Canine Fear-Related Aggression Toward Humans

Lisa Radosta, DVM, DACVB
Florida Veterinary Behavior Service

HOW I RECOGNIZE

Clinical Signs of Canine Fear-Related Aggression

- Early signs are often missed.
- Animal displays disengagement, distance increasing, fearful body language in response to stimuli.
- Offensive or aroused body language can be displayed if the disorder is severe or chronic.

Fear-related aggression (FRA) in dogs is a progressive emotional disorder with a physiologic response causing behavioral signs. Some cases have a hereditary component; however, traumatic incidents, learning, and a lack of socialization often contribute. The disorder is often chronic by the time the patient is presented. Aggressive behaviors negatively impact the patient's and client's quality of life. Ramifications of aggressive disorders include mistreatment, relinquishment, or euthanasia of the patient, as well as physical risk for the public, veterinary team, and owners.[1]

Clinical Signs

The initial signs of FRA often go unnoticed. Early clinical signs exhibited at presentation of the stimulus (ie, the thing that provokes fear) prior to the onset of aggression may include hiding, attempting to escape, distance-increasing signals (eg, averted gaze, lip lick, stress yawn, back turn), physiologic stress signals (eg, tachycardia, tachypnea, urination, defecation, mydriasis, panting), and apathy.[2]

When exposure to the stimulus does not decrease in response to these social signals, overt aggression may occur in an attempt to prevent continued approach of the stimulus. At presentation, signs of FRA may include barking, lunging, growling, snarling, snapping, and biting, with accompanying fearful body language (eg, tail down, ears back, nose lifted), caudal one-quarter to half of body lowered, physiologic arousal (eg, tail 90° or less to the back, mydriasis, injected sclerae, panting) or approach-retreat (eg, moving toward the stimulus and backing or turning away) in response to the presence of the stimulus. Dogs that exhibit fear-related aggression may wag their tails while exhibiting the clinical signs. A wagging tail does not indicate friendly intent and should be interpreted as a willingness to interact with a stimulus, even if the interaction is to bite. Offensive and neurochemically aroused body language can be negatively reinforced in fearfully aggressive dogs because of repeated removal of the stimulus in response to aggressive displays.

As the disorder becomes chronic, overtly fearful body language is often replaced by offensive or aroused body language. FRA cannot be ruled out based on the lack of fearful body language alone, as the initial fearful stage may not always be observed. In addition, approach-retreat patterns and physiologic signs of fear in these patients point to fear-related aggression as a diagnosis.

FRA = fear-related aggression, OA = osteoarthritis

Pain-related, irritable aggression and medical disorders affecting mentation should be ruled out with a physical examination and any other diagnostics indicated based on initial examination and history.

Diagnosis

A diagnosis of FRA can usually be confirmed through owner description of the progression of the patient's behavior, including early signs of fear; patient's behavior as a puppy, if known; viewing videos of the pet at home or in situations that elicit fearful or fear aggressive behavior (if safe to do so); identification of a list of stimuli or situations that elicit FRA (eg, reaching, cornering, petting); detailed description of clinical signs before, during, and after representative incidents; and evaluation of the dog's behavior during the appointment.

History, pictures, and videos supplied by the client are essential for proper diagnosis as observation in the hospital setting alone is not sufficient to confirm diagnosis.

Pain-related, irritable aggression—a medical condition that might not cause pain, but increase irritability and therefore increase aggression or retreat during approach and/or handling—and medical disorders affecting mentation should be ruled out with a physical examination and any other diagnostics indicated based on initial examination and history.

Situations occur in which dog trainers have made a "diagnosis" and the client requests tests or treatments based on that diagnosis. Just as a veterinarian would not blindly accept a dermatologic diagnosis from a groomer, a "diagnosis" from a trainer should not be taken at face value. Veterinarians should formulate their own diagnoses and treatment plans based on their own assessments and evaluations. Note that although legal advice cannot be given by a general practioner, clients should be reminded that aggression poses a legal concern that may result in legal action by victims.

