

**S25B**

**Diagnosing and Treating Canine Separation Anxiety**

Gary Landsberg

Doncaster Animal Clinic

Thornhill, ON, Canada

**OBJECTIVES OF THE PRESENTATION**

- To assist veterinarians in making a diagnosis of separation anxiety.
- To provide an understanding of the behavior modification steps that are required to help improve cases of separation anxiety.
- To review concurrent pharmacological interventions that might serve the pet's interests in reducing its anxiety as well as to improve the outcome of treatment for the owners.

**KEY CLINICAL DIAGNOSTIC POINTS**

- The most common problems associated with separation anxiety are vocalization (90%), destructiveness (80%) and housesoiling (55%).<sup>1</sup> In addition, dogs may exhibit autonomic arousal including hypersalivation, vomiting, or diarrhea, displacement behaviors such as licking and self-mutilation, and predatory-like behaviors such as jumping at objects, grabbing them and shaking.<sup>2</sup> Many dogs may refuse to eat or exhibit signs of depression. Most commonly these signs would arise when the dog is separated from the owner or cannot gain access to the owner.
- The presence of these signs alone is not diagnostic of separation anxiety since there are numerous other possible causes for each sign. Therefore a closer examination of the history is required to determine if the signs are indeed associated with anxiety, and whether separation from the owner is the cause. Dogs that exhibit any of these signs at times when they are not separated from the owner, should be evaluated for other causes, although separation anxiety can coexist.
- Most dogs with separation anxiety try to remain in close proximity to the owners or will constantly monitor their whereabouts within the home. When they are unable to gain access to the owners or as the owners prepare to leave signs of anxiety and distress will generally begin. Most dogs soon learn the cues that indicate the owner is preparing to depart. Destructive behavior or housesoiling may begin within a few minutes following the owner's departure and is often accompanied by distress vocalization. Destructive activity may be at entrance or exit doors, exits to confinement areas, or directed at the owners possessions, such as clothes and furniture. Hyperattachment, extreme following, departure cue anxiety, and excessive greeting when the owners return can be useful diagnostic aids.<sup>3</sup>
- While most of the problems are likely to begin within 30 minutes of departure, some dogs may cycle in and out of periods of arousal, perhaps associated with the presence of external stimuli.<sup>2,4</sup>
- At the time of presentation owners most owners will have made numerous attempts to modify the behavior and the presentation can therefore be altered. For example some dogs have learned to settle and take treats for a few minutes following departure, while others may have learned to settle during the owners' arrival. Some dogs display aggression to their owners as they attempt to leave or confine their dogs prior to departure.
- In order to accurately assess the dog's behavior prior to, at the time of, and following owners departures as well as at homecomings, videos, DVDs or movie clips can be invaluable diagnostic aids. They can help to detect more subtle changes in anxiety such as panting and pacing, which are less obvious than destructiveness or elimination and can help to validate to the owners that the dog is distressed. Recordings may also be the best way to monitor response to therapy.<sup>5</sup>
- Destructive dogs may be lacking sufficient stimulation, and be reinforced for chewing or exploration by what they find, or because of the owner's response. If these behaviors occur when the owner is at home, alternative causes for chewing should first be ruled out. Pets that are crated, confined or caged may be distressed about the confinement itself, and may therefore display destructive behavior, escape attempts, vocalization or other signs of anxiety. Therefore unless the pet is

comfortable with confinement when the owner is at home (e.g., as a play or resting area) then the confinement itself may be the cause of the anxiety or will further compound the separation anxiety.

- For pets that vocalize during departure, it should first be determined whether the pet vocalizes excessively when it hears or sees specific stimuli while the owners are at home. Some pets continue to vocalize or increase their vocalization because they have been reinforced. Whether the dog's response is excessive, whether the pet settles on its own after the stimulus ceases or retreats or whether the owner must be present to calm and settle the pet, can help to determine whether the vocalization that occurs in the owner's absence is due to separation anxiety. In addition, the type, intensity and duration of anxiety induced vocalization is generally quite different than alarm, territorial, fear induced or attention seeking vocalization.
- If the pet is not entirely housetrained when the owner is at home, then housesoiling may not necessarily be a sign of separation anxiety. Therefore be certain to review whether the pet has been fully housetrained, whether it is provided with sufficient opportunities to eliminate in the desired locations and whether it is accompanied by the owners to insure that it has eliminated and been rewarded before leaving the dog alone at home. Dogs that eliminate after several hours departure may be unable to control elimination for any longer, and those that eliminate in their confinement areas may be anxious about confinement itself (see above).

