

- Separation Anxiety
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## Outline

- Separation Anxiety
  - *Clinical signs*
  - *Prevalence and Comorbidities*
- Diagnoses and Differentials
- Client Communication Tips
- Treatment Options
  - *Management Options*
  - *Psychopharmacology*
  - *Behaviour Modification*
- What is Separation Anxiety?
  - Aka Separation related distress, Separation panic
- Fear, anxiety, stress or panic when left home alone, or separated from target
  - *Specific individual*
  - *Any individual*
  - Impact of Separation Related Distress
- Prevalence has been reported from 14%-56%
  - Undertreated and underdiagnosed
- One hour → Thousands of dollars in damage
- Significant welfare concern for both pets and the people who love them
  - *Prolonged and repeated FAS*
- Impact of Separation Related Distress
- Influencing Factors:
  - *Generalized anxiety*
  - *Other fears/phobias*
  - *Experience*
    - COVID complications
    - Comorbidities
      - Noise phobia
      - Thunderstorm phobia
        - 88% chance of SA if have NP
        - 86% chance of SA if have TP
        - 63% chance of NP if have SA
        - 52% chance of TP if have SA
          - SA = Separation anxiety
          - NP = Noise phobia
          - TP = Thunderstorm phobia

- Diagnosis and Differentials
  - Clinical Signs
    - Dog showing behavioral signs of fear, anxiety or stress when attachment figure is gone from the home, or otherwise separated. May have physical manifestations.
    - Classic signs: Destructive behaviour, excessive vocalization, and/or inappropriate elimination when the owner is gone from the home.
  - HOWEVER:
    - *Panting for hours while the owner is gone?*
    - *Pacing for extended periods of time?*
    - *Shivering and salivating?*
  - Often associated with:
    - *Increased signs of FAS when owner preparing to leave home*
    - *Excessive attention-seeking behaviour*
    - *Other anxiety-related conditions*
  - Not always associated with “velcro” or clingy behaviour
    - Body Language of Fear, Anxiety and Stress
- Medical Differentials
  - Medical conditions—directly related to symptoms, or indirectly increasing anxiety
  - Will depend on the clinical signs. For example:
    - *Inappropriate urination*
      - UTI/Cystitis/Cystoliths/other urinary issue
      - Endocrine disorder
      - Physiologic disorder
    - Medical Differentials
    - *Excessive vocalization*
      - Pain
      - Neurologic
    - *Destructive*
      - Pain
      - Neurologic
    - *Remember to techniques to minimize fear, anxiety and stress during diagnostic procedures*
- Videotaping is key
- Behaviour Differentials:
  - *Lack of stimulation*
  - *Lack of housetraining*
  - *Puppy chewing*
  - *External stimulus / territorial display*
  - *Cognitive dysfunction*
- Client Communication Tips
- Communication is Key
- Clients want help

- Often strong emotions
  - *Anxiety and stress*
  - *Blame*
  - *Sadness*
  - *Anger*
  - *Guilt*
  - *Shame*
  - Feel trapped by their dog's behaviour
- Questions to Ask
  - What resources do they have?
  - Watch video if possible
  - What are the clinical signs?
  - What is the baseline behavioral profile?
  - When does the behaviour occur?
  - How often and how long is the dog left alone?
- Setting Expectations
  - Most dogs improve with treatment
    - *Significant improvement in 2-3 months.*
      - But may take longer
    - *Rule-of-thumb:*
      - If a dog can stay alone for 4-6hrs, usually can stay the day.
    - *This is a condition of fear and panic. Becoming angry or disappointed will not help*
  - May need to trial multiple medications
    - May need long-term / life-long medications
    - May relapse if an unrelated stressor occurs
- Treatment
  - Three components:
    - *Management to prevent FAS*
    - *Behaviour Modification*
      - Increase independence
      - Graduated departures
    - *Medication and other modalities*
  - Management to Prevent Separation Distress
    - Avoid leaving the dog alone
      - *Daycare*
      - *Housesitter*
      - *Stay with friends*
    - Leave in safe location that is different from the final home-alone location
      - Leave in the car?
- Training Considerations...
  - We're veterinarians, not animal trainers
  - BUT...
    - *We are caretakers of mental as well as physical health*

