Part IV-E: CASE REPORT #1—Interdog household aggression EXAMPLE

a. Statement of the owner's presenting complaint or problem behavior.

This case of interdog household aggression involved two young female boxer-mixes. They had approximately ten fights between March and July, 2012, beginning soon after the owners were married. The couple believed that the one dog was instigated the fights (the initiating dog, Sherman et al., 1996), although there was some uncertainty because, once started, the second dog (the target dog) would escalate the altercation. The initiating dog also suffered the most severe injuries, with deep punctures and tears on her hind legs (Level 4 bite, Shannon, 2009). The owner was also injured while separating the dogs, with a broken thumb and a bite on the hand.

The fights escalated in frequency and intensity over the four months prior to the first consultation. Initially they occurred while the dogs were playing, usually with a ball and a human present, and immediately after fighting, the dogs were affectionate toward one other. Then fights occurred more often, with seemingly less provocation, and without reconciliation. They also occurred in new locations, including the fenced back yard and inside the home. For nearly a month before the consultation, the dogs were kept in separate parts of the house (the initiating dog upstairs and the target dog in the basement), and did not interact at all. To add to the disruption in routine, the newlywed owners were also essentially living and sleeping apart, each keeping company with one of the dogs.

b. A description of the animal's signalment (sex, breed, age, size, medical conditions), household composition and current living environment.

Both dogs were 1 1/2-year old boxer-mix, neutered females that had lived together in the same house with the same owners since they were puppies. The dogs were not related, and their appearance and temperaments were very different.

In general, the initiating dog was more assertive in her interactions with other dogs. The target dog was intensely ball-motivated and demanding of humans during play. The target dog was in excellent health, and the initiating dog was in generally good health, apart from the injuries sustained in the most recent fight. The initiating dog also had food allergies and pruritus, with chronic scratching and paw-licking. Her allergies may be related to anxiety, as she also and showed mild to moderate symptoms of generalized anxiety, separation anxiety, and noise reactivity (Sherman & Mills, 2008). She had been on antibiotic treatment for the bite injury, and was restricted to a salmon-based diet, but she did not take any medication for anxiety.

The dogs did not experience any changes in their living situation or daily routine concurrent with the onset of fighting, apart from the owners’ marriage. The home was small, but well suited to a two-dog household with an upstairs living area, a large finished basement, and an easily accessed fenced yard. The household also included two cats and a roommate, who got along well with the dogs, but who became guarded when the fighting erupted inside the home. The cats were not affected by nor did they influence the dogs’ aggression, and after the initial assessment they were not considered further.

The dogs were alone for about eight hours on weekdays, but the owners provided ample daily exercise for these athletic and high-energy dogs, with long walk to a local park, where they played fetch or wrestled with one another. Several times
a week the dogs also played at a larger off-leash dog park. The heightened aggression between the dogs constrained options for exercise, since they could not play together, ride together in the car, or walk side-by-side on leashes.

c. Behavioral history, medical history, and baseline frequency of problem behaviors.

At the time of consultation the owners reported that the dogs were now fighting at the sight of one another, so they had been separated for several weeks. While separated, the initiating dog reacted to sounds made by the target dog, with increased vigilance, pacing, low growling, and barking. During the consultation I confirmed the owner’s report by arranging a brief, controlled encounter with both dogs on loose leashes for safety. As soon as the target dog was visible in the doorway (relaxed and tail-wagging), the initiating dog tensed, growled, barked, and lunged at the target dog; the target dog adopted a defensive posture in response, leaning back with tucked tail. When I observed the initiating dog alone, she was generally vigilant, restless, and frequently scratched herself. She also reacted to outside noises, such as people walking past the house. In contrast, when I observed the target dog alone, she was active, but generally relaxed and playful.

The early body-language signals that preceded the initiating dog’s aggression included a stiff body posture, a hard-eye stare, and breathe-holding. The owners tended to ignore these subtle, quiet signals—attributing them to her vigilant personality—and intervened only when the dog’s aggression escalated. In addition, the interventions they used were to physically yank on the dogs’ leashes while commanding “NO” in a sharp, raised voice. These confrontational methods are often ineffective and can themselves elicit aggression (Herron et al., 2009).

d. Behavioral assessment and evaluation results, describing how assessment was conducted and including references to the literature.