### KEY ETIOLOGIC AND PATHOPHYSIOLOGIC POINTS

- In a recent review of behavior cases at behavior referral practices in Canada, Australia and the United States separation anxiety represented 9% of the Canadian cases, 13% at the Australian practice and 19% of the US cases.<sup>6</sup>
- The onset of problems often coincides with obtaining a new pet (often from a shelter)<sup>7</sup>, or an abrupt change in the owner's schedule that results in the dog being left alone for longer periods or at different times.
- In a recent Australian study of 61 dogs with separation anxiety, 79% were purebred, with an approximate equal number of males and females. Sixty-one percent had been obtained from breeders, 15% from shelters, 10% from pet shops and 7% from friends. In this study 84% of the dogs lived in households with two or more people, 85% were away from home 8 hours or longer, and 57% of the dogs lived with one or more dogs.<sup>8</sup>
- However, in another study dogs from households with a single owner were 2.5 times more likely to have separation anxiety than multi-owner households, but spoiling, sex and presence of other pets were not factors.<sup>3</sup>
- The problem may be **primary** in that the hyperattachment develops as the puppy grows into adulthood and cannot break the bond or primary attachment that has developed with its owners.
- In adult dogs that develop fear or anxiety (e.g., new home, noise phobia, cognitive changes), the attachment problem may be **acquired** as the pet seeks owner contact for comfort whenever the anxiety evoking situation arises. With time these dogs may become increasingly attached to their owners, and may exhibit anxiety whenever the owners are not nearby or easily accessible. In fact, dogs with separation anxiety show a high probability of noise phobia or thunderstorm phobia.<sup>9</sup>
- Separation anxiety is also a common reason for referral to behavior centers of senior dogs.<sup>10,11</sup>

### KEY THERAPEUTIC POINTS

- As with most behavior problems, treatment should focus on identifying those behaviors that are desirable and using rewards to train and shape behaviors that closer approximate a final goal.
- To do so effectively, any and all tangible items (i.e., treats, food, chew toys, play toys) and social interactions (e.g., affection, play, exercise, training, walks) that can serve as rewards (i.e., that the dog enjoys, desires or demands) should be used exclusively to gain increasingly more desirable responses (and never to reward undesirable responses).
- In the case of the dog with separation anxiety and overattachment, in addition to treats, food and chews, a primary reward would be the attention and companionship it receives from the owner.

Therefore, the focus of training and rewards, should be to achieve calm, relaxed behaviors and to gradually increase the duration, distance and even location where the pet learns to relax.

- Therefore the first set of instructions to the owner would be to a) provide a predictable daily routine that provides all of the pet's requirements b) to identify all rewards including affection and attention c) to insure that rewards are only given for relaxed and calm behaviors and d) to never give rewards on demand or when the pet seeks physical contact or proximity to the owner.
- The focus of training (i.e., any time the pet wants something or any time the pet can be motivated with rewards) is to teach the dog that settled and relaxed behaviors are required before any rewards are given (sit / watch, down-settle) and to gradually shape increasingly more relaxed responses and increasingly longer duration.
- Ideally it can be beneficial in dogs with separation anxiety to a) work toward training the dog to relax in a comfortable sleeping area (with bedding, and perhaps favored toys) where they can settle or rest at times they are not interacting with the owners, and b) to develop a daily schedule in which they can tolerate lengthy bouts of inattention from the owners.
- Punishment of any sort should be avoided since it adds to the pet's anxiety and conflict (i.e., the dog is overly attached but the dog is fearful or anxious of approaching). On the other hand, some dogs may accept the punishment since it still serves as attention. The most important principle of training is that when punishment is used to suppress behaviors, they may only be effective when the pet is engaging in the behavior. Therefore punishment for a behavior that has already occurred is ineffective and counterproductive.

### **The Program**

Although the owners and the behavior modification program should focus on rewards and shaping, specific suggestions may be easier to follow, as long as the owners understand the intent of each step of the program.

#### **1. Predictable rewards**

- a. Reward what is desirable and ignore what is undesirable. For pets with separation anxiety, attention seeking and the need for proximity to the owner are behaviors that we do not want to reinforce. Since this can lead to an increase in anxiety at the outset, drug therapy (discussed below) may be in the best interest of the pet and the owner.
- b. Identify all rewards so that they can be used to train what is desired and so they are never used to inadvertently reinforce what is undesirable. Consistency, timing and repetition are the keys to learning. Any item that will motivate the pet (e.g., food, treat, chew toy, play, walk) or anything that the pet seeks from the owner (play, affection, walk, sitting beside the owner) should be used only as rewards for training. In short, insure that your pet is exhibiting a desirable behavior (i.e., one that you wish to train) before any reward is given.
- c. Determine the behaviors that will help your pet to best adapt to periods of inattention. Training can begin by waiting for a relaxed sit, or a settled down for every reward (attention, affection, food, treat, chew toy) is given. Over time the owner should gradually work on increasing the duration and the amount of relaxation (by monitoring body language, breathing, facial expressions) before rewards are given.
- d. The optimum goal would be train the pet to have an area such as a mat or bedding where it learns to lie down and relax in between periods of play and attention. Teach the pet to go to the mat, gradually shaping longer stays on the mat (with food and affection as rewards); and consider the use of favored chew toys to encourage the pet to stay on its mat. Over time the owner moves farther away and for gradually longer times before returning. Success might be improved by placing a piece of family members clothing or a favored toy to which the pet can only have access in its area. Adding additional cues that are associated with relaxation training and the owners remaining at home such as an odor (aromatherapy) or the sounds of a TV or CD on may be beneficial.

