

Cutaneous Manifestations of Internal Disease



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Cutaneous Manifestations of Internal Disease

- Presented for skin disease only
 - Silent or absent systemic signs
- “Normal” physical examination
- Respond poorly to empirical treatments

Severe Staphylococcal Infections

- Rare
- Disproportionate clinical response
- Due to
 - Virulent organism
 - Immune deficiency
 - Underlying endocrine/metabolic disease

Papillomavirus Infections

- Resurgence in the United States
- Multiple different stains with differing presentation
 - Dog: 17
 - Cat: 3
- Variable clinical presentations
 - Classical
 - Fibropapilloma
 - Inverted papilloma
 - Digital “warts”
 - Oral/nasal squamous cell carcinoma
 - Pigmented plaques
 - Sarcoids

Canine Papilloma Stains

CPV-1: “classic”, inverted, “immuno-suppression”, squamous cell carcinoma
 CPV-2: inverted, digits, pads, “immuno-suppressive”, squamous cell carcinoma
 CPV-3: plaques, squamous cell carcinoma
 CPV-4: plaques
 CPV-5: plaques
 CPV-6: inverted
 CPV-7: exophytic, squamous cell carcinoma *in situ*
 CPV-8: plaques
 Many “novels” and “unclassified”

Feline Papilloma Stains

FPV-1: exophytic, plaques
 FPV-2: plaques, squamous cell carcinoma
 FPV-3: plaques, squamous cell carcinoma
 HPV-9: exophytic
 HPV-38, HPV-80: squamous cell carcinoma
 Many “novels” and “close to’s” (dog, human)

Feline Immunodeficiency Virus

- Immunosuppressive disorder
- Specific skin manifestation
 - Otic demodicosis
 - FIV Miliary dermatitis

Feline Rhinotracheitis

- Common upper respiratory infection
- Mild oral & cutaneous disease common
- Severe ulcerative & necrotizing possible

Generalized Dermatophytosis

- Rare
- Result of
 - Decreased epidermal turnover time
 - Abnormal immune system
- Systemic treatments required

Yeast Dermatitis

- Malassezia dermatitis
- Candidiasis

Candidiasis

- Disease of ecological alteration or immunosuppression
- Invades epithelium

Intermediate Fungal Infections

- Environmental saprophytic fungus overwhelms local immune system
- Extensive or multifocal involvement with immunoincompetence

Adult-onset Demodicosis

- Uncommon to rare
- “True” onset of signs in an adult (>4 years old) animal
- Poor response to treatment if underlying condition goes untreated.

Adult-onset Demodicosis – Treatment

- Incurable without resolution of underlying trigger event.
- Oral ivermectin – 0.3-0.6 mg/kg q24-48 hours
Monitor carefully for CNS disease!!
- Topical Advantage *multi* – q7, 14, 21, or 28 days
- Bravecto, NexGard, Simparica

Feline *D.gatoi* Demodicosis

- Surface parasite
- Contagious mite
- Variable symptomatology

Feline Demodicosis - Treatment

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

Acromegaly

- Growth hormone excess
- Produced by
 - Pituitary
 - Mammary tissue via progestational stimulation
 - Ovarian cysts/tumors
 - Pharmaceuticals
- Overgrowth of hair and dermal tissues
- Predisposed to diabetes mellitus

Testicular Neoplasia

- Most tumors are non-secretory and benign
- Estrogens produced by
 - Sertoli cell tumors
 - Seminomas
- Testosterone produced by interstitial cell tumors

Canine Hyperadrenocorticism - Adrenal Hyperplasia

- Constitutional signs precede hair loss
- Glucocorticoids predominate
- Cutaneous signs predictable

Canine Hyperadrenocorticism - Adrenal Neoplasia

- Constitutional signs develop close to hair loss
- Glucocorticoids +/- sex hormones
- Cutaneous signs variable

Feline Hyperfragility Syndrome

- Life threatening disorder
- Many causes
 - Cushing's syndrome
 - Progestational treatments
 - Liver or pancreatic disorders

