

Dermatology and Behavior in Cats and Dogs

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There are many similarities between the specialties of dermatology and behavior including the importance of history in making the diagnosis, extended consultation time, deal often with chronic conditions, often try to manage versus cure the condition and success is often measured in months instead of days. In determining how much of a given behavior is dermatologic versus behavioral we are often trying to sort out whether we are seeing the result of a pruritic condition or the result of compulsive, Self-Injurious Behavior (SIB). In behavior, it is not unusual for us to first rule out pruritic behavior as not stemming from pyoderma, atopy or food allergy before tackling it as a potential compulsive disorder. While there is considerable overlap between patients with behavior problems and dermatologic conditions, there is little evidence that there is a cause and effect relationship between pruritus and issues such as anxiety, fear or aggression (Klinck, et al).

Acral Lick Dermatitis is characterized by alopecia, erosion, ulceration, hyperplasia and is often unilateral seen mostly on the carpus or metatarsus. The Great Dane and the Retrievers are most affected. Causes include atopy, food allergy, arthritis, wounds, neoplasia and external parasites. Behaviorally, boredom, anxiety, attention seeking behavior and compulsive disorder are suspected etiologies. Topical treatment with antibiotics and corticosteroids, denying access to the area (Elizabethan collars, for example), intralesional injections with steroids or NSAIDs, food trials and long term oral antibiotics (Shumaker, et al) are all common approaches. Behaviorally, the condition is managed with increased exercise, removing triggers of the behavior, use of counter conditioning and desensitization (CC/DS) to reduce the animal's response to those triggers, interrupting and redirecting the behavior along with the use of a head collar. Clomipramine (2-4 mg/kg bid) and Fluoxetine (1-2 mg/kg sid) often are effective in reducing the anxiety component.

Excessive Licking can be self-directed or directed externally. Rule outs include allergic dermatitis, external parasites, oral cavity disease and GI disease causing nausea. Behaviorally, anxiety, compulsion, attention seeking, displacement behaviors and normal grooming behavior can be responsible. Ruling out primary skin disorder via skin scraping, parasite therapy, food trial or steroid trial can be a good first step. Consider videotaping the behavior when the pet is alone to rule attention seeking or separation anxiety as possible behavioral causes. To manage the behavioral component ID triggers of the behavior and remove them along with reinforcers of the behavior, CC/DS, consistent exercise, do not punish and manage separation anxiety if present. The use of Clomipramine and Fluoxetine can be helpful.

Tail chasing/biting

Typical lesions seen in this condition include denuded tail, pyoderma, erythema, ulceration and lichenification. Potential dermatologic etiologies include moist dermatitis, flea allergy dermatitis, tail gland hyperplasia (stud tail), neurodermatitis, allergic dermatitis, and anal sac disease. Behaviorally, compulsive disorder and attention seeking behavior can result in tail chasing. To rule out a primary dermatologic problem treat possible secondary pyoderma with antibiotics, treat for external parasites, dermatophyte culture and rule out allergic dermatitis. Behaviorally rule out attention seeking behavior by having owners ignore the dog in ALL situations except for feeding and elimination needs for 2 weeks. If there is no change, assume you are dealing with a compulsive disorder. Symptoms are characterized by spinning behavior as well as tail biting and can occupy the majority of the dog's activities. Breeds that are commonly affected include English Bull Terriers, German Shepherds and Australian Cattle Dogs. Behavioral therapy includes increasing exercise, consistent training and play, removing triggers of the behavior, using CC/DS to reduce reactivity to those triggers, interrupt and redirect the problem behavior, and using a head collar to assist with redirecting the behavior. Clomipramine and Fluoxetine can be added to assist with the behavior modification program.

Flank sucking

Flank sucking can present as a unilateral or bilateral erythema and alopecia of the skin of the flank fold or present with no visible lesions. The most common breed affected is the Doberman. Differentially flank sucking needs to be distinguished from contact dermatitis, psychomotor seizures, neuropathies, attention seeking behavior and compulsive behavior. Flank sucking presents as the dog grabbing its flank in its mouth, possibly in response to some identifiable trigger or with generalized increase in activity. Can occur with the owner present (attention seeking) or if the owner is absent (compulsive disorder). Stress, frustration or conflict can contribute to the behavior. It can also occur as a component of Separation Anxiety. As with most compulsive behaviors, treatment involves removing identifiable triggers, using CC/DS, using response substitution, not using punishment, increasing play and exercise as well as using consistent interactions (command-response-reward). Consider utilizing Clomipramine and Fluoxetine.