The reasons for interdog aggression are many, and in this case competition over valuable resources, redirected aggression related to the initiating dog’s underlying anxiety, and learning were the likely causes. There were multiple risk factors for aggression, as well. First, aggression between dogs in the same household is most often seen between neutered females (Sherman et al., 1996), and aggression and anxiety may be more common in mixed breeds (Bamberger & Houpt, 2006; but see Guy et al., 2001b); in general, the incident of bites may be more common among neutered, young dogs (Guy et al., 2001b). Second, the initial aggressive incidents between the dogs occurred during play. The dogs’ breed-typical athletic wrestling/body-slamming play style put them in a heightened state of excitement and arousal, which can quickly switch to aggression (Bennet & Briggs, 2008). Third, the initiating dog’s general anxiety and pruritus may have contributed her reactivity. For some types of aggression, the effect of fear may be important in understanding and treating the aggression (Guy et al., 2001a). Anxiety is under neurobiological control of fear centers in the brain, and creates a highly negative internal state (Panksepp et al., 2011) that imposes a negative valence on events in the environment and can lower a dog’s threshold for aggression (Bamberger & Houpt, 2006). Fourth, resource-guarding is a common cause of interdog household aggression, and may have been a factor in this case. The owner’s history confirmed that the dogs are competitive over high-value toys, and try to monopolize or displace the other dog for human contact and attention. This pattern was consistent with Sherman et al.’s (1996) findings that aggression was most often correlated with excitement, food/toys, and owner proximity. Finally, a pivotal incident marked the onset of fighting; the two dogs collided while chasing after a ball, and the initiating dog was slightly injured. The initiating dog may have learned to
associate the target dog, the ball/play, and the anticipation of pain, which may have contributed to future fights. Before this incident, the dogs had played together often without any conflict.

The severity of the problem called for an environmental and behavior modification plan that addressed the multiple factors contributing to aggression. It included the following elements, commonly used to treat interdog household aggression (e.g., Voith, 1995; Sherman et al., 1996; Landsberg & Horwitz, 2012): introducing short-term behavior management strategies; eliminating/reducing stressors from the environment; teaching the owners to read dog body language; using counter-conditioning to create positive associations to aggression-eliciting stimuli; using systematic desensitization to gradually reunite the dogs; shaping relaxation with positive reinforcement; introducing new exercise routines; working on obedience training and mental challenges; and seeking additional veterinary support. The plan required the owners to work together initially, applying the techniques to both dogs. However, some strategies were tailored for the initiating dog, which had more issues contributing to the problem. As a rule, food was incorporated into the behavior modification techniques (Feuerbacher & Wynne, 2012), and confrontational techniques were discontinued (Herron et al., 2009).

e. Recommended behavior modification plan and rationale, including references to literature to support interventions used.

1. Because the mere sight of the target dog triggered an aggressive response by the initiating dog, short-term management strategies were aimed at preventing fights from breaking out, and keeping people and dogs safe from further emotional and physical trauma. They included keeping the dogs physically separated with barriers, gates, and leashes, using a muzzle the dogs had to have together, and educating the owners on how to safely break-up a fight, should it occur. The goal was to replace temporary measures gradually in a controlled, systematic way. Physical separation has the potential to create barrier frustration aggression (i.e., the closed basement door, gates, leashes), but neither dog had ever demonstrated classic symptoms of barrier frustration, such as heightened reactivity along the fenced yard or while on leash.

2. An analysis of the home and daily routine identified several stressors in the initiating dog’s environment that could be reduced or eliminated, such as the constant presence of high value toys, and visual stimuli from outside that could be seen through a picture window. The owners were also advised to remain calm and keep the dogs calm, since excitement is a common trigger of household canine aggression (Sherman et al., 1996).

3. Although the fights seemed to erupt “without warning”, which is correlated with a poor prognosis for treatment of interdog aggression (Sherman et al., 1996), the initiating dog provided numerous early signs of anxiety or aggression that the owners had failed to notice, including breath-holding and forward-stance body rigidity. Learning to recognize the initiating dog’s subtle body language, and intervene before it escalated, was an essential part of the behavior modification plan.

4. Counter-conditioning uses Pavlovian associative learning to instill a calm, positive emotional response in the presence of a stimulus that had previously elicited fear/aggression. It involves pairing a high-value treat with the trigger-stimulus, at an intensity that is below the threshold for eliciting fear/aggression. In this case, counter-conditioning began by pairing a
high value treat with the sound of the other dog playing. As the dog stopped reacting, the intensity, duration, and complexity of the trigger used in the counter-conditioning exercise increased.

5. Systematic desensitization was used in conjunction with counter-conditioning, with the goal of gradually reintroducing the dogs. Desensitization and counter-conditioning are recommended treatments for interdog aggression (e.g., Voith, 1995). In this case, the stimuli and locations used in counter-conditioning became increasing more intense and distracting as the dogs learned to relax in the presence of one another. The location and context of counter-conditioning was expanded from being in the same room, to include the yard, leashed walks, and play.

