D - Dermatology
NEWLY DESCRIBED FELINE SKIN DISEASES

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A. Introduction

1. Skin disease in general is less common in cats than in dogs or humans.
2. Diagnosis of feline skin diseases may be more challenging since feline skin seems to have a limited number of ways to react. Both clinically and histologically, there seem to be less classical reaction patterns than in other species.
3. Many practitioners seem to fear feline dermatology as 'so many feline skin diseases look the same'. In the past, the development of feline dermatology was hampered by the rapid response of many feline skin diseases to corticosteroids or progestational compounds and the seeming safety of these medications in cats.
4. Increased frequency of skin biopsy has allowed the diagnosis of an increasing number of feline skin diseases.

B. Miscellaneous Newly described feline skin diseases

1. Feline degenerative mucinotic mural folliculitis
2. Feline paraneoplastic alopecia
3. Feline thymoma-associated exfoliative dermatitis
4. Proliferative necrotizing otitis of kittens
5. Erythema ab igne
6. Feline superficial demodicosis

C. Feline Degenerative Mucinotic Mural Folliculitis

1. A rare, unique, presumptively immunological skin disease of cats characterized by striking clinical features.
2. Clinical features - diffuse, generalized alopecia of variable severity, facial skin (especially the muzzle) becomes alopecic, thickened, and swollen, bilaterally symmetric, highly characteristic thickening of the lid margins and narrowing of the space between the eyelids. The affected skin of the muzzle becomes shiny and waxy, and has a rubbery feel. Scaling and crusting may be present. Alopecia commonly begins on the muzzle and neck, and after generalization, becomes most pronounced on the head, neck, and shoulders.
3. Pruritus is a feature in some cats.
4. Systemic signs - Lethargy, weight loss, general health screening tests do not show consistent abnormalities.
5. Histopathology – Degenerative inflammatory mucinotic mural folliculitis.
6. Therapy – The management of this disease has not been successful. Corticosteroid therapy may be slightly helpful in improving mood and diminishing lethargy

D. Feline Paraneoplastic Alopecia

1. A rare and highly characteristic skin disease that is a marker for underlying visceral neoplasia, usually pancreatic adenocarcinoma. This syndrome conforms to criteria established for a 'paraneoplastic syndrome'.
2. Clinical features - Precipitous hair loss is the prime presenting clinical feature. Alopecia usually commences on the ventral abdomen, thorax, and legs before generalization. The pinnae and periorbital regions also may be affected preferentially. Excessive grooming contributes to the alopecia. Remaining hair epilates easily. Regions of alopecia have a peculiar and highly distinctive smooth, shiny, and glistening appearance, even in areas that have not been groomed. There may be adherent crusts or scale in cats that have not groomed. The pawpads are dry, scaly, and shiny with multiple, concentric, circular rings of scale that give a striking targetoid appearance. Pawpad pain may be seen. Secondary *Malassezia* dermatitis may occur.
3. Cats commonly excessively self-groom inferring pruritus.
4. Systemic signs - Signs of underlying visceral neoplasia include lethargy, inappetence, and weight loss. Constitutional signs may develop in concert with skin disease or may precede it.

Lesions generally evolve rapidly over 1 to 3 months. Metastasis of the tumor to the liver or lungs generally has occurred by the time of diagnosis of skin disease. Most cats die or are euthanized within a month of diagnosis.
5. Feline paraneoplastic alopecia occurs in older cats.
6. Histopathology - Moderate to severe acanthosis, stratum corneum absent (but when present usually parakeratotic), cornified layer lifts from the underlying epidermis, hair follicles are diffusely miniaturized in telogen, dermal inflammation commonly absent unless ulceration is present.
7. Therapy – As mentioned above, metastasis usually precedes diagnosis of the skin disease.

E. Feline Thymoma-Associated Exfoliative Dermatitis

1. This is a rare feline paraneoplastic syndrome. Exfoliative skin disease usually precedes systemic signs associated with the underlying tumor. Many paraneoplastic syndromes of putative immunological basis are seen in conjunction with thymomas in humans. The paraneoplastic nature of feline thymoma-associated exfoliative dermatitis has been proven by the regression of clinical signs after surgical removal of the neoplasm. In humans, thymomas have been shown to generate new aberrant populations of autoantigen-responsive, CD4+ T cells. This disease probably is a reaction pattern indicative of T cell-driven immunity.
2. Clinical features - Erythema and exfoliation develop with increasing severity. Secondary alopecia is noted. The head, neck, and pinnae commonly are affected first, before the syndrome generalizes. Large visually striking sheets of exfoliated stratum corneum develop, and become entrapped in the remaining haircoat.
3. Pruritus usually is absent, unless secondary yeast or bacterial infection is present.
4. Systemic signs - Coughing and dyspnea may occur, less diagnostic systemic signs of anorexia and lethargy may be present in advanced cases.
5. Feline thymoma-associated exfoliative dermatitis primarily affects middle-aged to older cats.
6. Histopathology - Epidermal and follicular apoptosis and hyperkeratosis, interface dermatitis is invariably present, and extends to superficial hair follicles to the level of the isthmus, striking follicular interface inflammation with scattered basal cell apoptosis, lymphocytes and macrophages predominate,
7. Diagnosis is centered on identification of a thymic mass.
8. Therapy – Skin disease regresses in early cases after surgical removal of the thymic mass.

