

Generalized Anxiety Disorder

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Phobias in pets are commonly assumed to be associated with specific stimuli, such as thunderstorms, loud noises, strangers, separation from an owner, or the outdoors. However, some dogs and cats chronically exhibit signs of anxiety regardless of their situation. While demonstrations of fear may intensify when these animals are exposed to certain situations or stimuli, such pets are rarely or never truly relaxed and calm. These pets may have generalized anxiety disorder (GAD).

Clinical Signs

In humans, the essential feature of GAD is defined as follows:

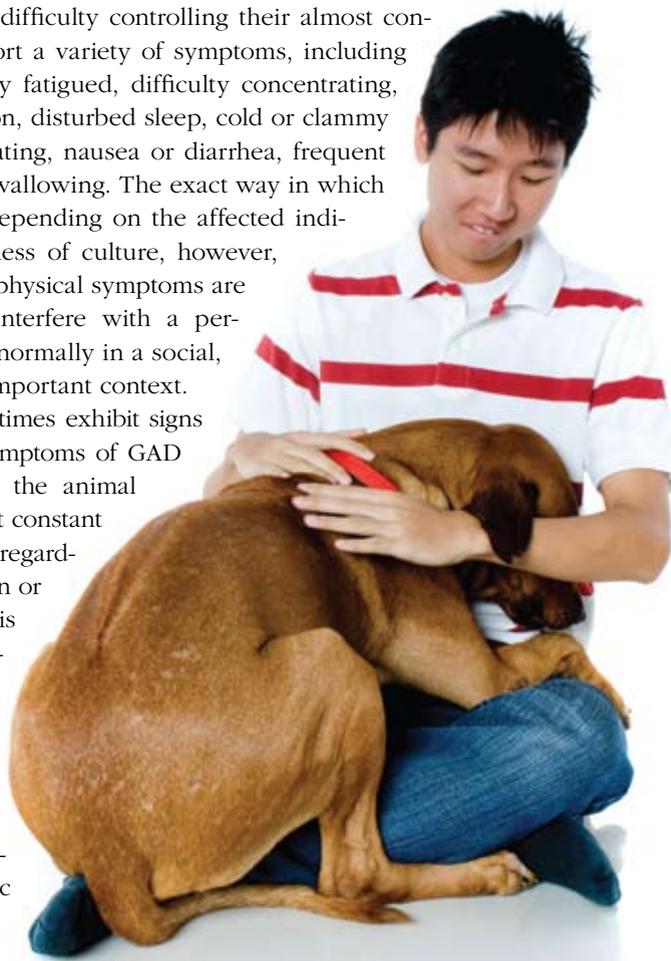
...excessive anxiety and worry (apprehensive expectation), occurring more days than not for a period of at least 6 months, about a number of events or activities [...] the intensity, duration, or frequency of the anxiety and worry is far out of proportion to the actual likelihood or impact of the feared event.¹

People with GAD have difficulty controlling their almost constant worrying and report a variety of symptoms, including restlessness, being easily fatigued, difficulty concentrating, irritability, muscle tension, disturbed sleep, cold or clammy hands, dry mouth, sweating, nausea or diarrhea, frequent urination, and trouble swallowing. The exact way in which GAD manifests varies depending on the affected individual's culture. Regardless of culture, however, the anxiety, worry, and physical symptoms are significant enough to interfere with a person's ability to function normally in a social, occupational, or other important context.

Animal patients sometimes exhibit signs that are analogous to symptoms of GAD in humans. Specifically, the animal shows constant or almost constant signs of fear and anxiety, regardless of the situation it is in or the stimuli to which it is exposed. Specific behaviors, such as those listed in **BOX 1**, vary depending on the patient.

History and Diagnosis

Pets with GAD may present to the veterinary clinic for an apparent specific fear-related disorder



Understanding Behavior

About This Series

Behavior problems are a significant cause of death (euthanasia) in companion animals. While most veterinary practices are necessarily geared toward the medical aspect of care, there are many opportunities to bring behavior awareness into the clinic for the benefit of the pet, the owner, and ourselves. This series acknowledges the importance of behavior as part of veterinary medicine and speaks practically about using it effectively in daily practice.

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QuickNotes

Pets with generalized anxiety disorder exhibit behaviors indicative of mild to severe anxiety most or all of the time and in a wide variety of contexts.

^aDr. Crowell-Davis discloses that she has received financial support from CEVA Animal Health.



QuickNotes

Pets with generalized anxiety disorder may also have specific phobias.

