Feline Aggression Part 1: An overview of human-directed aggression problems

Meghan Herron, DVM, DACVB
Behavioral Medicine Clinic
The Ohio State University College of Veterinary Medicine

What is aggression, really?

- Function
  - Communication – a distance increasing signal
  - In response to perceived threat
  - Predation?

Feline Body Language

Relaxed

- **Head**: resting on surface or over body
- **Eyes**: closed to heavy, pupils slit to normal size
- **Ears**: turned slightly forward
- **Sounds**: none/purr
- **Tail**: extended or loosely wrapped; up or loosely down when standing
- **Other**: May see bunting

Alert

- **Head**: over the body, some movement

- **Eyes**: open normally, pupils normal
- **Ears**: normal or erected to front or back
- **Sounds**: none or meow
- **Tail**: relaxed, some twitching
Tense

Head: over the body or pressed to body, little or no movement

Eyes: wide open, pupils normal to partially dilated

Ears: erected to front or back

Tail: close to body; tense downwards or curled forward, may be twitching

Other: ventral recumbency or “slinking”

Sounds: none, meow, or plaintive meow

Anxious

Head: on the plane with body, little or no movement

Eyes: wide open, pupils dilated

Ears: partially flattened

Tail: close to the body; may be curled forward close to body when standing

Sounds: none, plaintive meow, growling, yowling

Other: increased RR

Fearful

Head: tucked, still

Eyes: wide open, pupils fully dilated

Ears: fully flattened

Tail: close to the body; curled under body when standing

Sounds: none, plaintive meow, growling, yowling

Other: freezing, fidgeting, escaping, aggression

Terrified

Head: lowered

Eyes: pupils fully dilated

Ears: fully flattened, back on head
Tail: close to body

Sounds: spitting, growling, yowling, hissing, shrieking

Other: “Halloween Cat” – full piloerection

Freezing, fidgeting, escaping, aggression

Warning signs of an imminent cat bite

• Sudden dilation of pupils
• Piloerection
• Fast, jerky swishing of tail
• Swatting with forearms
• Vocalization – yowling, shrieking, spitting
• Direct stare with open mouth vocalizations

Impact of Disease

▪ Metabolic disease
▪ Neurologic problems
▪ Dermatologic
▪ Musculoskeletal
▪ Urinary tract discomfort
▪ Any disease that causes discomfort or pain
▪ Primary central (brain) disease vs aggression due to irritability

How to approach?

• Thorough behavioral & medical history
  ▪ Household changes, interaction changes, other pets, outdoor pets, elimination problems, events immediately surrounding event....
  ▪ Hx of UT or GI discomfort or disease?
  ▪ Lameness?
  ▪ Nausea?
- Changes in appetite or thirst?
- Current medications?

Medical work up

- Minimum database
  - Thorough physical examination
    - Oral exam
  - CBC, chemistry profile, total T4
  - Urinalysis
  - Consider radiographs/ultrasound/other diagnostics based on the results of the basic work-up

Behavior History

- Signalment?
- Who?
  - One or all family members?
  - Familiar vs. unfamiliar people?
  - Hx of interactions?
- When?
  - Time of day?
  - Relationship to owner’s schedule?
- Where?
- What?
  - Claws? Teeth?
  - Body language?
  - What happens immediately before and after?
- Progression?
  - Sudden onset of aggression?
• Duration?

How to approach?

• Behavior problem list
• Behavior differential diagnoses list
• Additional information:
  ▫ Video recording when necessary
  ▫ Map layout of house and locations of incidents

Treatment plan

• Safety first!
• Environmental management
• Behavior modification exercises
• Medication?
• Pheromones

Differential diagnoses

• Inappropriate play behavior
• Aggression related to touch
• Fear related aggression
• Status related aggression
• Territorial aggression
• Pain related aggression
• Any type of aggression can be redirected

Inappropriate play behavior

• Aka play-related aggression
• Normal vs inappropriate play behavior
• More common in young cats
• Rarely vocalize
• Single cat household
• Victim can be a person or another animal
• May diminish as the cat matures
• History
  ▫ Orphaned kittens
    ▪ Maternal separation <2 weeks
    ▪ Malnourished mothers
  ▫ Inappropriate play by owners
  ▫ High prey drive
  ▫ May also see destructive play behaviors
• Management
  ▪ Separate cat when behavior anticipated
    ▪ Safe haven
    ▪ Morning** and evening most likely to be active
  ▪ Provide appropriate scheduled play
    ▪ Toys that keep distance between owner and cat
    ▪ HAVE THEM READY!
  ▪ Avoid play with hands & feet
  ▪ Belled collar to alert owner of impending attack

Aggression related to touch
• Aka petting-related aggression
• Descriptive diagnosis
• When petted, picked up or touched
• Tail thumping, excessive panniculus, rotation of ears, dilated pupils, +/- hissing, growling
• Management
  ▪ Change owner’s petting duration or style
    ▪ No petting - at least temporarily
    ▪ Brief petting
    ▪ Pet on the head and neck only
    ▪ Light touch rather than long strokes
    ▪ Owner should give full attention to cat’s body language
    ▪ Stop petting when cat displays signs of arousal
  ▪ Interruption vs Punishment vs SIT STILL!
  ▪ Clicker training - Scheduled training sessions
  ▪ “Touch”
    ▪ Can be used to pre-empt petting
  ▪ Remember, not all cats like to be touched!