- *Clients respect our opinion, AND*
- *Animals are learning all the time*

It's important to know how to interact with animals and what to recommend, that will benefit their mental health

#### Associative and Instrumental Learning

- Consequence-Based Learning
  - *Instrumental learning*
  - *Operant conditioning*
  - *The **resulting effect** of a behaviour dictates whether or not the behaviour will happen again*
- Associative Learning
  - *Classical Conditioning*
  - *Pavlovian Conditioning*
  - *Learned association between an environmental stimulus and a predictive event.*
    - Doesn't rely on what the learner is doing
  - Considerations on behaviour Modification for Separation Anxiety
- Physical force, physical or verbal corrections are contraindicated
  - ***Not feeling guilty***
- Goal: Change underlying emotional state (FAS) to calmness and relaxation
- Key Points of Associative Learning
- Separation Distress Example
  - *Keys = No reaction*
  - *Keys + Leaving = Fear*
  - *Keys = Panting*
- Emotions can be associated with stimuli, resulting in positive or emotional states
  - *Positive (good)*
    - Food, play
  - *Negative (poor)*
    - Scolding, corrections, aversive
- Emotional associations can be made in a SINGLE trial
- Negative emotional state = increased fear, anxiety and stress
  - BUT...
- Learning doesn't happen in a vacuum!
  - *Associative learning impacts consequence-based learning and vice versa*
  - *Associative learning can condition emotional responses*
  - *This can profoundly impact the human-animal bond and animal welfare*

Therefore HOW an animal is taught is as important, if not moreso, than WHAT is being taught  
Animals are always learning, even if you are not actively teaching them

- Behaviour Modification Foundation Skills
- Decrease dependence on owner / Increase independence
  - *Ignore attention-seeking behaviour*
  - *Client can give attention when dog is calm and away from them*
  - *Practice with voluntary and physical separation in house if tolerated by dog*

- *Downplay departures and arrivals*
- Behaviour Modification Options for Departures
- “Drug Desensitization”
  - *Positive response to situational medications*
  - *Very busy households*
  - *Suspending departures isn’t option*
- Graduated Departure Training
  - *Desensitization and counter-conditioning to departures*
  - *Preferred*
  - *Works best if absences are suspended or otherwise non fear-provoking*
  - *Gradual process*
- Desensitization and Counter-Conditioning
  - Used if there is a strong emotional component to an unwanted behaviour
  - Systemic gradual exposure to a stimulus in ways that does not trigger a fear/ anxiety response
    - *Should ideally be guided by experienced professional*
    - Desensitization and Counter-Conditioning
  - Goal: Change the underlying motivation of the behaviour from fear or anxiety to relaxation and calmness.
    - *If the learner is relaxed and calm, they are less likely to exhibit the problem behaviour!*
    - Desensitization and Counter-Conditioning
- Desensitization and Counter-Conditioning
- Ways to Control Stimulus Intensity
  - *Realism*
  - *Distance*
  - *Volume*
  - *Movement*
  - *Category of stimulus*
  - *Number of senses the stimulus activates*
  - Desensitization and Counter-Conditioning
- 1. Determine desensitization gradient/ stimulus hierarchy
- 2. Teach desired response in ways that promote a positive emotional state
- 3. Teach desired response along gradient
  - Behaviour Modification for Separation Distress
  - Graduated departures

*Dog gets gradually used to owner being gone. At no point should the dog exhibit signs of fear, anxiety and stress.*

1. *Teach relaxed behaviour first in owner’s presence but not getting direct attention*
2. *Relaxed then when home but not in same room*
3. Behaviour Modification for Separation Distress

Graduated departures (con’t)

1. *Client gradually works through predeparture routine as long as dog is calm. At each step, relaxed behaviour is rewarded*
2. *Client gradually works up to touching door, then leaving the home*
3. *Leave for very short period of time (come back before dog starts separation-related behaviour)*
4. Technology is your friend!

