Animal Behavior Case of the Month

This feature is sponsored by the American College of Veterinary Behaviorists. Readers of the JAVMA are invited to submit reports, which should include a brief description of a behavioral problem, the evaluation and treatment, and a succinct discussion of the case. Send contributions to Dr. Katherine A. Houpt, Department of Biomedical Sciences, College of Veterinary Medicine, Cornell University, Ithaca, NY 14853-6401.

Statement of the Problem

An English Cocker Spaniel was examined because of growling and snapping at people and dogs, including an unfamiliar child, the referring veterinarian, family members, and another dog in the household.

Signalment

The dog (dog 1) was an adult spayed female English Cocker Spaniel that weighed 12.6 kg (27.7 lb).

History

The household included the owner, her 16-year-old son (who was present on weekends only), and 4 adult spayed female dogs: dog 1, a mixed-breed dog that weighed 45 kg (99 lb; dog 2), and 2 American Cocker Spaniels. Dog 1 had been adopted as a stray 1 month earlier. Within the first week, the dog had snapped (single snap without contact) at an 11-year-old girl reaching out to pet the dog on its head and a veterinarian examining the dog's ears. Both times, the dog attempted to move its head away prior to snapping but displayed no fearful body postures and appeared friendly and calm before and after. Moderately severe bilateral otitis externa was diagnosed and treated with antimicrobials administered systemically and ear flushing and removal of plant material while the dog was anesthetized. No topical treatment was given. The dog had been consistently friendly and outgoing with the owner's son but had snapped at his face 2 days earlier, prompting the behavioral consultation. The owner jostled her son's shoulder while on the sofa, and the dog jumped up between them and snapped at the boy's face. No contact was made. The dog then lifted its lip and growled when the owner tried to push the dog off the sofa. The owner finally shouted “no” at the dog, and the dog got down. The dog had also growled at the owner when approached on a spare bed and surrounded by toys, when lying on a chair without any toys present, and when the owner attempted to move the dog off the sofa while it was sleeping. No growling occurred for the first 2 weeks after the dog was adopted. No aggression around food was seen, and no fearful, timid, or excitable behavior was seen preceding any incident. Except for the snap at the son's face, all growling or snapping received a mild verbal reprimand. Dog 1 growled and snapped at dog 2 over access to toys, bones, and owner attention. A noninjury fight occurred when dog 2 ran to the area where dog 1 had buried bones after being let into the yard. No aggression towards the other household dogs or unfamiliar dogs was seen. The original 3 dogs had gotten along well previously, and dog 2, who was 12 years old and healthy, appeared dominant among them. The dogs were not left loose together unsupervised and were fed in separate areas.

A review of videotapes obtained during the previous week showed that dog 1 was often on the owner's lap, whimpering and pawing to solicit attention and standing over her. Dog 1 snapped when touched on the rump and stiffened and stood over toys as the owner approached, but no snaps occurred as the owner did not proceed. When dog 1 was resting on the owner's lap and dog 2 approached, dog 1 bared its teeth, and dog 2 backed away. The other dogs did not approach. Dog 1 also displaced dog 2 from a resting area by standing over dog 2, staring and whimpering.

Physical Examination Findings

A basket muzzle was placed on the dog before it was brought into the veterinary hospital. The dog appeared calm and confident while in the crowded waiting area and examination room and readily explored and solicited attention. When the muzzle was removed, the dog took treats eagerly and allowed gentle handling of its ears and fitting of a headcollar without signs of unease or resistance. No aggression was observed during the appointment. A follow-up physical and otic examination performed by the referring veterinarian 2 days previously had confirmed resolution of the otitis and revealed no other painful conditions; therefore, the physical examination was not repeated. No abnormalities in mentation or movement, including walking up and down stairs, were seen.

Diagnosis

Differential diagnoses for snapping at the veterinarian and child included pain, fear, and dominance aggression. Pain aggression was diagnosed on the basis of the dog's painful medical condition and its attempts to move its head away. Fear aggression was ruled out, as the dog did not show any signs of fear or unease until its head was reached for. Dominance aggression was considered unlikely, as both people were strangers, the dog had tolerated a thorough physical examination before reacting to ear handling, and the owner had examined the dog's ears without any reaction since the ears had been treated.

Differential diagnoses for aggression towards the owner and her son included dominance, protective,
possessive, fear, and pain aggression. Dominance aggression was diagnosed on the basis of the dog's confident body postures before and during incidents and the variety of contexts typically associated with dominance aggression.¹ Protective aggression, defined to include protection of a location in addition to people,² or possessive aggression could account for growling when approached on a bed surrounded by toys. Protective aggression could also account for the dog's aggression when the owner attempted to move the dog from a chair and for the dog's reaction when the owner jostled her son, but neither protective nor possessive aggression could account for the dog's snapping when touched or for the dog's snarling and staring when shoved after snapping at the son. Protective and possessive aggression occur as separate entities and are also seen in association with dominance aggression.¹² Dominance aggression was a more inclusive diagnosis for all observed incidents. Fear aggression was unlikely, as the dog did not avoid or display fearful body postures with the owner or her son. The dog was also not being approached when it snapped at the son's face. Pain was not considered the primary motivation for aggression towards family members, but otitis could have contributed by increasing the dog's overall irritability. No other painful conditions were detected, and the dog was not always being approached or reached for during aggressive episodes.