BOX 1

Signs of Anxiety

- ▶ Trembling
- ▶ Persistent vocalizing
- ▶ Urinating
- ▶ Defecating
- ▶ Salivating
- ▶ Pacing
- ▶ Panting even when not in a hot environment
- ▶ Hiding
- ▶ Persistently holding the ears back against the neck
- ▶ Persistently holding the mouth in a submissive grin
- ▶ Destructiveness
- ▶ Freezing (not moving)

specific, the owners will describe the dog as “happy” or “relaxed” in other contexts (e.g., good weather, at home). However, it is also important to ask about specific somatic signals, such as pinning the ears against the neck or holding the lips in a submissive grin. Some owners are not sufficiently familiar with canine communication to understand that if their dog is thumping its tail while displaying a submissive grin and pinning its ears back, it is displaying some degree of arousal coupled with anxiety, not happiness. The owners should describe the pet’s

(e.g., separation anxiety, storm phobia, fear aggression, submissive urination) because their fear—and consequent problem behaviors—becomes more common or more intense in certain situations. For example, the owners of a dog with GAD may state that the dog trembles and hides under the furniture during storms. If the dog’s behavior in the examination room is also indicative of anxiety, it is important to ask how the dog acts in other situations. If the dog’s fear is context spe-

specific signals in a variety of situations, especially when the pet is in its own home, the owners are present, and nothing obvious is happening to disturb the pet. If the pet is almost constantly demonstrating signals of fear and anxiety, regardless of context, and simply gets worse in particular situations, then the pet has GAD.

In contrast, some owners may present their pet because they have already perceived a more general problem. They may describe the pet as seeming consistently “miserable” or “frightened.” These pets may not demonstrate exacerbated signs of fear in specific contexts. Instead, they simply exhibit low levels of behavior indicative of anxiety most of the time. The owners may make comments like, “He’s never happy.” As for pets that present because of exacerbation of specific behaviors in specific situations, it is important to ask for detailed descriptions of behaviors that cause the owner to believe the pet is unhappy, anxious, miserable, or frightened.

Animals that have had prior stressful experiences (e.g., abuse, repeated homelessness) commonly display some degree of chronic, low-level anxiety when they are taken into a new home. As these animals persistently experience a loving, stable environment over a period of days or weeks, many show decreased signs of anxiety. However, if the passage of 2 to 3 months does not improve the pet’s general level of anxiety, GAD should be presumed and the pet treated accordingly.

Treatment

Once a pet has been identified as being chronically anxious, medication is a critical component of treatment. A selective serotonin reuptake inhibi-

TABLE 1

Medications That May Benefit Pets With Generalized Anxiety Disorder^{a-c}

| Medication | Dogs | Cats |
|--------------|----------------------|---------------------|
| Fluoxetine | 1–2 mg/kg q24h | 0.5–1.5 mg/kg q24h |
| Paroxetine | 1–1.5 mg/kg q24h | 0.5–1.5 mg/kg q24h |
| Sertraline | 0.5–4.0 mg/kg q24h | 0.5–1.5 mg/kg q24h |
| Clomipramine | 1–3 mg/kg q12h | 0.24–1.3 mg/kg q24h |
| Buspirone | 0.5–2.0 mg/kg q8–24h | 0.5–1.0 mg/kg q12h |

^aCrowell-Davis SL, Murray T. Selective serotonin reuptake inhibitors. In: *Veterinary Psychopharmacology*. Ames, Iowa: Blackwell Publishing; 2006:80-100.

^bCrowell-Davis SL, Murray T. Tricyclic antidepressants. *Veterinary Psychopharmacology*. Ames, Iowa: Blackwell Publishing; 2006:179-206.

^cCrowell-Davis SL, Murray T. Azapirones. *Veterinary Psychopharmacology*. Ames, Iowa: Blackwell Publishing; 2006:111-118.

tor, serotonin and norepinephrine reuptake inhibitor, or azapirone can benefit most cases (TABLE 1). These drugs are given daily over a period of weeks to effect a long-term change in the pet's underlying emotional state. Because of their potential for addiction and the chronic nature of GAD, benzodiazepines are not good choices for the primary treatment of this disorder. However, if the pet shows an exacerbation of fear in particular contexts, benzodiazepines can be useful supplements, especially if they can be given 30 to 60 minutes before an exacerbating situation (TABLE 2).

