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

SIGNALMENT/DESCRIPTION OF PET

Species
- Dogs
- Cats

SIGNS/OBSERVED CHANGES IN THE PET
- Depend on cause
- Erosions or ulcers; they may be found anywhere on the body
- 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 dry discharge on the surface of a skin lesion (known as a “crust”) or may have moist discharge
- 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)
    - Feline indolent ulcer (rodent ulcer)
    - Auto-immune disorders (such as pemphigus or 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*
    - Deep fungal or mycotic infections (such as sporotrichosis, cryptococcosis, histoplasmosis)
    - Superficial fungal infections (*Malassezia* dermatitis, dermatophytosis)
    - Actinomycetic bacteria (such as *Nocardia*, *Actinomyces*, *Streptomyces*)
    - Feline cow pox
    - Feline immunodeficiency virus (FIV) and feline leukemia virus (FeLV) related disease
  - **Parasitic Disorders**
    - Demodectic mange (demodicosis)
    - Sarcoptic or notoedric mange
    - Flea-bite allergy
  - **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
  - **Metabolic Disorders**
    - Liver disease
    - 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”)
  - **Cancer**
    - Squamous cell carcinoma
    - Mast cell tumors
    - Lymphoma of the skin (“mycosis fungoides”)
  - **Nutritional Disorder**
    - Zinc-responsive dermatosis
    - Generic dog-food dermatosis
  - **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 (such as those containing neomycin) 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.
- Supplementation of zinc in the diet for pets with zinc-responsive skin conditions.

**SURGERY**

- Skin biopsy may be necessary for diagnosis.

**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 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.

**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”).
- Some infectious diseases (such as nocardiosis, atypical mycobacteriosis) may be controlled, but not cured.

**EXPECTED COURSE AND PROGNOSIS**

- Vary widely according to cause.

**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.