#### Behaviour Modification for Separation Distress

- Graduated departures (con't)
  - *If need to leave for longer time than what you have trained  
→ use management strategies*
  - Behaviour Modification for Separation Distress
- “Drug desensitization”
  - *Conditioning positive emotional response to departures.*
  - *Give situational medication prior to **every** departure*
  - *Give food-based interactive toy at least 10 minutes before departure.*
  - Behaviour Modification for Separation Distress
- “Drug desensitization” (con't)
  - *As long as the dog is working on the toy and comfortable, depart.*
    - *If shows signs of anxiety, medication will need to be adjusted.*
  - *If anxiety is well-managed, dog will eat when alone and settle after the interactive toy is finished.*

#### Common Questions

- What about:
  - *Using a crate?*
    - *Perhaps not as common a question in Europe?*
  - *Using an anti-bark collar?*
  - *Getting another dog to keep this one company?*
- Behavioural Medication Usage (General Principles)
- When to consider psychotropic medication
  - *If behaviour is:*
    - *more intense than normal*
    - *out of proportion to the amount of trigger*
    - *out of context*
  - *If emotion is getting in the way of learning (high anxiety)*
  - *There is no non-stressful starting point for treatment*
  - *If learning doesn't seem to be "sticking"*
  - *If multiple anxiety conditions exist*
  - *If behavioural euthanasia is being considered*
- Behavioural Medication Usage (General Principles)
- Psychotropic medications can promote:
  - *Positive mood*
  - *Improved focus*

- *Neuroplasticity*
- Behavioural Medication Usage (General Principles)
- Most common client questions:
  - *Will my pet be sedated*
    - Or turn into a zombie?
  - *Will their personality change?*
  - *What are the side effects?*
  - *Will they need medications lifelong?*
- Behavioural Medication Usage (General Principles)
- Think about:
  - *The condition you are treating*
  - *How you want to use the medication*
  - *What concurrent diseases does the pet have*
  - *What concurrent medications is the pet taking*
- Setting Expectations
- Medications:
  - *Will not cure behaviour*
  - *Often won't modify anxiety-related behaviour significantly on its own*
    - Must be in combo with management / behaviour modification
    - Makes dog more receptive to the training
    - May need to do test doses, and may need to try multiple medications
    - Behavioural Medications (Overview)
- Situational
  - *Rapid effect (30min – 2hrs)*
  - *Effects shorter-lasting*
  - *May be sedating*
  - *Can be used situationally*
  - *Can be used as daily adjunct to mainstay medication*
  - *Many can be used together*
  - **Require trialing**
  - Behavioural Medications (Overview)
- Mainstay Medications
  - *Longer to take effect*
  - *Effects lasts longer*
  - *Don't tend to be sedating*
  - *Can't be used situationally*
  - *Not usually used in combination with other mainstay medications*
  - Decreased baseline anxiety
- Increased resilience to change
  - GABA
- GABA
  - *Inhibitory*

- *Synthesized from glutamate*
- *Action:*
  - Activates GABA receptors → hyperpolarizes postsynaptic cell → CALMING, decreases vigilance
- *Medications that increase GABA activity*

### Mainstay Neurotransmitters

- Serotonin
  - *Complex effects!!*
  - *Modulates:*
    - Mood (including anxiety)
    - Cognition
    - Learning
    - Sleep—wake cycle
- Mainstay Neurotransmitters
- Dopamine
  - *Modulates:*
    - Feeling of reward
    - Movement modulation
- Norepinephrine
  - *Modulates:*
    - Attention
    - Vigilance
    - Sympathetic NS
      - Situational
  - Benzodiazepines
  - *Action:*
    - Increase activity of GABA receptors
    - Schedule IV controlled drugs
  - *Effects*
    - Quick acting (30-60min)
    - May cause sedation
    - Calming effect

### Situational

- Benzodiazepines
- *Side effects*
  - Excessive sedation
  - Polyphagia
  - Paradoxical excitation
  - Disinhibition of aggressive behaviour? Use Caution!
- *Examples*
  - Alprazolam
  - Lorazepam