6. Operant conditioning techniques were used to help maintain a calm, controlled, predictable environment for the dogs. Relaxation and self-control were shaped using positive reinforcement (clicker-training), by rewarding quiet behaviors like sit, down, wait, and stay, and by reinforcing any natural change the dog showed toward a relaxed, less impulsive state (Voith, 1995). For example, one dog was given treats if it watched calmly while the other dog retrieved a ball or chased a flirt pole. At the same time, excited and energetic behavior, particularly indoors and during play, was reduced through negative punishment (response cost and time-outs), extinction (ignoring), and actively redirecting the dogs to another activity. For example, if the dogs became too physical during play (body slamming), the owner interrupted the play, and cued the dogs to down-stay briefly (time-out), or if the dogs competed for a person’s attention, that person would get up and leave the area (response-cost).

7. As young, athletic, intelligent dogs, they needed a great deal mental stimulation and physical activity. In the past, the owners relied primarily on the dogs playing with one another for exercise. The behavior modification plan included developing new activities that would encourage more interaction with a person and independent play. Examples included using more play toys, such as a flirt pole, as well as trick, agility, and obedience training using positive reinforcement. Obedience trained dogs have been shown to have lower levels of overexcitement (Jagoe & Serpell, 1996). The target dog continued to play with other dogs at a local off-leash area, as well.

8. Seeking additional veterinary attention for the initiating dog’s anxiety was recommended after four weeks; medication could complement and improve the efficacy of the behavior modification techniques. The time delay was suggested to assess the success of behavior modification alone, and because some authors suggest that compliance may be reduced when medication is prescribed (Sherman & Mills, 2008). Anti-depressants and anti-anxiety medications are commonly prescribed to treat aggression, however, a temporary increase in aggression is a potential side-effect of some medications, and can be a concern for dogs with a bite history.

f. Progress reports and follow-up, explaining successful and unsuccessful resolutions, owner compliance, and modifications to plan over time.

The dogs showed good progress immediately. One week after the in-home consultation, they could be together about 10-feet apart in the same room calmly while on leash. After one month they were playing together and shared toys in the house and yard, including places where they previously fought. The dogs were walking well together, each handled by one person, and they are playing together in their wrestling style, with the initiating dog on a long tether and the target dog
free to move away safely if she felt uncomfortable. Despite the progress, at six weeks there was a fighting incident; the target dog startled, and the initiating dog went for her. As with past incidents it was sudden and difficult to anticipate.

At eight weeks the dogs were still separated most of the time, alternating one in the basement with access to the yard and the other upstairs in the main living area, but spent time together in the house and playing when the owners were home. The owners effectively incorporated calming breaks into the play, and when one of the dogs showed signs of tension. The dogs were responsive to the positive reinforcement and counter-conditioning techniques (i.e. the dogs were eager to work for food). As additional support, the owners enrolled the initiating dog in a “growly dog” class to help work on her reactivity and anxiety issues. An in-home follow-up consultation was conducted at 10 weeks, with the goal of letting the dogs loose together in the house. The dogs were initially very energetic and showed some initial competition for human attention, but the owners effectively curbed the intensity with frequent calming breaks. The dogs settled after about 15 minutes.

At four months the dogs experienced a set-back with an intense fight, perhaps over a bone. They were difficult to separate, and the initiating dog sustained minor injuries. At about the same time, the target dog was being walked and the initiating dog escaped the back yard to join them. The dogs greeted one another in a relaxed, friendly manner, and walked together home without any tension. At this point the owners decided to separate the dogs completely again. They were feeling frustrated and desperate since the recent fight; one owner is not ready to supervise more reintroductions because she is afraid that the dogs will fight again.

The excellent compliance, dedication, and creativity by the owners in this case was essential to have any hope for a successful outcome, and they provided regular video and email updates for fine-tuning of the behavior modification techniques. This case was particularly challenging because of the multiple risk factors and severity of the interdog aggression. As in the treatment of many behavior problems, most gains were made in the first month. With a set-back at six months, the owners have begun to realize the long-term dedication to ongoing treatment that this problem calls for. Even with treatment, only half of cases of interdog household aggression return to normal, unsupervised interactions. The risk of failed treatment is particularly high when aggression is between neutered dogs with nearly equal resource holding potential (Sherman et al., 1996), as in this case (i.e. females of the same age, size, and breed). As a next step, the owners will try anti-anxiety medication to complement the behavior modification techniques. If the combined treatment fails, the owners may need to face the difficult decision to keep the dogs permanently separated, either within their home or by re-homing one of the dogs.

g. Discussion

Dogs involved in interdog household aggression are typically loving, playful members of the family, but the problem is challenging for dog owners. It disrupts household routines, interferes with the human-animal bond, creates emotional distress, and can lead to serious injury to dogs and people. Behavior modification requires a great deal of commitment and effort, and rarely does it fully resolve the problem. For example, in one report, only 36% of dogs could be together unsupervised after treatment and 44% were permanently separated (Sherman et al., 1996). The recommendations of behavioral professionals would be improved by having a better handle on the factors that predict treatment outcome, and by looking at the short- and long-term success of treatment, with a focus on quality of life as well as aggression reduction.
h. References


