

## Feline Dermatology by Reaction Pattern

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## Common Reaction Patterns in Feline Dermatology

- Head and neck pruritus
- Traumatic alopecia
- Miliary dermatitis
- Eosinophilic granuloma complex

## Head and Neck Pruritus

- Most common reaction pattern??
- Presented early in the course of disease
- Variable rate of progression



## Head and Neck Pruritus

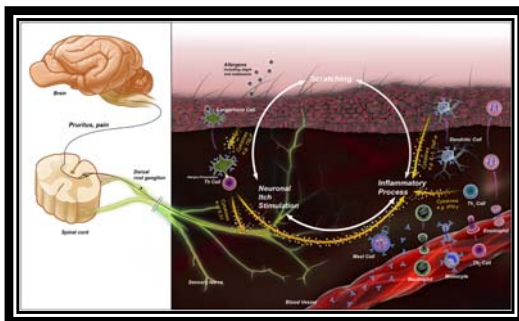
### Initially Lesion Free

- Atopy
- Food hypersensitivity
- Otodectes
- Early feline scabies

### Pre-existing Skin Lesions

- Mosquito bite hypersensitivity
- Feline herpes

## Atopic Dermatitis



Courtesy: Zoetis

## Feline Atopy

- Uncommon
- Uncertain pathogenesis
  - Transdermal exposure?
  - Respiratory exposure?
  - Oral exposure?
- Good response to medical management usually

**Feline Atopy**

- Recognized age at onset:
  - Purebreds: 12- 36 months
  - Mixed-breeds: adulthood
- Lesional or nonlesional pruritus
- Protracted seasonality
- Coincidental asthma?
- Pruritus stops with appropriate glucocorticoid administration

**Clinical Features of Feline Atopy or Food Hypersensitivity**

- Pruritic otitis externa
- Facial pruritus
- Head and neck pruritus
- Generalized pruritus
- Miliary dermatitis
- Traumatic alopecia
- Eosinophilic granuloma complex

**Atopic Dermatitis - Diagnosis**

- History
- Physical examination
- Exclusion
- Allergy testing ???

**Food Hypersensitivity**

- Genetic predisposition not required
- Allergens
  - Water-soluble proteins and glycoproteins
  - ≥4,000 Daltons??
- Variable clinical presentations
  - Skin
  - Non-skin
  - Combination

**Food Hypersensitivity**

**Source of exposure**

- Daily ration
- Treats
- Medications
- Scavenged/hunted foods
- Matter in drinking water



**Reported Feline Food Allergens**

Protein	Grain	Other
Beef	Barley	Commercial food
Chicken	Corn	Clam juice
Fish (various)		Cod liver oil
Eggs		Food additives
Dairy products		Food preservatives
Horse meat		
Lamb		
Pork		
Rabbit		
Whale meat		

### Clinical Features of Feline Atopy or Food Hypersensitivity

- Pruritic otitis externa
- Facial pruritus
- Head and neck pruritus
- Generalized pruritus
- Miliary dermatitis
- Traumatic alopecia
- Eosinophilic granuloma complex
- Poor response to glucocorticoid therapy

### Food Hypersensitivity - Diagnosis

- History
- Physical
- Diagnostic exclusion
- Serologic testing?
- Food dechallenge/challenge

### Dietary Dechallenge & Challenge

- Dietary history required for accurate formulation of test diet
  - At onset only?
  - Entire course of disease?
- Types of diets available
  - Home cooked
  - Commercial
    - OTC limited ingredient diets
    - Veterinary limited ingredient diets
    - Altered molecular weight foods

### Otodectes cyanotis

- Nonburrowing psoroptid mite
- 3 week life cycle
  - Egg → larva: 4 days
  - Larva → protonymph: 4 – 11 days
  - Protonymph → deutonymph → adult
- 2-month life span

### Otodectes cyanotis

- No host specificity
- Feeds on debris and tissue fluid
- Variable symptomatology
  - Ears
  - Body

### Otodectes cyanotis - Treatment

- Parasitacidal otic preparations
  - Pyrethrin Solutions
  - Tresaderm®
  - Topical avermectins
- Systemic agents
  - Ivermectin: 0.3 mg/kg
  - Milbemycin: 2 mg/kg PO q7d
  - Doramectin: 0.2-0.6 mg/kg SQ
  - Selamectin: topically q14d
  - Advantage *multi*™: topically q14-30 days
  - Bravecto?

