterinary hospital and medical management
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Introduction

There are many ways veterinarians and clients can work together to improve patient outcomes in veterinary settings. With a basic (or better yet, detailed) understanding of body language, common triggers, components of a calm environment, and medication protocols success can be maximized and patients can receive the care their families prefer. The topic of low-stress handling is far larger than can be covered in a 1 hr course (most basic courses are several hours). This lecture will focus only on body language and medical interventions. For more information, audience members are encouraged to explore the many offerings from a number of books and videos on the subject, including but not limited to, those from Fear Free™.

Body language

Body language is best interpreted when looking at the entire animal, including the context in which it is exhibited. Symptoms of anxiety, fear, and stress often, but not always, follow a predictable pattern. Behavioral indicators of fear are species specific. For the purposes of this lecture, we will focus on cats and dogs.

Dogs

Dogs who are willing to eat, play, and follow known cues most of the time and with only short breaks of difficulty with these are likely tolerating veterinary handling well. These animals should never be taken for granted because without support and appropriate handling, they can become less comfortable with repeated exposures and escalate to growling, snarling, snapping, biting, freezing, hiding, and even urinating and defecating due to panic.

Dogs who are taking many breaks in eating or playing, who are having a harder time responding to known cues or are moving/away or hiding are starting to escalate towards fight or flight. Symptoms in these pups can often be improved by taking short breaks for play, petting, and/or rest depending on the patient's preferences.

Dogs who are showing muscular stiffening, food refusal for high value foods, unwillingness to play, hiding, extreme avoidance, urination or defecation, or growling, snarling, snapping, and/or biting need additional care. Items that are wanted but not urgent should be put off while pre-visit medications are trialed or if the situation is urgent then sedation should be implemented immediately.

Cats

Cats who are willing to eat, play, or enjoy petting with only short breaks of difficulty with these are likely tolerating veterinary handling well. As for dogs, these patients need care and appropriate approaches to maintain this low level of distress. Cats naturally take more breaks than dogs during prosocial and training interactions. However, if a cat who was enjoying treats suddenly stops wanting them or a cat who was enjoying being scratched on the chin begins moving away, if you note tail thrashing, paw lifting/swatting or attempts to hide the patient escalate towards fight or flight. Symptoms in these cats can also improve with breaks for play, petting, and/or rest depending on the patient's preferences. Many cats will be helped by having the opportunity to hide during all or most of the exam.

Medications

One of the most complex issues that veterinarians face when managing behavioral problems in practice is when to prescribe psychoactive medications. Multiple levels of analysis and refined administration protocols are required in order to ensure rational use these medications.

The first thing a veterinarian considering prescribing a trigger time medication should be thinking about is whether there is a valid veterinary client relationship. If none exists, then no medication can be prescribed legally. In addition, all frequently recommended trigger time medications are off-label for use in companion animals.

Extra-label drug use is rational when the patient and/or family is suffering from a behavioral problem and/or when the patient is a threat to himself or others. However, these medications, like all psychoactive medications, should be used only in combination with safety tools, aggression/anxiety management techniques, environmental management, and a rational, science-based behavior modification plan.

Fast acting medications

Choosing an appropriate medication for trigger time use is a complex process, but it is no different from medication decisions in other parts of veterinary medicine. The veterinarian must assess the specific details of each case (species, signalment, history, diagnosis, medication history, medical and behavioral co-morbidities, etc.) as well as the published data on efficacy and side effects for the specific medications being considered. A monitoring plan for treatment must be implemented as well as a safety plan. Potential side effects need to be discussed with family members. Route, cost, and duration of treatment must also be addressed.

Medications used only during trigger times need specific characteristics. They need to work quickly, last long enough to be helpful, have a side effect profile that doesn't negatively impact the patient or the family members' quality of life, and be affordable. In addition, it's helpful if these medications have a dose range that allows family members to titrate the patient's most effective dose.

Commonly used trigger time medications include the benzodiazepines, trazodone, and clonidine.

The benzodiazepines alter GABA (gamma-aminobutyric acid), the most widespread inhibitory neurotransmitter in the brain. This neurotransmitter moderates vigilance, anxiety, muscle tension, neuronal excitability, and memory (too much GABA can inhibit memory). Medications that increase GABA effects include diazepam, clonazepam, clorazepate, alprazolam, lorazepam, and oxazepam. These medications can be reversed with flumazenil. These medications are used off-label for control of anxiety¹, phobias², and historically urine marking³. They are controversial for cases where aggression is the primary complaint or a behavioral co-morbidity. Side effects include sedation, ataxia, increased appetite, muscle relaxation, paradoxical excitation/anxiety, idiopathic hepatic necrosis⁴, and impaired learning. Impaired learning is not a rational reason to exclude this category of medications from your tool box because anxiety, panic, and fear also impair the types of learning a patient needs in trigger situations. Dose decreases accommodate patients who have altered hepatic or renal metabolism, are taking other medications metabolized by CYT P450, are obese, or are elderly. With long term use, there is a chance of physical dependence and dose tolerance. Patients need to be weaned off benzodiazepines if they have been on these medications daily for a few weeks. Generally, they are decreased by 25% weekly until the medication is discontinued completely. However, if they are truly being used as-needed for intermittent trigger times, weaning is unnecessary.