- e. Pets that are resistant might benefit from lure reward techniques, target training, clicker training or a head halter to more quickly achieve and reinforce desired behavior.
  - f. When the pet appears settled, relaxed or distracted on its mat, this might be a good time to begin some graduated departures, in which the owners leave while the pet is calm and return quickly so that the pet can begin to learn that departures are not of any concern. Gradually vary and slowly increase the length and duration of departure.
- 2. Predictable routine**
- a. Develop a daily routine that provides sufficient exercise, play, training and attention at times when the owner is likely to be at home, so that the pet can learn to predict the times for attention and play and the times to expect no attention or play. Keeping the pet occupied during these times of non-attention can be accomplished by having a comfortable bedding area (above), through gradually shaping and reinforcing the use of the area (above) and by providing favored chew or feeding toys when in the area.
- 3. Arrivals and departures**
- a. Prior to departures plan your day to provide exercise, attention and a chance to eliminate about 15 to 20 minutes prior to departure. Then get your pet to settle, distract it with special toys or treats and leave when the pet is settled, distracted or resting.
  - b. At homecoming do not give attention until your pet settles and calms. Either ignore or give a command to sit, settle or go to the mat, and then reinforce with attention and a walk. Do not punish even if there has been undesirable behavior in your absence.
- 4. Departure cues**
- a. Over time most pets learn that certain cues predict departure such as picking up keys or a purse, putting on work clothes, walking in and out the door, opening or shutting the garage or turning on the car. Therefore either avoiding these cues or developing strategies to help the pet adapt to these cues should be employed. After teaching the pet to settle, you might give a favored reward and pick up your keys or purse, approach the door and return, or go out to the garage and return multiple times so that these no longer are predictive of departure.
  - b. Just as there are cues that are predictive of departure, over time it should be possible to develop cues that help the pet to relax or are predictive of non-departure. Having the pet lie on its mat, turning on the TV, using an aroma or sweatshirt given during mat training, or giving favored food treats may all help to calm the pet and minimize the impression that your are about to depart.
- 5. Drugs and pheromones – adjunctive therapy**
- a. The concurrent use of drugs or pheromones can help to calm the dog, improve the response to training and perhaps decrease the dogs desire or need for proximity and attention.<sup>11</sup> However, even with the aid of drugs some form of behavior therapy to reduce dependence and attachment will be required, and success can potentially be achieved with behavior therapy alone.<sup>11</sup>
  - b. Short-term solutions will need to be found for most owners since it can take weeks to months to achieve satisfactory improvement and many owners and pets are desperate for a more immediate fix. Day care, house sitters, a dog walker (for pets that can tolerate short departures), confinement to a dog proofed section of the home or the short term use of anxiolytics may be beneficial unless the owners can schedule time off work to deal with the problem.

### **KEY PROGNOSTIC POINTS**

- Takeuchi *et al* evaluated treatment outcome in dogs with separation anxiety and owner compliance and perception of effectiveness of treatment recommendations. Fifty-two dogs were evaluated and the researchers found that 32 were improved and 20 were the same, worse, or had been euthanized or given away.<sup>12</sup>

- Significantly fewer dogs whose owners were given >5 instructions improved or were cured when compared to those given fewer instructions. This may reflect the difficulty of compliance, time commitment or lack of understanding of the treatments prescribed. Owners complied with instructions that required little time such as chew toys at departure, increasing exercise and omitting punishment. Often owners were not willing to uncouple departure cues or desensitize to impending departures.<sup>12</sup>
- Twenty-seven dogs were treated with medication (e.g., amitriptyline) and 15 (55%) improved.<sup>12</sup>
- Treatment with clomipramine and pheromones in conjunction with behavior therapy have led to success rates approaching 70 to 80% for most signs over 4 to 8 weeks.<sup>13,14</sup>

### OVERVIEW OF THE ISSUE

- Although separation anxiety might be improved with proper guidance and a committed and compliant owner with behavior therapy alone, the added use of drug therapy may help the pet to more quickly improve success or increase overall success.