F. Proliferative Necrotizing Otitis of Kittens

1. Proliferative necrotizing otitis of kittens is a rare, highly characteristic syndrome of uncertain etiology. The syndrome is seen only in cats less than one year of age. An immunologic basis is suspected based on similarities to hyperkeratotic erythema multiforme. No evidence currently exists to link this syndrome to infectious viral diseases. PCR testing for feline herpesvirus 1 was negative in five cats.
2. Clinical features – The primary lesion is a well-demarcated erythematous plaques with adherent, thick keratinous debris. Lesions occur on the medial aspect of the pinnae, the entrance to the auditory canal, and the preauricular region of the face. Lesions eventuate rapidly and coalesce. Adherent crusts often are trapped in the hair coat. Erosion and ulceration occur as the lesions progress. Most lesions are asymptomatic. The syndrome is seen in kittens between 2 months and 6 months of age and regress, apparently spontaneously, by 12 to 24 months. Most cases have occurred in Domestic Shorthaired Cats.
3. Diagnosis – The syndrome is visually distinctive. Skin biopsy is confirmative.
4. Histopathology – Striking parakeratosis intermingled with neutrophilic crusts is present on the surface. Scattered apoptotic keratinocytes are present within the hyperplastic epidermis and superficial follicular epithelium.
5. Therapy – The syndrome seems to regress spontaneously by 1 or 2 years of age.

G. Erythema Ab Igne (Synonyms: Chronic moderate heat dermatitis; chronic radiant heat dermatitis)

1. 'Erythema ab igne' is a term borrowed from human medicine used to describe skin disease caused by repetitive, prolonged exposure to chronic radiant or conductive heat. Clinically, this syndrome is characterized by erythema and mottled pigmentary changes. In humans, the most commonly reported heat sources include stoves, heating pads, steam radiators, and hot water bottles. Predisposing factors include venous stasis and aging. Pre-cancerous thermal keratoses and thermal carcinomas have been reported in humans. Reported heat sources in animals include heating pads, heated kennel mats, electric blankets, plant warmers, metal heat register covers, infrared lamps, sun-heated driveways, and cable television boxes.
2. Clinical features - Alopecia is the most common clinical sign. Erythematous scaly or crusted macules and plaques give rise to mottled hyperpigmentation. Linear and intersecting lattice-like hyperpigmentation with alopecia is a highly characteristic feature. Lesions are seen

most commonly on the ventral or lateral chest, abdomen, and flank and neck.
3. Diagnosis – Lesions are not particularly visually distinctive. Clinical suspicion and exposure history are helpful. Biopsy may be confirmatory.
4. Histopathology – A cell poor interface reaction that features mild apoptosis of basal cells is seen. Deeply staining basal cell nuclei (karyomegaly) may be seen. Eosinophilic, wavy elastic fibrils may be seen in the superficial dermis ('Red spaghetti of Walder').
5. Therapy – Access to the source of chronic radiant heat must be eliminated.

H. Feline Superficial Demodicosis

1. Feline demodicosis in general is a rare or regional skin disease caused by at least three different species of demodectic mites. Feline superficial demodicosis is a contagious, transmissible frequently pruritic generalized skin disease caused by the surface dwelling mite, *Demodex gatoi*. In comparison, feline follicular demodicosis caused by the feline follicular mite, *Demodex cati* resembles *Demodex canis* infection in dogs.
2. Feline superficial demodicosis does not have a canine counterpart. It is believed to be rare in most of North America, but is found more commonly in localized enzootic regions of the southern and southeastern U.S.A. The disease may be increasing in frequency where modern insect-specific parasiticides that do not kill acarids are used for flea control.
3. Clinical features - Clinical features vary from asymptomatic alopecia to alopecia with variable pruritus and self-trauma. If pruritus is absent, cats can present with diffuse, bilaterally symmetric alopecia, plus or minus scaling, affecting the ventral and lateral trunk and caudal legs. Pruritus, if present, usually is intense leading to erythema, crusting and excoriation. Skin scrapings may not yield mites or eggs in pruritic cats since excessive grooming can remove surface-living mites. Skin scrapings of non-pruritic cats may yield large numbers of mites.
4. Diagnosis – Superficial skin scrapings, fecal examination and skin biopsy all can yield definitive diagnosis.
5. There is good evidence-based information to recommend lime sulfur rinses (LymDyp) (2%) weekly for the treatment of feline demodicosis. There is fair evidence to support the use of amitraz rinses (0.0125%) weekly.

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