- Situational
  - Gabapentin
  - *Action*
    - Inhibition of voltage-sensitive Ca<sup>2+</sup> channels which affects depolarization
  - *Effect*
    - Effect in ~2-3hrs
    - General calming
    - May increase sociability
  - *Side effects*
    - Sedation
- Situational
- Trazodone
  - *Mechanism*
    - Serotonin receptor antagonist and reuptake inhibitor (SARIs)
  - *Effect*
    - Effect in 1-2 hrs
    - General calming
  - *Side effects*
    - Sedation
    - Rare irritability

#### Mainstay Medications

- Selective Serotonin Reuptake Inhibitors (SSRIs)
  - *Action*
    - Blocks reuptake of serotonin into presynaptic cell
  - *Effect*
    - Changes in post-synaptic receptors resulting in decreased anxiety, anxiety and impulsivity
  - Mainstay Medications
- Selective Serotonin Reuptake Inhibitors (SSRIs)
  - *Side effects*
    - Calming effect
    - Decreased appetite
    - V/D uncommon
    - Warn re: increased irritability
  - Mainstay Medications
- Selective Serotonin Reuptake Inhibitors (SSRIs)
  - *Examples*
    - Fluoxetine (Prozac<sup>®</sup>)
      - **Reconcile<sup>®</sup>**: US FDA-approved for Separation Anxiety + behaviour Modification
    - Paroxetine (Paxil<sup>®</sup>)
      - Sometimes better effect with BID dosing

- Sertraline (Zoloft<sup>®</sup>)
  - Mainstay Medications
- Tricyclic Antidepressants (TCAs)
  - *Action*
    - Blocks reuptake of serotonin and norepinephrine into presynaptic cell
  - *Effect*
    - Changes in post-synaptic receptors resulting in decreased anxiety, anxiety and impulsivity
  - Mainstay Medications
- Tricyclic Antidepressant (TCAs)
  - *Side effects*
    - Calming effect
    - Decreased appetite
    - Dry mouth
    - Urinary retention, constipation
    - V/D uncommon
    - Decrease seizure threshold
    - Cardiac side effects
    - Warn re: increased irritability
  - Mainstay Medications
- Tricyclic Antidepressant (TCAs)
  - *Examples*
    - Clomipramine
      - *Most serotonin-selective TCA*
      - **Clomicalm<sup>®</sup>** – US FDA-approved for treating separation anxiety + *bmod*
        - Prefer BID dosing
  - Serotonin Syndrome
- Serotonin Syndrome
  - *Always discuss if combining products that increase serotonin*
  - *Signs*
    - Lethargy
    - Agitation
    - Confusion
    - Vocalization
    - Hyperthermia
    - Coma/Death
- Tips for Medicating Dogs
- Avoid manual pilling
  - *Often increases anxiety*
- Hiding Medications
  - *Strongly flavored/smelling carrier*
    - Separate from regular food

- *Flavor the medication*
    - Flavored tablets
    - Flavored compounded liquid
- Transdermal?
  - Other Modalities
- Pheromone products
  - *Adaptil Dog Appeasement Pheromone*
  - *Comfort Zone*
- Body Wrap?
  - *Thundershirt*
  - *Anxiety Wrap*

#### What If There is a Relapse?

- Assess physical health
- Assess environmental changes
- Assess presence of new triggers
  - *Eg Noises*
  - Rarely medication failure

#### Prevention

- Encourage early training for independence
- Anxiety reduction for life changes
- Treat comorbidities

#### Conclusions

- Treatment includes:
  - *Suspending fear-provoking absences*
  - *Foundation Skills*
    - Increase independence
    - Downplay departures/arrivals
  - *Behaviour Modification*
    - Graduated departure training
    - “Drug Desensitization”
  - *Medication to minimize stress and facilitate learning.*
- Separation anxiety is a treatable condition that is underrecognized
- Untreated, it causes significant welfare risk to patients due to high and prolonged FAS

#### Questions?

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