

Feline Hyperesthesia Syndrome

**Robin E. Levitski-Osgood, DVM
Diplomate ACVIM- Neurology**

Feline hyperesthesia syndrome (FHS) is commonly seen in private practice. It is also known as self-mutilation syndrome, rolling skin syndrome, twitchy cat disease, atypical neurodermatitis, and hyperkinesis. Unfortunately there is not much known or published about FHS.

Feline hyperesthesia syndrome is most commonly seen in 1-4 year old cats, but can be seen at any age. The most common breeds FHS has been noted in are the Siamese, Burmese, Himalayan, and Abyssinian breeds. One theory is that these breeds are more high-strung.

There are a multitude of clinical signs and not every cat will have all of the clinical signs. Usually FHS presents as episodes of abnormal behavior/activity that can sometimes be induced by scratching the cat over the caudal lumbar region and base of the tail.

Excessive grooming	Hissing
Skin ripples	Running
Tail swishing	Jumping
Vocalization	Frantic licking/chewing
Mydriasis	Self- mutilation
Tail chasing	Seizures

There are three main suspected etiologies for FHS. Behavioral problems, dermatological, and neurological disease are the primary etiologies. Any change in the household (people or animals) can cause environmental and social stress for kitties.

Dermatological diseases that cause pruritis commonly can cause signs of FHS. In fact flea allergy dermatitis is the number one pruritic condition seen. Food allergies, atopy, and infectious skin diseases are also differentials.

There are many neurological diseases that may cause FHS. Spinal pain from any etiology can cause kitties to exhibit these signs. Intervertebral disc disease is generally very painful, and many cats will lick, chew, and attack the lumbar or lumbosacral region. Some cats with lumbosacral disc extrusions will chew on their tails. Neoplasia that affects the spinal cord, spinal nerve, or spinal column can also be the culprit. Infectious

diseases of the spinal cord (most commonly cryptococcosis) are also painful. Brain tumors or other types of brain disease can cause cats to have unusual and bizarre episodes.

Most recently, an inclusion body myopathy/myositis has been documented in the literature. An abstract in JVIM, in 1999, described 5 cats with clinical signs of FHS. These cats were between 5-8 years of age. Four of the five cats had thoracolumbar hyperpathia on spinal palpation. There were no other abnormal findings on the physical and neurological exam. The cats underwent a thorough diagnostic work-up. Abnormalities were only found on electromyography (EMG) and muscle biopsies. Normal muscles are electrically silent with EMG testing. Spontaneous activity consisting of fibrillation potentials, positive sharp waves, complex repetitive discharges, and trains of giant motor unit potentials were found in the thoracolumbar epaxial muscles in these kitties. The muscle histology was the most interesting part and was consistent with rimmed vacuoles with positive labeling of monoclonal antibodies against paired helical filaments and beta amyloid. These findings are similar to the inclusion body myositis/myopathy described in humans.

A complete workup for FHS starts with the history, physical and neurological exams. If a behavior problem is suspected then appropriate therapy can be instituted or a referral to a behaviorist should be made. Any dermatological testing that is indicated should be performed. Basic blood work, viral (FeLV, FIV, FIP), protozoal (toxoplasma), and fungal (crypto) tests should also be submitted. Spinal radiographs are evaluated for findings suggestive of disc disease, neoplasia, or infection. An electrodiagnostic workup consisting of EMGs and epaxial muscle biopsies should be done. I recommend that the muscle biopsies be sent to Dr. Shelton for evaluation. Imaging of the spine or brain may be indicated based on the exam findings.

If a specific underlying disease is diagnosed then appropriate therapy should be started. Of course if the complete workup is negative then therapeutic drug trials can be instituted. Commonly used drugs for FHS include flea treatments, corticosteroids, anti-convulsants and anti-anxiety/behavior medications.

The two most commonly used anti-convulsants appear to be Phenobarbital and diazepam. I do not recommend using potassium bromide for FHS due to the severe respiratory side effects that may occur. Many neurologists are using Neurontin (gabapentin) to treat FHS.

I have had fair success with Phenobarbital (PB). Phenobarbital can be started at 2 mg/kg PO BID and adjusted based on blood levels and clinical signs. The first blood level should be checked 3 weeks after starting PB. The most common side effects in cats are ataxia, sedation, and weight gain. They rarely ever develop immune mediated reactions, bone marrow hypoplasia or liver enzyme elevations.

Diazepam can be used at 0.5-1.0 mg/kg PO BID-TID. Common side effects include behavior changes and sedation. Hepatic failure has also been reported in cats given oral diazepam.

I would not use Potassium bromide (KBr) in cats due to the respiratory disease that can occur. Peribronchial infiltrates with fibrosis has been described in cats being treated with KBr. If KBr is considered then pre-treatment thoracic radiographs should be obtained.

Neurontin also known as gabapentin comes in a pediatric suspension (50 mg/ml). Three different doses have been reported by different neurologists.

50 mg per day for 3 days, then increase to 50 mg PO BID, then 50 mg PO TID.

5 mg/kg PO BID

10 mg/kg PO BID

I start with 5 mg/kg PO BID and evaluate the kitty's response over 2 months. The amount can slowly be increased.

Many other drugs have been listed to treat FHS. I usually consult with a behaviorist prior to using these medications.

Amitriptyline (Elavil)

Alprazolam (Xanax)

Clomipramine (Anafranil, Clomicalm)

Fluoxetine (Prozac)

Sertraline (Zoloft)

Paroxetine (Paxil)

In summary, FHS is a widespread but poorly understood disease. The goal is to identify an underlying disease process and treat it. Electromyography and muscle biopsies on all cats with clinical signs of FHS could prove to be very rewarding in understanding this disease. Of course there are a number of drugs that can be tried in an attempt to control the clinical signs.