

Fractious cats and feline aggression

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Summary Despite variation in terminology it is clear that the context in which feline aggression occurs is important for classification, prevention and treatment. Many of the aggressions discussed can be considered variants of normal feline behavior, so client education is particularly important. Educated clients will know when their cat can benefit from veterinary intervention, and when closing a door may be sufficient. The goals of treating all feline aggressions should be safety for all concerned, and quality of their living environment for the cats. The greater our knowledge, the more likely we are to achieve these goals.

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Introduction

Feline aggression is a very common problem seen by behaviorists, and because of the potential for injury to other pets and humans, it is considered serious. In multi-cat homes, cats usually aggress toward other cats, but in single cat households, an owner is a common target. There are several types of aggression shown by cats, and in some cases, the types are unique to this species. Categorization or labeling of these problems may vary with the specialist, not because there is debate about the diagnosis or condition, but because different terms are used by different behaviorists. As discussed in Beaver (2003), the diagnostic list can be limited to two types of aggression—*affective* and *non-affective*—or it can be more specific. Regardless of the specific classifications or terms used, the treatment used depends on making an accurate diagnosis first.

The following types of feline aggression are generally descriptive, by cause, and with each are suggestions for common treatment approaches that can be used. In all cases, it is important to let the owners know there are no guaranteed outcomes

and that an aggressive animal can inflict injuries on another animal or person. The more predictable the circumstances of the aggression, the more easily the situation can be avoided. It is the unpredictable nature of some cats that can make treatment difficult.

More commonly noted aggressions

**Dominance (competitive) aggression;
intercat aggression (Overall, 1997);
intraspecies aggression/social aggression
(Crowell-Davis et al., 1997)**

Dominance in cats is often different than in other domesticated animal species. Linear or linear-tending social orders have a top ranking number one animal, or alpha, and then a number two, number three, and so on down the group. When there is a defined linear social rank, the lower ranking would always defer to the higher ranking. For cats there is an obvious top and bottom, with the territorial tomcat usually being the highest ranking, and one or two very low ranking cats, called pariahs. In multicat households there is usually one cat that is the highest ranking, even though it is probably not a tomcat. Most of the other cats in a group share a “middle space” and therein lies the

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potential for conflict. As equals, each decision about who eats first, who crosses a path first, and who gets a favorite sleeping spot must be settled at the time it comes up. Dominance is generally not seen related to the protection of food resources (Barry, 1998). Usually it does not make any difference but once in a while the decision must be based on something besides rank. This could be by a first-come-first-served basis or it could be by an aggressive interaction.

Dominance aggression can be seen as one cat bullying another. Providing personal space and hiding holes for each cat is important in multicat homes. It may also be necessary to separate the bully from its usual targets occasionally. In severe cases drug therapy can be tried using a selected serotonin reuptake inhibitor for the dominant cat and buspirone, a partial serotonin agonist, for the fearful victim (Overall, 2002, 2003).

Fear-induced aggression/defensive aggression (Chapman, 1991)

In general a cat would rather avoid a confrontation than participate, and they have evolved an elegant signaling system that can convey the extent to which they are exhibiting offensive v. defensive aggression (Crowell-Davis et al., 2003; Overall, 1997; Overall et al., 2003). In a fearful situation, such as when cornered by a dog or child, a cat may react aggressively until it can escape. This aggressive response has been preceded by attempts to avoid the interaction or escape from it, but it is the degree of confinement that has prevented simple flight (Crowell-Davis, 2001; Moyer, 1968). Other behavioral options that the cat could exhibit include becoming completely immobile or showing a behavior that is completely opposite of what would be expected.

It is important to recognize situations which can induce fear in the cat and then to avoid them. Prevention of exposure to circumstances that provoke fearful aggression is key to resolving the problem. When the particular situation can not be avoided, it is most desirable to remove the cat for the development of the problem. If the cat experiences a fear invoking situation, it is better to avoid the cat than to try to calm it because redirected aggression can result as a sequela. The feline hypothalamus is complex in its response to situations that provoke aggression, but cats stay reactive for a prolonged time after the initial stimulus, and can become more—not less—reactive and aggressive if they are manipulated during this reactive period (Adamec, 1990). Chronic fear can be debilitating

and should be managed with selected serotonin reuptake inhibitor medications.

Intermale aggression

Intermale aggression is classically shown by an intact tomcat at the sight of another intact tomcat. It is not related to location, dominance, or other types of aggression (Moyer, 1968). Subsequent meetings between the two males and interactions between courting males in the presence of estrous females are usually not associated with aggression (Natoli and DeVito, 1991). Intermale aggression is a testosterone dependent behavior, so castration reduces the behavior in approximately 90% of these cats. Use of progestins can also be effective; however, the many side effects of these drugs limits their use to a very short time, if at all.

Maternal aggression

Queens with neonates are very protective of their young. This hormonally influenced aggression (Inselman-Temkin and Flynn, 1973) is strongest during the first week post-partum and will gradually diminish as the kittens get older. The distress cries of the kittens trigger the initial concern by any nearby queen. It is theorized that the inhibition of predatory instincts in the presence of the young results in an exaggerated expression of maternal aggression.