Dopamine blockers (most commonly acepromazine) are often used inappropriately for trigger times in patients with panic, phobia, anxiety. Acepromazine is on-label for dogs, cats, and horses for “control of intractable animals” and as an anti-emetic. However, it is not a true anxiolytic; rather, it is a conventional anti-psychotic. Acepromazine can be useful in combination with benzodiazepines and other trigger time medications when anxiolysis with more appropriate interventions has been insufficient to help calm the patient. Side effects (sedation, ataxia, aggression, hypotension/paradoxical tachycardia, and paradoxical excitability) can be prolonged and onset of best action can take several hours.

Trazodone is published for use in patients with anxiety disorders and for post-op calming of active patients.^{5,6} Trazodone is a serotonin antagonist/reuptake inhibitor. Veterinary studies report improvement in clinical signs around 60 to 90 min after administration in most patients. The medication is not controlled, readily available, and relatively inexpensive. Nausea is a side effect that can be prevented in many patients by starting at the low end of the dose range and titrating up as-needed. Other side effects, such as ataxia, sedation, panting, increased anxiety, agitation, or irritability can occur. The potential for priapism precludes this medication’s use in most intact, breeding males. Trazodone can be used safely, if carefully, with SSRIs, TCAs, clonidine, benzodiazepines, and acepromazine.

Clonidine is published for use in canine patients with fear-related aggression, noise phobia, and separation anxiety.⁷ A close relative of clonidine, Sileo (dexmedetomidine oromucosal gel) is approved for noise aversions. Both of these alpha-2 agonists work by blocking NE release in the locus ceruleus. Sileo can be effective in approximately 30 min in many patients, while clonidine is effective in 60-90 min for many patients. Neither medication is controlled and both are readily available. Clonidine is inexpensive, and Sileo prices can be high comparatively. However, for fast-onset and quick wear-off (such as is preferred by many clients), Sileo is a clear winner between the two and worth the price discrepancy. Side effects include sedation, ataxia, increased agitation, anxiety, and irritability, as well as nausea. This medication can be used as a single agent or rationally with SSRIs, benzodiazepines, or trazodone if additional control of panic is required. Acepromazine should be avoided if using clonidine or Sileo due to increased risk of hypotension.

Gabapentin is used anecdotally in patients requiring trigger time meds who may also have neuropathic pain and/or do not respond to other interventions. It is also used for patients who have drug interaction issues precluding use of other more well-researched anti-anxiety medications. While it was once considered to work on GABA, it is now thought that it may function by altering glutamate. The dose range is wide and the short half-life may require re-dosing at least every 8 hours for most patients if control is required for an entire day or several days. This medication is relatively inexpensive, readily available, and not controlled (but is likely to be in the future). It can be used safely in combination with SSRIs, TCAs, benzodiazepines, clonidine, trazodone, and acepromazine.

Proactive use of NSAIDs, probiotics, and anti-emetics can be important adjuncts to a typical pre-visit medication protocol. NSAIDs or other pain management medications should be prescribed for any patient who is or might be painful during handling and treatment. Cerenia should be used 2 hrs before the car ride to the veterinary clinic to prevent motion sickness and to help keep patients feeling comfortable if they need sedation. For patients prone to stress related gastrointestinal distress, probiotics can decrease symptoms especially if started a few days before a stressful situation and continued for at least 48 hrs after.

Sedation

Many veterinarians and clients work hard to avoid sedation. Unfortunately, this means many patients who would be better served with sedation do not get adequate care. If a fast-acting/trigger time medication will not allow a relatively complete physical examination or medical care when needed, sedation should come sooner rather than later to prevent the patient from having a bad experience in the moment that can lead to behavioral fallout in the rest of his life (such as increased fear-related aggression to strangers) and complicate his medical treatment in the long term.

New sedative medications and protocols are being designed every day, especially in light of limited access to opioids. In our practice we have traditionally used, Dr Meghan Herron's TOM sedation protocol combining dexmedetomidine and morphine. When this is insufficient, additional Alfaxan can often be administered safely to achieve stronger sedation. For cats the traditional, Kitty Magic protocol can be very helpful. It can be used safely with gabapentin (now a common trigger time med for cats).

Conclusion

There are a variety of medications that can be helpful for patients who are anxious, panicked, or phobic in specific situations. These medications can be used as monotherapies or combination therapies. They can be combined with other medications if needed. In addition, they can be used just as-needed or daily with additional bolus doses for trigger times. Situational anxiety, panic, and phobia can lead to death of patients through traumatic injuries as well as through abuse, abandonment, and euthanasia. Thankfully, most patients can improve quickly with treatment.

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