Necrolytic Migratory Erythema

- Rare disorder
- Hepatopathy-induced (cirrhosis): 90%
 - Drug-induced
 - Aflatoxin-induced
 - Idiopathic
- Glucagonoma-induced: 10%
- Skin lesions due to hypoproteinemic delayed wound repair
- Silent clinical signs
- Poor prognosis

Necrolytic Migratory Erythema

- Diagnostic histopathology
- Characteristic clinicopathology
 - Anemia
 - Marked hypoalbuminemia
 - Decreased BUN, cholesterol
 - Variable liver enzyme elevations
 - Elevated bile acids
 - Hepatopathy: Yes
 - Glucagonoma: No

Necrolytic Migratory Erythema - Treatment

- Anti-infectives
- Resolve liver disease or remove tumor
- Nutritional supplements
 - Zinc, essential fatty acids, protein
 - Hyperalimentation
- Somatostatin

Lethal Acrodermatitis

- Intestinal absorptive defect: Zn and Cu
- Bull terriers predominately
- Autosomal recessive trait
 - Breakthrough in carriers?
- Skin lesions plus susceptibility to infections
- Lethal condition

Nonlethal Acrodermatitis

- Partial intestinal absorption blockade?
- Bull terriers
- Increased susceptibility to skin infections and digital hyperkeratosis

Xanthomatosis

- Uncommon lesion
- Pressure point localization initially
- Underlying lipid abnormality

Feline Bronchogenic Carcinoma

- Old cats
- Present initially for an antibiotic-responsive paronychia
- Initial response short-lived

Feline Exfoliative Dermatoses

- FeLV dermatosis
- Thymoma: ± thymoma
- Sebaceous adenitis
- Drug reaction
- Cutaneous lymphoma

Feline Leukemia Virus

- Immunosuppressive disease
- Specific skin manifestations
 - Cutaneous horns
 - Exfoliative dermatitis

Feline Thymoma

- Middle-age to old cats
- No systemic signs initially
- Variable pruritus
- Variable hair loss

Paraneoplastic Alopecia

- Old cats
- Systemic signs precede hair loss
- Hair loss in frictional areas first
- Exposed skins often glistens
- *Malassezia* dermatitis common

Collagenous Nevi

- Singular or multiple
- Development of multiple lesions in adulthood associated with:
 - Renal cyst or tumors
 - Uterine leiomyomas
 - Intestinal polyps

Cutaneous Flushing

- Persistent or paroxysmal vasodilatation
- Unknown frequency in animals

Persistent Cutaneous Flushing

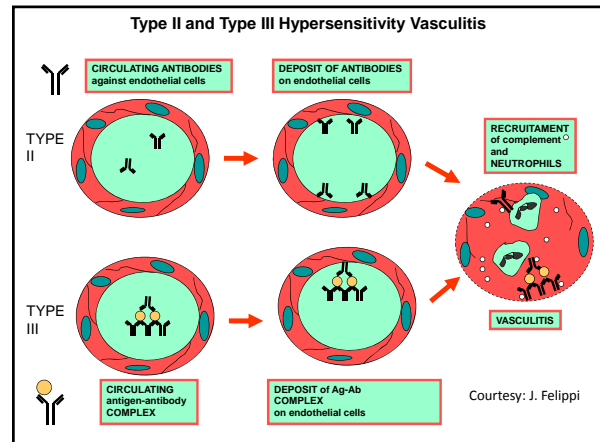
- Drug reaction
- Mast cell disease
 - Mastocytosis
 - Mast cell tumor

Feline Seborrhea

- Cutaneous reaction pattern
- Multiple external and internal causalities

Vasculitis

Demonstrated by diascopy
 Pressure point predisposition
 Severity varies with vessel size
 Slow healing with deep vessel involvement
 Scarring expected



Treatment

- Diagnose and resolve trigger event
- Caution with topicals
- Systemic agents
 - Glucocorticoids
 - Tetracycline group/Niacinamide
 - Pentoxifylline: 25 mg/kg q12h