### Feline Scabies

- *Notoedres cati* or *Sarcoptes scabiei*
- Regional disorder
- Mites easy to demonstrate

### Feline Scabies - Treatment

- Topicals: lime sulfur, amitraz, fipronil
- Systemics:
  - Selamectin: topically q14d
  - Ivermectin: 0.3 mg/kg PO q7d
  - Doramectin: 0.2-0.6 mg/kg SQ
  - Advantage *multi*<sup>™</sup>
  - Bravecto?

### Mosquito Dermatitis



- Dusk to dawn feeders
- Feed only in hairless areas
- Minimal disease without hypersensitivity reaction



### Mosquito Bite Hypersensitivity

- Rare
- Indoor-outdoor cats
- Seasonally recurrent
- Lesions on pinna, bridge of nose and footpads

### Mosquito Bite Hypersensitivity - Treatment

- Restrict outdoor activity
- Corticosteroids
- Insect repellants



### Feline Herpes Dermatitis

- Infected cats are carriers
- Disease flair with stress or drug treatments
- Variable ocular or respiratory signs

### Herpes Treatments

- Symptomatic treatments
- Lysine: 250 mg PO q24h
- Interferon alfa: 1 million units/MSBSA SQ eod
- Famciclovir: 125 mg q8h
- Acyclovir?
- Imiquimod: topical q3d

### Feline Traumatic Alopecia

- Hair shaft fracture by “excessive” grooming or hair pulling. How much is too much?
- Integrity of hair shaft must be determined
- Self-induced?



### Feline Traumatic Alopecia

Dorsal Hair Loss	Ventral Hair Loss
Behavioral disorders	Behavioral disorders
Cheyletiellosis	<i>Demodex gatoi</i>
Anal sac disease	Atopy
Flea bite hypersensitivity	Food allergy
Pediculosis	
Atopy	
Food allergy	

### Behavioral Skin Diseases

- Rare
- Must have other behavioral issues

### Cheyletiellosis

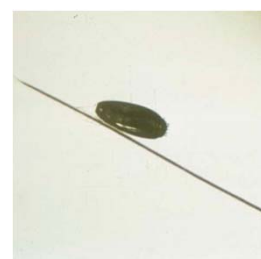
- *Cheyletiella yasguri*, *C. blakei*, and *C. parasitivorax*
- No host specificity??
- 3 week life cycle
- Surface parasite
- Eggs cemented to hair shafts

### Hair Shaft Attached Eggs

Lice



Cheyletiella



### Cheyletiellosis – Clinical Signs

- Very variable
  - None
  - Dorsally-oriented
    - Seborrhea
    - Seborrhea with pruritus
    - Pruritus
  - Scabies-like pruritus

### Cheyletiellosis – Diagnosis

- Parasite identification
  - Fecal floatation
  - Skin scraping
  - Acetate tape impressions
  - Flea combing
- Response to treatment

### Cheyletiellosis – Treatment

- Treat all contact animals
- Topical agents: lime sulfur, fipronil
- Systemic agents
  - Selamectin: topically q14d
  - Ivermectin: 0.3 mg/kg PO q7d
  - Milbemycin: 2.0 mg/kg PO q7d
  - Doramectin: 0.2-0.6 mg/kg SQ
  - Advantage *multi*<sup>™</sup>
  - Bravecto?
- Environmental control?

### Feline Anal Sac Disease

- Rare clinical signs



Source: [www.arkvetsgalway.com](http://www.arkvetsgalway.com)

### Flea Bite Hypersensitivity



### Flea Bite HYpersensitivity



**Pediculosis**



**Atopy**



**Atopy**



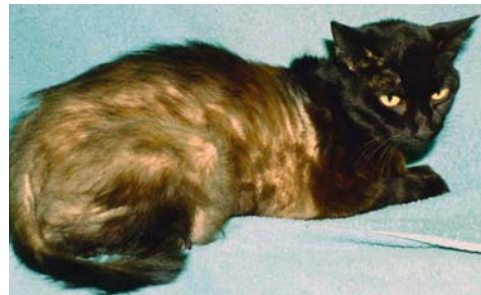
**Atopy**



**Food Allergy**



**Food Allergy**



## Food Allergy



## Demodex gatoi

- Regional differences in frequency
- Contagious mite
- Clinical signs due to hypersensitivity

## Diagnosis



## Feline Demodicosis - Treatment

- Topicals
  - Lime sulfur: 2- 4%
  - Amitraz: 125-250 ppm
- Ivermectin: 0.3 mg/kg PO q24h
- Advantage *multi*: apply q14d for 6 applications
- Doramectin: 0.6 mg/kg SQ q7days
- Bravecto?

