Feline Miliary Dermatitis

Etiology

A cutaneous reaction pattern, and not a specific disease entity.

Clinical Features

Small focal to diffuse papular eruptions with small crusts that are usually pruritic, and excoriations may occur.

Flea Allergy Dermatitis

Affects the dorsal lumbo-sacral region, caudo-medial thighs, ventral abdomen, and flanks. May also affect the head and neck region, and may become generalized. Can be either a warm weather seasonal or nonseasonal pruritus—geographic differences.

Cutaneous Adverse Food Reactions: “Food Allergy”

Affects the pre-aural region, pinnae, neck, periorbital region, and face. Severe excoriations may occur. A nonseasonal pruritus, with concurrent GI signs being rare!

Atopic Dermatitis (“Catopy”)

May mimic the distribution patterns of flea allergy or food allergy, or may also present with lesions of the forelegs, rear legs, ventral abdomen, and chest. May be warm weather seasonal, present year-round with exacerbations in warm weather, or nonseasonal.

Parasitic Causes

The presence of “miliary lesions” implies a hypersensitivity response.

Cheyletiellosis (“Walking Dandruff”)—affects primarily the dorsal trunk, excess scaling a major sign.

Notoedric Mange (Feline Scabies)—affects the pinnae, face, periorbital region, neck (“head mange”)—heavy crusts/scales. May extend to the feet, perineum.

Trombiculosis (“Chiggers”)—affects ground contact areas—legs, feet, ears, and ventrum with orange-colored crusts.

Otoacariasis (Ectopic Ear Mites)—may mimic the distribution patterns of flea allergy, food allergy, or atopy. Usually has concurrent otitis externa.

Demodicosis—Demodex cati—long slender mite. Affects the periorbital region, head, and neck with concurrent ceruminous otitis externa.

Pediculosis (Lice)—Felicola subrostrata. Affects primarily the dorsal trunk. Presence of “nits” on hair shafts.

Cat Fur Mite—Lynxacarus radovsky. Affects primarily the dorsal trunk. “Salt and pepper”-like scale.

Intestinal Parasite Hypersensitivity—roundworms, hookworms, whipworms, tapeworms, Coccidia. May mimic the distribution patterns of flea allergy, food allergy, or atopy.
Fungal Causes

*Dermatophytosis*—may mimic the distribution patterns of flea allergy, food allergy, or atopy. Additional areas of patchy alopecia, scales. History of other pets or humans in the household with skin lesions.

*Malassezia Dermatitis*—usually only a secondary complication.

Autoimmune Causes

*Pemphigus Foliaceus*—affects the nasal planum, periorbital region, and pinnae. May become generalized. May be systemically ill.

*Pemphigus Erythematosus*—lesions limited to the nasal planum, periorbital region, and pinnae.

Immune-Mediated Causes

*Cutaneous Drug Reaction*—often mimics the distribution pattern of food allergy. Methimazole reported, Propranolol.


Neoplastic Causes

*Cutaneous Mastocytosis*—most commonly affects the head and neck region, may be generalized. Geriatric Siamese cats predisposed. Gastrointestinal ulcers, coagulation disorder.

*Epitheliotropic Cutaneous Lymphoma (Mycosis Fungoides)*—the “Great Imitator.”

Viral Causes

*Feline Herpes Virus*—affects the nasal region and face. May have a history of previous upper respiratory infections. May have history of conjunctivitis and/or oral ulcers.

*FeLV- and FIV-Associated Skin Lesions*—chronic “miliary dermatitis” with concurrent systemic illness.

Idiopathic Causes

*Idiopathic Sterile Granuloma and Pyogranuloma*—may mimic the distribution pattern of food allergy. Spontaneous remission may occur.

*Idiopathic “Miliary Dermatitis”*—relatively rare. A diagnosis of exclusion!

Diagnosis

*Flea Allergy Dermatitis*

Distribution pattern of lesions—posterior third of the body and most frequently with a seasonal pruritus. Intradermal testing with flea antigen, and/or in vitro testing for flea. Response to intense flea treatment protocol.

*Cutaneous Adverse Food Reactions: “Food Allergy”*

Distribution pattern of lesions—anterior third of the body with a nonseasonal pruritus. Home-cooked, novel protein and carbohydrate elimination diet of 12 weeks in duration. Protein hydrolysate diets—reduced molecular weight (Daltons) of specific protein in diet. Most “allergenic” proteins are in range of 14,000—70,000 Daltons. Hydrolyzed proteins in the range of 1,000—12,000 Daltons.
Feline commercial protein hydrolysate diets: Royal Canin Veterinary Diet: Feline Hypoallergenic HP 23—hydrolyzed soy, chicken fat, rice, beet pulp, fish oil; Hill’s Prescription Diets: Feline z/d Low Allergen—hydrolyzed chicken and chicken liver, rice, vegetable oil.

*Feline Miliary Dermatitis: Atopic Dermatitis (“Catopy”)*

Mimics flea allergy and food allergy. Either a seasonal or nonseasonal pruritus. Intradermal testing with aeroallergens (no longer recommended); aeroallergen specific IgE immunoassay.

**Parasitic Causes**

Distribution pattern of lesions. Skin scrapings, Scotch tape preparations, flea combing, fecal flotation, and vacuum technique. Response to empirical parasiticidal treatments—lime sulfur dips vs. selamectin vs. ivermectin vs. fipronil spray.

*Dermatophytosis*

Areas of patchy alopecia, scales. May or may not have a history of other pets or humans in the household with skin lesions. Wood’s lamp examination, KOH prep, fungal cultures, and skin biopsy.