HOW I DIAGNOSE

Canine Fear-Related Aggression

1. Observe patient's body language during physical examination and in videos.
2. Collect a detailed behavioral history, including progression of clinical signs.
3. Consider changes in clinical signs caused by chronicity of disorder.
4. Rule out medical disorders (including pain-related aggression) and irritable aggression.

Treatment

The treatment of FRA is similar to other medical disorders. First, stimuli that cause clinical signs should be identified so they can be avoided or addressed through behavior modification. Just as a client may be advised to avoid playing Frisbee with a dog that has osteoarthritis (OA), clients who own dogs displaying FRA should be instructed how to avoid situations that trigger a fearful or aggressive response. For example, if the dog is aggressive on the couch, advise the client to block access to the couch. These simple measures can reduce clinical signs significantly in many cases.

A veterinarian treating a patient with OA may discuss with the owner that an agility career is not a realistic expectation for the patient, but pain-free leash walks are a reasonable goal. Similarly, veterinarians should discuss reasonable goals with owners of fear-related aggressive dogs along with practical ways to achieve a positive outcome. For example, if a dog is aggressive toward the owner's grandchildren, having the dog in the same room as the children as a form of treatment may be too dangerous or unethical to attempt. Owners should be advised that interactions between their dog and grandchildren may be an unrealistic goal, that working with the children to modify the behavior may not be an option, and that boarding or confining the dog when the grandchildren are visiting may be the safest and least stressful option for all concerned.

Continuing the analogy of a patient with OA, medication may be used to lower pain and discomfort so that physical therapy can be instituted. In the same way, psychopharmaceutic medications can be used to treat FRA by lowering neurochemical mediators of fear and arousal, altering the patient's emotional state thereby making treatment more productive. Selective serotonin reuptake inhibitors and tricyclic antidepressants can help to mediate neurochemical imbalance. Multiple types of medications can be effective in the treatment of FRA. Research on mechanisms,

continues

duration of action, latency to positive clinical effect, and interactions should always be performed before starting medical treatment.

Just as the patient with OA would be sent to physical rehabilitation, the patient with FRA begins with a behavioral therapy plan. The first behaviors to be taught are control behaviors (ie, behaviors that do not change the pet's behavioral state but control its actions), which are incompatible with the aggressive response (ie, cannot be exhibited at the same time). For example, if a dog is aggressive on the couch, it can be taught to go to a specific location away from the couch, such as a dog bed, and stay there on cue. Once control behaviors are in place and the dog is regulated neurochemically, counterconditioning techniques (eg, changing the pet's behavioral response by pairing a positive stimulus with a negative stimulus) are instituted for maximum alteration in behavioral response.

Behavioral therapy (behavior modification) plans should be made by the veterinarian and implemented by a qualified veterinary technician or a qualified dog trainer if a veterinary technician is not available. Because the dog training industry is unregulated with no legal certifications or verification of claims, cases should not be turned over to dog trainers without a plan—constructed by the veterinarian—in place to guide treatment. Each time a trainer sees the patient, the veterinarian should receive a report so medical treatment and follow-up can be altered if necessary. Cases outside of the scope of the veterinarian's knowledge should be referred to a board-certified veterinary behaviorist.

Information on how to select a qualified dog trainer is available through the American Veterinary Society of Animal Behavior (avsabonline.org). ■ cb

References

1. Salman MD, Hutchinson J, Ruch-Gallie R. Behavioral reasons for relinquishment of dogs and cats to 12 shelters. *J Appl Anim Welf Sci.* 2000;3(2):93-106.
2. Landsberg G, Hunthausen W, Ackerman L. Canine aggression. *Behavior Problems of the Dog and Cat,* 3rd ed. Edinburgh, Scotland: Saunders Elsevier; 2013:297-327.

Suggested Reading

Handelman B. Canine Behavior: A Photo Illustrated Handbook. Norwich, VT: Woof and Word Press; 2008.

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