Differential diagnoses for aggression towards dog 2 included interdog, protective, and possessive aggression. Interdog aggression specifically related to social status was diagnosed.¹ Dog 1's response when dog 2 approached the owner or the cache of bones in the yard could be attributed to either protective or possessive aggression when viewed in isolation. However, aggression also occurred when dog 1 did not have possession of an object or place, such as when dog 1 displaced dog 2 from a resting spot.

**Treatment**

For pain aggression, the owner and her son were initially advised to avoid all situations during which someone could reach for the dog's head. When with people, direct physical control by holding a leash attached to the headcollar or placing the dog in a tall exercise pen was recommended. Procedures for desensitization and counterconditioning (DS-CC) to help the dog tolerate or even welcome handling of its head were demonstrated. Reaching for the dog's head was to be started at a low enough stimulus level that even the earliest signs of uneasiness were avoided. Food treats were to be offered only for calm, relaxed behavior. Daily sessions were recommended. As the program progressed, the stimulus was to be gradually increased from a hand reaching for the dog's head to touching the dog's head and ears and eventually to lifting the pinna. The stimulus was eventually to be extended to routine ear cleaning to prevent further infection and allow handling at the veterinary clinic. Finally, DS-CC was to be used to improve the dog's interactions with strangers and, possibly, to have the dog allow children to reach for its head. For all steps, a headcollar and muzzle were to be used when additional safety was required.

Because of the dominance aggression, the owner was advised that even with a successful reduction in motivation, there would be situations when the dog might snap or bite and that lifelong safety management would be required. Treatment for dominance and interdog aggression involved the same 2 initial steps: avoiding all circumstances that had previously resulted in aggression and increasing the owner's influence over the dog's behavior. Avoidance was important both for safety and for reducing the risk of escalating the level of aggressive threat. Avoiding aggression to family members included limiting dog 1's access to beds, chairs, and the sofa and avoiding touching the dog on its rump. When the son and the owner were on the sofa, child gates were to be used to keep the dogs in another room. Avoiding interdog conflict included avoiding highly competitive (eg, food, toys, and owner proximity) and arousing situations.⁶ Although the dog was still to be provided with abundant bones and toys, items that the dog had a tendency to guard were removed, including those buried in the yard. A "nothing-in-life is free" program and headcollars were used to increase owner control. The owner provided all resources but only after the dogs were encouraged to defer by obeying a simple command. The owner was advised that it was important to avoid inadvertently increasing tension between the dogs by differentially increasing control and decreasing privileges of dog 1, as this dog appeared to be the highest-status dog in the household. All dogs were involved in the nothing-in-life-is-free program, but dog 1 was still to be greeted first and given rewards and any special privileges first. The owner and her son were instructed to ignore the dogs whenever interaction was initiated by the dogs. Headcollar use was demonstrated, and 1 was provided for each dog. The headcollars were expected to increase owner control with all the dogs and the safety with dog 1 by allowing physical management from a distance, particularly when performing DS-CC exercises. Gradual exposure to situations during which dog 1 had reacted aggressively to family members was recommended for those situations that could not be completely avoided. An example was using DS-CC to increase the dog's tolerance for physical handling, starting with a part of the body the dog liked to be stroked and slowly progressing until the dog could be handled all over. Touch was to be kept below the level at which the dog was uneasy, and use of the basket muzzle was suggested if the owner felt she or the son were in any danger. Treats were to be given only when the dog was calm and relaxed. Other potential gradual exposures included approaching the dog while it was chewing on a chew toy. This was accomplished by first approaching the dog while it had a very low-value object and working towards approaching the dog while it had progressively higher-value objects. Safely using these techniques was strongly emphasized.

For the interdog aggression, besides avoidance and increased owner control, supporting the dog with presumed higher status in its interactions with the other dogs was suggested. This dog was to be accorded preferential treatment. Reevaluation of which dog to support was suggested if the aggression escalated. Safe
methods of handling dog fights were discussed, including use of a nonpainful startle stimulus and headcollars with drag lines. Further separation and DS-CC between dogs 1 and 2 were suggested if the problem worsened.

Final recommendations for all the forms of aggression included avoiding inadvertently reinforcing aggressive behavior by attempting to reassure, calm, or scold the dog and avoiding all harsh verbal and physical reprimands. The use of medication was discussed but not recommended in view of the willingness of the owner to work on all aspects of the treatment plan. Detailed instructions were mailed within the week.

Follow-up
During a recheck visit 2 weeks later, things were going well, although the owner had had some difficulty, as anticipated, implementing the nothing-in-life-is-free program with all dogs at once. There were no new instances of aggression, and the DS-CC program was reviewed. The owner called monthly to report that things were going well until 8 months later, when she reported 2 incidents of growling when she approached the dog while it had a toy. Safety and avoidance were reemphasized, and the nothing-in-life-is-free program was reinstituted for 2 weeks. At 18 months, the owner was very pleased with the dog's progress, and there were no new incidences of aggression. The owner had continued to work on DS-CC with strangers, the referring veterinarian, and visitors. The owner remained cautious around children, and the dog was never left unattended with them. Dogs 1 and 2 were allowed together when the owner was home, but potential sources of conflict were carefully avoided.

Several factors contributed to a positive response to treatment and a satisfactory outcome in this dog. First, the aggressive threat was limited to snapping and not biting. Second, there were no young children in the household. Third, the owner was willing to practice lifetime safety management and implement the treatment program as fully as possible. Fourth, the otitis was not chronic or recurrent. Fifth, intervention occurred before injury fights had occurred between the dogs.4

Follow-up

References