Along with medication, all training protocols should be reviewed to identify and minimize stressors in the pet's life. Training techniques that involve aversive stimuli, such as positive punishment (an aversive stimulus occurs when the pet engages in an undesired behavior) and negative reinforcement (the pet experiences an aversive stimulus unless

it engages in a desired behavior), should never be used when handling pets with GAD. These training techniques include such common practices as "leash correction," in which, if the pet does not obey a command, the leash is jerked, snapping the collar against the skin covering the trachea, external jugular vein, carotid artery, and vagosympathetic nerve trunk, until the pet does obey the command. Instead, desired behaviors should be encouraged and reinforced, and the owners should attempt to prevent undesired behaviors by logical management. For example, if the pet chews on certain objects (e.g., electronic remote control devices), these objects should be kept out of the pet's reach. Otherwise, undesirable behaviors should be ignored because use of aversive stimuli will only worsen the pet's anxiety and potentially exacerbate the severity

QuickNotes

Effective treatment requires the use of appropriate medication.

TABLE 2

Benzodiazepines Commonly Used in Dogs and Cats^{a,b}

| Generic name | Dogs | Cats |
|-------------------------|--------------------|-----------------------|
| Alprazolam | 0.02–0.1 mg/kg q4h | 0.0125–0.25 mg/kg q8h |
| Chlordiazepoxide | 2.0–6.5 mg/kg q8h | 0.2–1.0 mg/kg q12h |
| Clonazepam | 0.1–0.5 mg/kg q8h | 0.015–0.2 mg/kg q8h |
| Clorazepate dipotassium | 0.5–2.0 mg/kg q4h | 0.5–2.0 mg/kg q12h |
| Diazepam | 0.5–2.0 mg/kg q4h | 0.1–1.0 mg/kg q4h |
| Flurazepam | 0.1–0.5 mg/kg q12h | 0.1–0.4 mg/kg q12h |
| Lorazepam | 0.02–0.5 mg/kg q8h | 0.03–0.08 mg/kg q12h |
| Oxazepam | 0.04–0.5 mg/kg q6h | 0.2–1.0 mg/kg q12h |

^aCrowell-Davis SL, Murray T. Benzodiazepines. In: *Veterinary Psychopharmacology*. Ames, Iowa: Blackwell Publishing; 2006:34-71.

^bThe dose frequency is the maximum frequency that should be used. The lowest dose and frequency that alleviate the fear should be used.



QuickNotes

A safe, predictable environment with regular pleasant experiences is required for improvement. Recovery is likely to require weeks to months of treatment.

of the clinical signs or cause the manifestation of new signs.

As much as possible, a stable, predictable environment should be provided for the pet. This does not mean that the family must stick to a rigorous and specific schedule, but there should be enough consistency in the pet's day that it can learn which events predict certain subsequent events and can expect things to happen in a certain order.

Efforts by the family to elicit relaxation, play, or other "happy" behaviors can be beneficial. The most effective stimulus varies from patient to patient. Some pets respond well to delicious food treats; others are relatively uninterested in food. In severe cases, the pet may have a poor appetite due to chronic anxiety, and the use of appetite-stimulating benzodiazepines may be beneficial for the first weeks of treatment. Other pets respond better to gentle petting or massage from someone they are familiar with, while others may exhibit their rare moments of "happiness" (e.g., relaxed face, ears up) when a Frisbee is thrown. Many other solutions exist, and it is important to communicate with the family about identifying and extending the situations in which their pet does seem to be relaxed or happy. Various products that provide environmental enrichment can also be useful. Regardless of the specific treatment, the owners should watch for signals of relaxation,

alertness, and playfulness and facilitate the repetition of those signals.

It is important for the family to understand the need for patience. Whether the pet has developed GAD because of genetic factors that make it overreactive to fear-inducing stimuli; a single, severe traumatic event; chronic environmental deprivation at a young age; repeated exposure to fear-inducing stimuli; or some other cause, recovery is likely to require weeks or months. Family members should endeavor to be relaxed when around their anxious pet and should not engage in excessive consoling behavior. While emotions such as fear cannot be operantly reinforced, some behaviors that are common indicators of fear can be. Thus, if a dog learns that leaning against a person's legs and whining results in its being picked up, cuddled, talked to in a soft voice, and fed treats, it will become more likely to engage in that behavior.

Conclusion

The major criterion for identifying a pet as having GAD is the persistence and frequency of behaviors indicative of anxiety, even low levels of anxiety, over long periods of time. The standard criterion in human psychiatric medicine is 6 months. In the case of adopted pets whose earlier history is not known, GAD should be assumed if chronic anxiety persists 2 to 3 months after the pet has been provided with a stable, loving, secure household free of aversive stimuli. **C**

Reference

1. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 4th ed. Washington, DC: American Psychiatric Association; 1994.