This is a normal behavior and one to be anticipated rather than changed. It can be helpful if handling the kittens to keep a kitten between the queen and the person. It is extremely rare that a new mother will go over her young to get to a victim.

Pain-induced aggression

When a cat's tail or fur is pulled, this causes pain, and the cat responds with aggression toward the source of the pain. The response is often at a level that is out of proportion to the given stimulus (Hutchinson et al., 1965). It is important to find ways to reduce the amount of pain the cat experiences or to adequately protect oneself if it is necessary to work with a painful cat. Special concerns pertain to children and cats: toddlers can cause pain without understanding that they have done so, or the subsequent aggressive consequences.

Play aggression

A number of postures in kittens are associated with play fighting. While the exact purposes of play

remain unknown, theories indicate that they are practice for future needs, strengthen muscles, develop eye-muscle coordination, and learn moderation is social play. As the kittens get older, the amount of play aggression increases and gets rougher, eventually leading to the dispersion of the litter. Owners are often targets for this type of aggression when other play targets are unavailable, as seen by a cat sneaking up, biting, and running, or ambushing passing ankles. There can be many similarities between this and predatory aggression, making differentiating between them difficult to impossible.

Play aggression is a social behavior so the cat's behavior will need to be refocused on inanimate objects instead of unacceptable ones. This can be encouraged through active play with toys that move and consistent punishment with a squirt of water or startle noise for owner directed actions (Beaver, 2003). An alternative recommendation that works for many owners is to introduce another cat of approximately the same age so that the play occurs between the cats instead of involving the owner.

Predatory aggression

The instinct to hunt is triggered by the sight or sound of moving prey. Wild cats normally proportion a part of their energies to hunt, but those energies build if hunting does not occur. Over time the amount of stimulus needed to trigger the hunting behavior decreases (Beaver, 2003). Then, slight movements or unusual targets such as an owner walking through a room or a wagging tail may be enough to trigger a predatory attack. The target seems inappropriate to us, but the motion was enough. This type of attack on a person can also be done in play, and it is probably not likely that we can always differentiate the two.

Hunting behaviors are instinctively programmed so eliminating them is not possible. They can, however, be channeled into acceptable outlets. Encouraging active play with moving toys helps eliminate the excessive drive to hunt and directs the behavior toward objects that withstand cat claws and teeth. In some locations, owners let their cat outside for part of the day so that they get to hunt insects instead of owners.

Redirected aggression

One of the most common forms of aggression in cats involved redirected actions. When a cat becomes upset, it would normally direct the aggression

toward the source that triggered it. However, if the cat is not able to get to the source, as often happens when it sees roaming cats outside a window, it will redirect the aggression toward something that is close by. That could mean a cat sees another cat, gets upset by the introduction of a new dog, or is distressed by an odor or loud noise and seeks out an owner, dog, or other cat to aggress toward. Unfortunately, in cats the association made between a victim and a stressful event can be retained for a long time, even if the victim had nothing to do with the onset. Every time the cat is around the victim, it is reminded of the incident and may aggress again.

Prevention can be easier than treatment in some cases. It is important that the human not try to calm the upset cat or interact with it while aroused (Chapman and Voith, 1990). There are times, however, when it is impossible to avoid the distressed cat. The most commonly prescribed treatment is long term separation of the cat and its target. The length of time the target and the human should be separated is quite variable. If the intent is to extinguish or attenuate the cat's response using only separation and avoidance, the amount of time required for extinction could be considerable. Alternatively, antianxiety medications such as the benzodiazepines, tricyclic antidepressants, or selected serotonin reuptake inhibitors can be added to a program of gradual reintroduction in which there is also a role for highly prized foods given at widely separated locations. If the victim is a cat that has become excessively fearful of the aggressor, it may be desirable to put that cat on buspirone, a partial serotonin agonist, to reduce its fear and increase its boldness (Overall, 2002, 2003).

Sex-related aggression/intermale aggression (Chapman, 1991)

In mating, there are two types of aggression, one normally seen, the other more occasional. It is normal for the female to turn on and swat at the male as he dismounts. Occasionally a male is excessively rough with his neck grip and will puncture the female's skin.

The normal female post-mating behavior can not be changed and is normally viewed as a problem only from the owner's perspective. The rough mating style of a tomcat also can not be changed. There are some females that will no longer accept him as a partner, but there are usually others that will.

Territorial/protective aggression

In some circumstances cats can be more concerned about territory than about social interactions, so protection of the territory from feline or human intruders occurs (Overall, 1995). This could be shown as an attack of a guest in a home when guests are infrequent, or it could be shown toward another cat being introduced into a home. When the encounter is between cats, the resident cat has a distinct advantage in any aggressive encounter (Hart, 1977). Mounting of a cat by the territorial cat is normal social behavior, not abnormal sexual behavior. Cat A can mount cat B when in cat A's territory, but if the cats are in cat B's territory, it is cat B that would do the mounting (Michael, 1961).