Fear-related aggression

• “Affective” or emotional aggression
• Can be directed at a person or another animal
• Defensive body language
  ▪ Remember, hissing = fear
• Causes:
  ▪ Introduction of new cat
  ▪ Improper socialization
  ▪ Genetics
    ▪ Paternal effects
  ▪ Cat is trapped
• Directed toward familiar people
• Based on previous frightening experience
  ▪ Harsh punishment
  ▪ Inappropriate handling
• In specific contexts
  ▪ Grooming
  ▪ Placing into carrier
  ▪ Picking up
• Certain household members (antagonizing cat)
• Directed toward unfamiliar people
  ▪ Strangers entering home
  ▪ Veterinary staff
  ▪ Fear of outdoor stimuli can be redirected to any person, familiar or unfamiliar

Status related aggression
• Confident cat
• Directed toward a familiar individual within social group
• Most frequently directed toward other household cats
• Can be directed to owners, familiar people
• Related to resting places, interactions, and “personal space”
• Status related aggression
• Directed towards people is uncommon
  ▪ Confident body language
    ▪ Staring, ears forward
  ▪ Can occur if cat disturbed when resting, location, interactions
  ▪ Arousal
  ▪ +/- aggression when touched
Territorial aggression

- Directed towards unfamiliar individuals
  - Visitors, pet-sitters, deliver persons
- Often combined with fear

Pain-related aggression

- Veterinarians
- Underlying medical cause?
- Petting, picking up, other manipulations
- Body language consistent with avoidance and fear-related aggression
- Quickly becomes learned fear-related aggression

Aggression in a veterinary setting

- Defensive, variable degrees of aggression
- Fear or pain related aggression
- Confident aggression not seen in this setting
- Aggression in a veterinary setting

Redirected aggression

Not a diagnosis: find primary motivation

- Aggression directed toward a victim other than the inciting stimulus
- Triggers
  - Outdoor cats**
  - New odor
  - Loud noise
  - Any fear-producing stimulus
- Does not have to be a temporal relationship between trigger and aggression
• Learning may result in development of fear-related aggression to victim

Management of Aggression

Fear related aggression (and status related)
  ▪ Avoid fear-eliciting stimuli
  ▪ Avoidance of petting (never touch an aroused cat!)
  ▪ Structure and predictability
  ▪ Interrupt & redirect
    ▪ “Interruptor sound”
  ▪ DS & CC to victim – clicker training
    ▪ Slowly decrease distance
    ▪ Slowly increase movement/interactions
  ▪ Management of aggression

  ▪ Environmental Enrichment
    ▪ Scheduled, structured play time
    ▪ Interactive toys, food toys
    ▪ High resting places
    ▪ Core area/kitty haven

Territorial aggression
  ▪ Keep cat indoors
  ▪ Block visual access outside
    ▪ “frosty glass” window film
  ▪ Neuter?
  ▪ Separate from guests
    ▪ “Safe haven”
  ▪ Counter-conditioning to visitors
- **Clicker training**

Pain related aggression

- Find and address cause
- Avoid situations that elicit pain
- Address any resulting fear-related aggression

**Drug therapy**

- Used to anxiety and improve confidence in the fearful cat
- May slightly reduce reactivity in the offensively aggressive cat
- Unlikely to affect the play driven cat
- Minimum database
  - PE, CBC, chemistry, total T4, urinalysis
- No drugs labeled for behavior problems in cat in the US
- No drugs labeled for aggression in pets

**Selective serotonin reuptake inhibitors (SSRIs)**

- **Fluoxetine** (Prozac®)
  - 0.25-1.0mg/kg SID
  - Decreased appetite and mild sedation most common side effects
- **Paroxetine** (Paxil®)
  - 0.25-1.0mg/kg SID
  - Better choice for finicky eaters
  - Anticholinergic side effects possible
    - Constipation, urine retention, dry mouth, arrhythmias
- **Sertraline** (Zoloft®)
  - 0.25mg-0.5mg/kg SID
  - Fecal excretion
- Contraindications: cardiovascular dz, hepatic dz, renal dz (PAR), constipation (PAR), obesity (FLU)

Tricyclic antidepressants (TCAs)

- Clomipramine (Clomicalm®)
  - 0.25-1.0mg/kg SID
  - Anticholinergic and antihistaminergic side effects possible
  - May sedate perpetrator cat and allow fear to decrease in fearful cat
- Amitriptyline (Elavil®)
  - 0.5-1.0mg/kg SID
  - Higher side effect profile
  - Sedation common
  - Extremely bitter
  - Contraindications: seizures, CV dz, hepatic or renal dz, constipation, owners opposed to sedated cat

General Treatment Guidelines

1. Safety! – you may be liable!
   - Interruption vs. punishment
   - Avoid interactions that provoke the cat
   - No interactions for at least 1 hour after an aggressive incident

2. Behavior modification

3. Environmental modification

4. Anxiety reduction through medication
   - Monitor closely for side effects

5. Referral when necessary