

Erosions or Ulcers of the Skin

(Erosive or Ulcerative Dermatoses)

Basics

OVERVIEW

- Erosions are shallow defects in the skin, which only affect the skin's upper layers; erosions can be quite painful, but tend to heal quickly if protected (and the underlying cause is eliminated)
- Ulcers are deeper defects in the skin, where the surface layers are compromised completely; ulcers require careful wound care to prevent infection, and tend to heal slowly
- Erosive or ulcerative dermatoses are a group of dissimilar skin disorders, characterized by the presence of erosions or ulcers

GENETICS

- Some diseases characterized by erosions or ulcers of the skin are likely inherited since they tend to occur in certain breeds; however, no genetic screening tests are available (such as lupoid disorders, familial dermatomyositis, zinc-responsive dermatoses)

SIGNALMENT/DESCRIPTION OF PET

Species

- Dogs
- Cats

SIGNS/OBSERVED CHANGES IN THE PET

- Depend on cause; may have known skin yeast infections, parasites, chemical contact, cold stress, venomous insects or snakes, burns or underlying disease (for example, necrolytic dermatitis, hypereosinophilic syndrome of cats)
- Erosions or ulcers; they may be found anywhere on the body; may be triggered by self-trauma associated with itchiness (known as “pruritus”)
- Hair loss (known as “alopecia”)
- Single or multiple lesions; lesions may be inflamed (indicated by redness)
- May see lesions over pressure points (such as skin over bones)
- May have dried discharge on the surface of a skin lesion (known as a “crust”) or scales (dandruff), or may have moist discharge



- If deep, may see draining tracts
- Some specific diseases may also produce fever and general poor-doing (known as “malaise”)
- May have loss of pigment of skin and/or hair (known as “depigmentation”)

CAUSES

- Wide variety of diseases may result in erosions or ulcers of the skin; common causes are burns, trauma, and skin infections; more complicated diseases, such as drug reactions, certain types of cancers, auto-immune diseases of the skin, and viruses also may cause erosions or ulcers that appear identical to burns or trauma—your pet's veterinarian may need to run a battery of tests (including bloodwork, cultures for different types of infections, and skin biopsies) to identify the cause and prescribe proper treatment
- In some cases, an underlying cause cannot be identified and the cause is “unknown,” so-called “idiopathic” disorder or disease
- Disorders that cause erosions or ulcers of the skin include the following (a partial list):
 - ◆ *Immune-Mediated Disorders*
 - Inflammation of blood vessels (known as “vasculitis”)*
 - Canine juvenile cellulitis (puppy strangles)*
 - Toxic epidermal necrolysis (usually medication-induced); erythema multiforme*
 - Feline indolent ulcer (rodent ulcer);*
 - Idiopathic panniculitis*
 - Eosinophilic furunculosis of the face*
 - ◆ *Autoimmune Disorder*
 - Cold agglutination disease*
 - Pemphigus foliaceus, pemphigus vulgaris, bullous pemphigoid, epidermolysis bullosa acquisita, discoid lupus erythematosus, exfoliative lupus, vesicular lupus) in which the immune system attacks the skin*
 - ◆ *Infectious Disorders*
 - Skin infection characterized by the presence of pus (known as “pyoderma”) caused by Staphylococcus; may be superficial (known as “hot spots”), folliculitis, deep bacterial ulcerative or furunculosis*
 - Deep fungal or mycotic infections (such as sporotrichosis, cryptococcosis, histoplasmosis, blastomycosis, coccidioidomycosis)*
 - Superficial fungal infections (Malassezia dermatitis, dermatophytosis)*
 - Actinomycetic bacteria (such as Nocardia, Actinomyces, Streptomyces)*
 - Pythiosis/laeagenidiosis, Protothecosis*
 - Leishmaniasis*
 - Feline cow pox*
 - Feline immunodeficiency virus (FIV) and feline leukemia virus (FeLV)-related disease*
 - Feline herpesvirus-related*
 - ◆ *Parasitic Disorders*
 - Demodectic mange (demodicosis)*
 - Sarcoptic or notoedric mange;*
 - Pelodera and hookworm migration*
 - Flea-bite allergy*
 - Feline mosquito bite hypersensitivity*
 - ◆ *Congenital/Hereditary Disorders*
 - Various skin disorders in which the skin is abnormal at birth (that is, a “congenital” abnormality) that may or may not be inherited such as canine familial dermatomyositis, epidermolysis bullosa, cutaneous asthenia, aplasia cutis, deep ulcerative*
 - ◆ *Metabolic Disorders*
 - Liver or pancreatic tumor disease; producing superficial necrolytic dermatitis*
 - Excessive production of steroids by the adrenal glands (known as “hyperadrenocorticism” or “Cushing's syndrome”), especially when complicated by secondary infections or calcium deposits in the skin (known as “calcinosis cutis”)*
 - Uremia ulcers*
 - ◆ *Cancer*