Feline ventral alopecia/pruritus (psychogenic alopecia, over grooming, hormonal responsive alopecia, a component of hyperesthesia)

The behavior is seen as excessive grooming resulting in loss of fur, especially on the ventral abdominal area, flanks and posterior regions. It typically does not involve many skin lesions, other than alopecia with evidence of broken hair shafts as being the main abnormality. Medical differential diagnoses include atopy, food allergy, external parasites, and dermatophytosis. Behaviorally attention seeking behavior, hyperesthesia, compulsive disorder and psychogenic alopecia are typical rule outs. While it is tempting to assume the majority of these cases are behaviorally related, the fact is that over 75% of pruritic cats were found to have an underlying medical cause (Landsberg, et al). A behavioral diagnosis of Psychogenic alopecia is one made by the process of elimination by using skin scrapings, dermatophyte culture, prophylactic parasiticide use, food trials and assessing for atopy and endocrinopathies. Behavioral therapy includes ignoring attention demanding behaviors, consistent play, exercise and interactions, CC/DS to identifiable triggers, interrupt and redirect excessive grooming and remove or manage social issues in the household. Treatment with Clomipramine at 0.5-1.0 mg/kg sid or fluoxetine at 0.5-1.0 mg/kg sid.

Feline hyperesthesia syndrome

This syndrome has many names including Rolling Skin Disease, Neurodermatitis, Neuritis, Psychomotor Epilepsy and Pruritic Dermatitis of Siamese. The multiple names, and the use of the term “Syndrome”,

indicates that this is a poorly understood condition. The condition is typically seen in younger oriental breeds of cats including the Siamese, Burmese, Persian and Abyssinian. Signs of FHS include rippling skin along the lumbar spine, pain on palpation of lumbar musculature, mydriasis, attacking the tail, forelegs and/or flanks, running and vocalizing wildly, change in personality from calm to aggressive or aggressive to displaying affection, may be induced by petting or stroking, commonly occurs in the morning or later in the evening. Dermatologic causes can include Flea Allergy Dermatitis, Food Allergy, Atopy, and Infectious Dermatitis. Neurologic causes can include epilepsy, brain tumor, and spinal disease disc disease, neoplasia, and myelitis). Musculoskeletal causes can include Myositis or Myopathy. Behavioral cause can include Compulsive Disorder or Displacement Behavior.

Diagnostic steps to be taken include physical examination, neurologic exam, CBC/Chemistries/Urinalysis, spinal radiographs, skin scraping, fungal culture, skin and/or muscle biopsy, spinal or cranial imaging (CT/MRI), EMG studies, food trial and pharmaceutical trials (flea control, corticosteroids, anti-seizure medication).

Compulsive disorder (CD)

As a possible behavioral cause of FHS, Compulsive Disorders can result in Self-Injurious Behavior (SIB). It is as a consequence of displacement behavior. Displacement behavior occurs as an alternative

to two conflicting behaviors. If this conflicting situation persists over a prolonged period, the cat may engage in the displacement behavior even when the competing motivations are no longer present. This then is defined as a compulsive behavior. An example of this is seen hunger and fear being conflicting motivations which can result in the displacement behavior of self-grooming. Over time, the excessive grooming can occur when the cat is no longer faced with hunger in a fear inducing situation.

Other theories include increased dopamine levels resulting in Compulsive Behaviors or elevated opiates causing reinforcement of the compulsive behavior. Serotonin deficiency may be responsible since an increased serotonin level reduces the incidence of CD's and is the rationale for the use of Selective Serotonin Reuptake Inhibitors (SSRI's). Serotonin is produced in the dorsal raphe nucleus and its influence on the basal ganglia/frontal cortex impact behaviors such as CD's.

Behavioral therapy of FHS includes providing regular feeding in order to provide a more predictable source of food, providing regular play sessions using target-type toys (feather toys, for example), not using punishment for this behavior since that it can increase conflict and stress in the cat resulting in a likely increase in the problem behavior, anticipating triggering situations that result in the behavior and redirect to more appropriate behaviors (such as training or play).

Pharmaceutical intervention can be critical in managing FHS. Common agents used include the SSRI's such as Fluoxetine (0.5-2.0 mg/kg PO q24h), or Paroxetine (0.5-1.0 mg/kg PO q 12-24h) with possible side effects being sedation, anorexia, irritability, vomiting, and diarrhea. Tricyclic Antidepressants (TCA's) can also be used. Clomipramine (0.5-1.0 mg/kg PO q 24h) is a good choice in this class and possible side effects include sedation, anticholinergic effects, potentiation, of arrhythmias if predisposed, and lowered seizure threshold if seizures are pre-existing. Benzodiazepines (BZD's) can be added to SSRI's or TCA's with Lorazepam (0.125-0.50 mg PO per cat q8-24h) and Oxazepam (0.20-0.50 mg/kg PO q 12-24h) being commonly used due to these not having active, and potentially hepatotoxic, metabolites in cats. Ataxia and temperament changes can occur. In general, when using psychoactive pharmaceuticals, begin at the lower end of the dose range then titrating upwards as needed, maintain treatment for 4-6 months, gradually reduce the dose (25% reduction q 1-2 weeks), reinstitute at lowest effective dose if behavior reoccurs during weaning and wean one drug at a time if using combination therapy.