### KEY DRUGS, DOSAGES AND INDICATIONS

- Drugs are often utilized in conjunction behavior modification to help the dog to better settle and focus as well as to help control excesses of anxiety. However, the drugs do not address the training needed to achieve greater independence and relaxation during the owner's absence.
- Clomipramine at 1–2 mg/kg bid can be dispensed for one to two months after which point response to therapy can be reassessed. Occasionally 2–3 mg/kg bid might be more effective. However, for accurate objective assessment of drug response (e.g., intensity, duration) a recording is advisable.
- After week one, 47% of the dogs receiving Clomipramine and behavior modification showed improvement compared to 29% of the dogs receiving behavior modification alone.<sup>13</sup>
- If insufficiently effective or if there are adverse clinical signs a selective serotonin reuptake inhibitor may be a useful alternative.
- Dog appeasing pheromone has been found to be of approximately equal efficacy as clomipramine in the treatment of separation anxiety in a blinded study of 67 dogs in which behavior modification and clomipramine was compared to behavior modification plus DAP diffuser.<sup>14</sup> Physical signs such as sleep disorders, hypersalivation, housesoiling and feeding problems improved to a greater degree in the clomipramine group (perhaps because of its anticholinergic effects).
- Benzodiazepines such as alprazolam (.02–.1 mg/kg) might be dispensed on an as needed basis, shortly before departures for more immediate or short term control of departure related anxiety. Ongoing use of benzodiazepines might also help to reduce anxiety over the short term but they may inhibit learning and there may be a rebound effect when they wear off or are discontinued.
- For further details on drugs and doses see **Dr. Simpson's notes for lecture V2.**

### SUMMARY

Behavior modification combined with drugs can greatly improve most cases of separation anxiety but owner understanding and compliance with the behavior modification program may be difficult or impractical for some owners to implement. Short term immediate solutions may also need to be found.

### REFERENCES

1. Voith VL, Borchelt PB. Separation Anxiety in Dogs. In: *Readings in Companion Animal Behavior*, Voith VL, Borchelt PB (editors). Veterinary Learning Systems, Trenton, NJ, 1996, 124
2. Lund, DJ, Jorgensen, MC. "Separation Anxiety in Pet Dogs Behaviour Patterns and Time Course of Activity". *Proceedings of the 1st Inter Conf Vet Behav Med*. UFAW, Great Britain, 1997, p. 133–142.
3. Flannigan G, Dodman NH. Risk factors and behaviors associated with separation anxiety in dogs. *J Am Vet Med Assoc*, 219, 2001, 4604–66
4. Borchelt, PL, Voith, VL. "Diagnosis and Treatment of Separation-Related Behavior Problems in Dogs". *Vet Clin North Am Sm Anim Pract*. 12, 1982, 625–635.
5. Frank D. Animal behavior case of the month. *J Am Vet Med Assoc*, 227;2005:890–2

6. Denenberg S, Landsberg GM, Horwitz D. A comparison of cases referred to behaviorists in three different countries. *Current Issues and Research in Veterinary Behavioral Medicine*. Mills D, Levine E, Landsberg *et al*, eds. Purdue Press, 2005, 56–62
7. McCrave, EA. Diagnostic Criteria for Separation Anxiety in the Dog. *Vet Clin North Am Small Anim Pract* 21;1991:247–255.
8. Perry G, Seksel K, Beer L, Batt L. Separation anxiety: a summary of some of the characteristics of 61 cases seen at Sydney, Australia Behaviour Practice. *Current Issues and Research in Veterinary Behavioral Medicine*. Mills D, Levine E, Landsberg *et al*, eds. Purdue Press, 2005, 203–206  
Overall KL, Dunham AE, & Frank DF, Frequency of nonspecific clinical signs in dogs with separation anxiety, thunderstorm phobias and noise phobia alone or in combination. *J Am Vet Med Assoc*, 219, 2001, 467–473
9. Landsberg GM. The most common behavior problems in older dogs. *Vet Med* 1995;90(suppl):16–24
10. Horwitz D. Dealing with common behavior problems in senior dogs. *Vet Med* 2001; 96(11):869–879
11. Podberscek, AL, Hsu Y, Serpell, JA Evaluation of clomipramine as an adjunct to behavioural therapy in the treatment of separation-related problems in dogs. *Veterinary Record*, 1999, 145: 365–369.
12. Takeuchi, Y, Houpt, KA, Scarlett JM Evaluation of treatments for separation anxiety in dogs. *JAVMA*. 2000, 217: 342–345.
13. King JN, Simpson, BS, Overall KL *et al* Treatment of separation anxiety in dogs with clomipramine: results from a prospective, randomised, double-blind, placebo-controlled, parallel-group multicenter clinical trial. *Applied Animal Behaviour Science*. 2000 67: 255–275
14. Gaultier E, Bonnafous L, Bougrat L, Lafont C, Pageat P. Comparison of the efficacy of a synthetic dog-appeasing pheromone with clomipramine for the treatment of separation-related disorders in dogs. *Veterinary Record*, 156, 533–538, 2005