*Pemphigus Foliaceus*

Affects the nasal planum, periorbital region, and pinnae. May become generalized, and systemically ill. Histopathology—subcorneal pustules with acantholytic cells.

*Pemphigus Erythematosus*

Lesions limited to the nasal planum, periorbital region, and pinnae. Histopathology—subcorneal pustules with acantholytic cells.

*Cutaneous Drug Reaction*


*Hypereosinophilic Syndrome*

Many organs involved, with anorexia, vomiting, diarrhea, and weight loss. Moderate to marked eosinophilia. Histopathology—superficial and deep perivascular to interstitial dermatitis with eosinophils.

**Neoplastic Causes**

*Cutaneous Mastocytosis*—geriatric Siamese cats predisposed. Gastrointestinal ulcers, coagulation disorder.

*Epitheliotropic Cutaneous Lymphoma (Mycosis Fungoides)*—the “Great Imitator.”

*Feline Herpes Virus*

Idiopathic Sterile Granuloma and Pyogranuloma

Distribution pattern of food allergy.

Histopathology—perifollicular pyogranulomatous dermatitis or preauricular xanthogranuloma—a diffuse granulomatous dermatitis with multinucleated giant cells—may have a history of chronic steroid or megestrol acetate use.

Idiopathic “Miliary Dermatitis”

Histopathology—superficial perivascular dermatitis with neutrophils, eosinophils, plasma cells, and mast cells.

Treatment

Flea Allergy Dermatitis

Environmental treatment—pyrethroid + pyriproxifin; boric acid, or sodium polyborate powder.

Patient treatment—Imidacloprid—q14d + leufenuron—q30d; Fipronil + methoprene—q21d. Selamectin q30d. Allergen-specific immunotherapy (ASIT) with flea salivary antigen (Greer).

Cutaneous Adverse Food Reactions: “Food Allergy”

Commercial diet avoiding the known offending food source. Nature’s Recipe—rabbit and rice canned diet. Hill’s prescription diets; Feline d/d—venison and green pea based dry or canned diet; duck or rabbit and green pea based dry diet. Eukanuba Response Formula LB for Cats—lamb and barley based canned diet. IVD—Royal Canin—Waltham: duck, rabbit, venison, or lamb and green pea—canned or dry diets. Home-cooked treatment diets—“novel” protein and carbohydrate source, essential fatty acid dietary supplement, safflower oil, dicalcium phosphate, non-flavored, additive free vitamin and mineral supplement, and taurine for cats.

Atopic Dermatitis (Catopy)

Allergen-specific immunotherapy (ASIT). Prednisolone (not prednisone)—1 mg/kg q12h x 7 d, then q24h x 7 d, then q48h at lowest possible dose to control pruritus or cyclosporine—5 mg/kg q24h.

Parasitic Diseases

Lime sulfur—q7d x 4 weeks—Cheyletiella, Notoedres, Trombicula, Lynxacarus, Demodex gatoi, Felicola subrostrata.

Selamectin—q14d x 3 treatments—Cheyletiella, Notoedres, Otodectes.

Fipronil spray—q30d—Cheyletiella, Notoedres, Felicola subrostrata.

Ivermectin—200 ug/kg q7d x 4 weeks—Cheyletiella, Notoedres, Otodectes; 200-300 ug/kg q24h—Demodex cati.

Amitraz—125 ppm q14d—Cheyletiella, Notoedres, Trombicula, Lynxacarus, Demodex gatoi, Demodex cati, Felicola subrostrata.

Dermatophytosis: Systemics

Itraconazole—5-10 mg/kg q24h with food for 4–6 weeks; Terbinafine—30 mg/kg q24h for 4–6 weeks.

Lufenuron—60–100 mg/kg q30d x 2 treatments.

Dermatophytosis: Topicals
Lime sulfur—twice weekly for 4–6 weeks.

Enilconazole topical solution (10%)—twice weekly for 4–6 weeks.

Miconazole shampoo and leave on rinse 2% (ResiZole)—twice weekly for 4–6 weeks.

*Pemphigus foliaceus and Pemphigus erythematosus*

Prednisolone (*not* prednisone)—Induction dosage—2 mg/kg q12h; Maintenance dosage—gradually decrease the dosage every 2 weeks to prevent a relapse.

Chlorambucil—Induction dosage—0.1 mg/kg q48h; Maintenance dosage—0.05 mg/kg q48h.

*Drug Eruption*

Discontinue suspected drug and avoid chemically related or similar drugs. Best advice: “Do no harm!”

*Hypereosinophilic Syndrome*

Prednisolone (*not* Prednisone)—induction dosage—2 mg/kg q12h; maintenance dosage—gradually decrease the dosage every 2 weeks to prevent a relapse; alpha interferon—30–60 IU orally q24h. Overall a very poor prognosis.

*Cutaneous Mastocytosis*

Spontaneous remission may occur.

Prednisolone (*not* prednisone)—Induction dosage—2 mg/kg q12h; Maintenance dosage—gradually decrease the dosage every 2 weeks.

Chlorambucil—induction dosage—0.1 mg/kg q48h; maintenance dosage—0.05 mg/kg q48h.

*Epitheliotropic Cutaneous Lymphoma (Mycosis Fungoides)*

Prednisolone and Chlorambucil—as above.

Lomustine—60 mg/m² q21d.

*Feline Herpes Virus*

Pure lysine granules (78.8% lysine)—¼ teaspoon (~570 mg) q12h, or L-lysine tablets (without propylene glycol)—250–500 mg/cat for life or, L-lysine gel or powder (VIRALYS™)—250 mg/cat q12h for life. Imiquimod 5% cream—3 times weekly; alpha interferon—30–1,000 IU orally q24h.