For the cat that is highly territorial, it is easiest for owners to shut the cat in a room before guests arrive. It is also possible to change a cat's territory from the entire house to one room by making that room its primary living quarters.

Less commonly noted aggressions

Feline asocial (retaliatory) aggression

After behavioral or social maturity, most cats disperse and may live alone (asocial) or in small groups of related individuals or individuals that grew up together. When approached by an unfamiliar cat, the individual may react aggressively to drive the intruder off, perhaps as defensive or fearful responses (Chapman and Voith, 1987). This is a common reaction when a new kitten is introduced to a mature, resident cat. In general the older the cat, the more likely this behavior is to be shown with the introduction of another cat. The social kitten continues to approach the older cat and it responds with frequent hissing, growling, and swatting at the youngster.

When a new cat is introduced into a household, the goal for feline social relations should be mutual tolerance, not necessarily that the cats will become good "friends." The feline asocial aggression can be minimized by putting the new cat in a room by itself for several days. The owner can use a towel to rub the resident cat first, then the new cat, then the resident cat, then the new cat, to help transfer the odors. Eventually the door is opened and the two cats allowed to find each other. The room is now a territory for the introduced cat and can serve as a safe haven when needed. If the new cat is still a kitten, it can take several months for it to be less likely to approach, so opportunities for interaction should be kept to a minimum (Beaver, 2003).

Feline dispersion aggression

Kittens are very social. Then about the time they reach 6 to 10 months, there is a dramatic change in their personality. The interactive play with littermates becomes rougher and tends to end with an aggressive bout. Over time the length of the play bouts decreases and the aggression becomes more intense and longer. Eventually, this type of interaction can result in the dispersion of the littermates. When littermates are not present, humans can receive the same type of interaction.

What owners are usually most upset about is the personality change in their once loving kitten. That can not be changed back, but aggression to owners should be controlled with punishment for inappropriately addressed aggression and play bouts directed toward inanimate objects.

Idiopathic aggression

There will always be some aggression that can not be diagnosed; although, these are becoming fewer in number as more is understood about causes of aggression. In those unknown cases, idiopathic aggression would be an appropriate category.

Irritable aggression

When a human has a headache or toothache, they are more easily bothered by little things that would normally not be problematic (Beaver, 1989; Moyer, 1968). Animals also experience this. The cat that normally is very passive might be very intolerant later in the day when its osteoarthritis is active. History taking will need to point toward a medical problem and will often suggest that the aggression is not in normal character for the cat or that the Dr Jeckel–Mr Hyde personality change is different.

Treatment of the medical condition is important to reduce or eliminate the aggression. Pain medication, relieving chronic bowel problems, expressing impacted anal sacs, and addressing underlying interstitial cystitis are just some considerations that should be explored.

Learned (instrumental) aggression

Cats can learn that acts of aggression will give them a desired result because of reinforcement of the behavior (Moyer, 1968). As an example, cat that was used to receiving a food treat each evening may initially show irritable aggression when the owners decide to put it on a diet. It quickly learns that the aggressive behavior resulted in the owners

again giving the treat, and the now learned behavior continues. All aggressions are learned and reinforced to some extent through repetition, so avoidance and prevention are important treatment steps.

Pariah aggression

The lowest ranking cat in a group is called the pariah. This cat commonly uses a lateral, crouched posture, with flattened ears, hissing behavior, and stare toward the territorial tomcat (Beaver, 2003). Occasionally the same behavior is shown toward an owner. If the approach continues, the potential for aggression escalates, until the cat can escape.

Since this is a "back-off" message, increasing the threat is not helpful. If the posture is directed toward another cat, the pariah will need to have a place where it feels safe and not so stressed. This could involve time alone in a certain room, or special perches that are big enough for just one cat. If the posture is directed toward a person, the person needs to back away. Over time, offering highly palatable food treats, first putting them down and backing far away, then gradually staying closer each time, can alter the negative relationship.

Aggressions associated with medical conditions

Hyper- and hypothyroid aggression

Changes in thyroid hormone status have been associated with aggression. The usual description for hyperthyroid aggression is "nasty" and for that of hypothyroidism as "grumpy" (Beaver, 1989). While hyperthyroidism is much more common in cats than is thyroid hormone deficiency, a routine thyroid screen for any type of aggression, particularly in middle-aged to older individuals, can be helpful in determining if either of these conditions exists.

Rabies-induced aggression

There are several medically related conditions that can cause aggression, but the one which is the most serious is aggression from a rabies infection. Some of the infected individuals become extremely aggressive, chasing intended victims and aggressing severely. It is important that a veterinarian always be mindful of rabies in cases of acute onset of behavior change.

Summary

Despite variation in terminology it is clear that the context in which the aggression occurs is important

for classification, prevention and treatment. Many of the aggressions discussed can be considered variants of normal feline behavior, so client education is particularly important. Educated clients will know when their cat can benefit from veterinary intervention, and when closing a door may be sufficient. The goals of treating all feline aggressions should be safety for all concerned, and quality of their living environment for the cats. The greater our knowledge, the more likely we are to achieve these goals.

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