Squamous cell carcinoma

Mast cell tumors

Lymphoma of the skin (“mycosis fungoides”) or epitheliotropic lymphoma

◆ *Nutritional Disorder*

Zinc-responsive dermatosis

Generic dog-food dermatosis

◆ *Physical/Conformational*

Pressure point pyoderma; skin fold pyoderma; self-trauma due to itchiness

◆ *Idiopathic Disorder*

Feline dorsal neck ulcers; acne; feline plasma cell pododermatitis

◆ *Miscellaneous*

Thermal, electrical, solar, or chemical burns

Frost bite

Chemical irritants

Venomous snake and insect bites

RISK FACTORS

- Depend on underlying cause

Treatment

HEALTH CARE

- Outpatient for most diseases
- Varies widely according to the cause
- Keeping eroded or ulcerated skin clean and protected are key to healing; if the cause is known, specific drug therapies may be prescribed
- Pain management may be necessary for some pets, based on cause of condition
- Your veterinarian will tailor a management program that is best for your pet's individual case
- Hydrotherapy, which may be achieved with either a whirlpool bath or by spraying cool water under pressure against the ulcerated skin can be helpful in many cases; ask your pet's veterinarian first to be sure that hydrotherapy is appropriate for your pet's condition
- Avoid the temptation to apply “over-the-counter” creams and ointments to erosions and ulcers, without first checking with your veterinarian—some commonly used products actually may delay healing in some cases; other products may contain types of alcohol or other ingredients that could cause pain upon application

DIET

- Supportive therapy with fluid and nutritional supplementation is indicated in cases with severe fluid and protein loss through the damaged skin
- Good quality diet
- Correction of dietary deficiencies is the only treatment for generic dog-food dermatosis
- Supplementation of zinc in the diet for pets with zinc-responsive skin conditions

SURGERY

- Skin biopsy may be necessary for diagnosis
- For pancreas or liver tumors causing loss of hair as a secondary effect, removal of the primary tumor may be curative
- Surgical removal of long-term draining tracts or nodules for certain infections such as feline thymoma-associated exfoliative dermatitis, for pythiosis, laeagenidiosis, *Mycobacterial* or *Nocardial* lesions

Medications

Vary widely according to cause

Follow-Up Care

PATIENT MONITORING

- Case-by-case basis, depending on the disease process, presence of generalized (systemic) disease(s), medications used, and potential side effects expected
- Follow-up care is important, especially for slowly healing ulcers; a veterinarian will check progress of the wound at least every other week to be sure that healing is proceeding properly and that infection has not complicated the healing process

POSSIBLE COMPLICATIONS

- Depend on cause
- Some diseases are potentially life-threatening
- Some diseases are caused by agents that may be spread to people (known as having “zoonotic potential”)
- Superinfections and drug side effects are possible in cases requiring medications to decrease the body's immune response (known as “immunosuppression”)

EXPECTED COURSE AND PROGNOSIS

- Vary widely according to cause
- Some infectious diseases (such as nocardiosis, atypical mycobacteriosis) may be controlled, but not cured if lesions are extensive at time of diagnosis; pythiosis and laeagenidiosis have extremely poor prognosis for response to therapy and survival when lesions extensive

Key Points

- Wide variety of diseases may result in erosions or ulcers of the skin; common causes are burns, trauma, and skin infections; more complicated diseases, such as drug reactions, certain types of cancers, auto-immune diseases of the skin, and viruses also may cause erosions or ulcers that appear identical to burns or trauma—your pet's veterinarian may need to run a battery of tests (including bloodwork, cultures for different types of infections, and skin biopsies) to identify the cause and prescribe proper treatment
- Follow-up care is important, especially for slowly healing ulcers; a veterinarian should check progress of the wound at least every other week to be sure that healing is proceeding properly and that infection has not complicated the healing process
- Some of the causes of skin erosions and ulcers are caused by agents able to cause disease in people (known as “zoonotic”) such as sarcoptic mange, ringworm, some fungal agents, so definitive diagnosis is very important to safe management of the case