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

Feline Atopy
• Uncommon
• Uncertain pathogenesis
  • Transdermal exposure?
  • Respiratory exposure?
  • Oral exposure?
• Good response to medical management usually

Courtesy: Zoetis
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

<table>
<thead>
<tr>
<th>Protein</th>
<th>Grain</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef</td>
<td>Barley</td>
<td>Commercial food</td>
</tr>
<tr>
<td>Chicken</td>
<td>Corn</td>
<td>Clam juice</td>
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<tr>
<td>Fish (various)</td>
<td></td>
<td>Cod liver oil</td>
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<tr>
<td>Eggs</td>
<td></td>
<td>Food additives</td>
</tr>
<tr>
<td>Dairy products</td>
<td></td>
<td>Food preservatives</td>
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<tr>
<td>Horse meat</td>
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<tr>
<td>Lamb</td>
<td></td>
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<tr>
<td>Pork</td>
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<tr>
<td>Rabbit</td>
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<tr>
<td>Rabbit</td>
<td></td>
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<tr>
<td>Whale肉</td>
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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™*
  - 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**

<table>
<thead>
<tr>
<th>Dorsal Hair Loss</th>
<th>Ventral Hair Loss</th>
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<tbody>
<tr>
<td>Behavioral disorders</td>
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</tr>
<tr>
<td>Cheyletiellosis</td>
<td>Demodex gatoi</td>
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<tr>
<td>Anal sac disease</td>
<td>Atopy</td>
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<tr>
<td>Flea bite hypersensitivity</td>
<td>Food allergy</td>
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<tr>
<td>Pediculosis</td>
<td>Atopy</td>
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<tr>
<td></td>
<td>Food allergy</td>
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**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™
  - Bravecto?
- Environmental control?

Feline Anal Sac Disease

- Rare clinical signs

Source: www.arkvetsgalway.com

Flea Bite Hypersensitivity

Flea Bite HYpersensitivity
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**

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Atopy

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Food Allergy
Cutaneous Drug Reactions
- Pleomorphic eruptions
- Immunologic or nonimmunologic mechanisms
- Immunologic sensitization: 7-14 days
- 1st 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 erythematous: 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