## Feline Miliary Dermatitis

- Crusted papular lesions
- Long list of differential diagnoses
- Exudative cytology necessary

## DDx - Feline Miliary Dermatitis

- Hypersensitivity disorders
  - Atopy: head & neck, trunk
  - Food hypersensitivity: head & neck, trunk
  - Drug reaction: anywhere
  - Fleas bite dermatitis: neck, rump, abdomen
  - Mosquito bite hypersensitivity: face, ears
  - Hypereosinophilic syndrome: generalized
- Autoimmune disorders
  - Superficial pemphigus: face, ears, generalized
  - Lupus erythematosus: face, ears, generalized



**DDx - Feline Miliary Dermatitis**

- **Ectoparasitism**
  - Otodectic mange: head, neck
  - Cheyletiellosis: dorsum
  - Pediculosis: head, neck, generalized
  - Follicular demodicosis: head, neck, front limbs
  - Trombiculosis: face, limbs, ventrum
  - Fur mite infestation: generalized
- **Infectious disorders**
  - Staphylococcal infection: variable
  - Dermatophytosis: head, neck, front limbs
- **Miscellaneous**

**Atopy**



**Atopy**



**Atopy**



**Food Allergy**



**Food Allergy**



### **Flea Bite Hypersensitivity**



### **Cheyletiellosis**



### **Cutaneous Drug Reactions**

- Pleomorphic eruptions
- Immunologic or nonimmunologic mechanisms
- Immunologic sensitization: 7-14 days
- 1<sup>st</sup> reaction usually within 21 days
- Reaction pattern can change at each exposure

### **Common Offending Drugs**

#### DOGS

- Potentiated sulfas
- Penicillins
- Cephalosporins
- Topicals

#### CATS

- Penicillins
- Cephalosporins
- Sulfas
- Topicals

### **Drug Reaction - Diagnosis**

- History
- Differential elimination
- Skin biopsy??
- Dechallenge & challenge testing

### **Superficial Pemphigus**

- Autoimmune skin disease
  - Pemphigus erythematosus: Head & neck involved
  - Pemphigus foliaceus: Generalized
- Rare in the cat
- Striking lesions usually

### Superficial Pemphigus - Diagnosis

- History
- Physical
- Exfoliative cytology
- Skin biopsy

### Superficial Pemphigus - Treatment

- Glucocorticoids
  - Prednisolone: 4.4 mg/kg q24h
  - Methylprednisolone: 3.5 mg/kg q24h
  - Dexamethasone: 0.4 mg/kg q24-48 h
- Chlorambucil: 0.1 – 0.2 mg/kg q24-48 hrs
- Cyclosporine: 7 mg/kg q24h

### Feline Staphylococcal Folliculitis

- Rare
- Associated with severe skin trauma or glucocorticoid administration
- Diagnosis via exudative cytology
- Methicillin-resistant strains occur

### Idiopathic



### Eosinophilic Granuloma Complex

- Three presentation
  - Indolent ulcer
  - Eosinophilic plaque
  - Eosinophilic granuloma
- Overlapping etiologies
  - Idiopathic
  - Hypersensitivity disorder
- Prolonged course of therapy

### Indolent Ulcer



### Eosinophilic Plaque



### Eosinophilic Granuloma



#### Eosinophilic Granuloma Complex - Diagnosis

- History
- Exudative cytology
  - Classify lesion
  - Evaluate for secondary infection
- Biopsy?
  - Confirm diagnosis

#### Eosinophilic Granuloma Complex - Treatment

- Initial presentation
  - Glucocorticoids
- Recurrent cases
  - Identify and resolve underlying cause
  - Glucocorticoids
  - Cyclosporine
- Treat all cases beyond visual and palpable resolution