

# DEPIGMENTING DERMATOSES

## (SKIN DISORDERS CHARACTERIZED BY LOSS OF PIGMENT)

### BASICS

#### OVERVIEW

- Disease or cosmetic condition involving loss of pigmentation of the skin and/or hair coat
- Normal pigment in the skin and hair coat is melanin

#### SIGNALMENT/DESCRIPTION of ANIMAL

##### *Species*

- Dogs and cats

##### *Breed Predilections*

- Mucocutaneous pyoderma (bacterial skin infection involving areas of the lips, eyelids, nostrils)—German shepherd dogs
- Systemic lupus erythematosus (autoimmune disease in which the body attacks its own skin and other organs) and discoid lupus erythematosus (autoimmune disease involving the skin only, usually the face)—collies, Shetland sheepdogs, German shepherd dogs
- Pemphigus foliaceus (autoimmune disease involving the skin, characterized by inflammation with crusting and lesions containing pus)—chow chows, Akitas
- Uveodermatologic syndrome (a rare syndrome in which the animal has inflammation in the front part of the eye, including the iris [condition known as “anterior uveitis”] and coexistent inflammation of the skin [known as “dermatitis”], characterized by loss of pigment in the skin of the nose and lips)—Akitas, Samoyeds, Siberian huskies
- Vitiligo (condition characterized by symmetrical lack of pigment in the skin and white hair coat, especially involving the face and nose)—Doberman pinschers and rottweilers; Siamese cats
- Seasonal nasal hypopigmentation (loss of pigment in the tough, hairless skin of the nose [known as the “nasal planum”] that occurs seasonally)—Siberian huskies, Alaskan malamutes, Labrador retrievers
- Proliferative arteritis of the nasal philtrum (inflammation of the arteries of the nasal philtrum, the juncture between the sides of the upper lip extending to the nose)—St. Bernards, giant schnauzers

##### *Mean Age and Range*

- Vitiligo (condition characterized by symmetrical lack of pigment in the skin and white hair coat, especially involving the face and nose)—Doberman pinschers and rottweilers, typically less than 3 years of age
- Cutaneous T-cell lymphoma (also known as “mycosis fungoides”)—typically dogs over 10 years of age

##### *Predominant Sex*

- Discoid lupus erythematosus (autoimmune disease involving the skin only, usually the face)—may occur more often in females than in males
- Vitiligo in Siamese cats—females

#### SIGNS/OBSERVED CHANGES in the ANIMAL

- White hair (known as “leukotrichia”)
- Partial or total lack of pigment in the skin (known as “leukoderma”)
- Reddening of the skin (known as “erythema”)
- Loss of the top surface of the skin (known as an “erosion” or “ulceration,” based on depth of tissue loss)

#### CAUSES

- Mucocutaneous pyoderma (bacterial skin infection involving areas of the lips, eyelids, nostrils)
- Systemic lupus erythematosus (autoimmune disease in which the body attacks its own skin and other organs)
- Discoid lupus erythematosus (autoimmune disease involving the skin only, usually the face)
- Pemphigus foliaceus (autoimmune disease involving the skin, characterized by inflammation with crusting and lesions containing pus)
- Pemphigus erythematosus (autoimmune disease involving the skin of the face and ears, characterized by reddening of the skin [erythema] and lesions containing pus)
- Uveodermatologic syndrome (a rare syndrome in which the animal has inflammation in the front part of the eye, including the iris [anterior uveitis] and coexistent inflammation of the skin [dermatitis], characterized by loss of pigment in the skin of the nose and lips)
- Contact hypersensitivity (increased sensitivity or reaction in the skin to the presence of a foreign agent that comes in contact with the skin)
- Vitiligo (condition characterized by symmetrical lack of pigment in the skin and white hair coat, especially involving the face and nose)
- Seasonal nasal depigmentation (loss of pigment in the tough, hairless skin of the nose [known as the “nasal planum”] that occurs seasonally)

- Albinism (inherited disorders characterized by lack of pigment in the skin, hair, and/or eyes, due to abnormal production of melanin)
- Hormonal disorders
- Drug reaction
- Proliferative arteritis of the nasal philtrum (inflammation of the arteries of the nasal philtrum, the juncture between the sides of the upper lip extending to the nose)
- Loss of pigment in the skin and/or hair following skin inflammation
- Dermatophytosis (fungal infection on the surface of the skin)

#### **RISK FACTORS**

- Sun exposure—systemic lupus erythematosus (autoimmune disease in which the body attacks its own skin and other organs), discoid lupus erythematosus (autoimmune disease involving the skin only, usually the face), and pemphigus erythematosus (autoimmune disease involving the skin of the face and ears, characterized by reddening of the skin [erythema] and lesions containing pus)

### **TREATMENT**

#### **HEALTH CARE**

- Outpatient, except for systemic lupus erythematosus (autoimmune disease in which the body attacks its own skin and other organs) when severe multiple organ dysfunction is present
- Reduce exposure to sunlight—systemic lupus erythematosus (autoimmune disease in which the body attacks its own skin and other organs), discoid lupus erythematosus (autoimmune disease involving the skin only, usually the face) and pemphigus erythematosus (autoimmune disease involving the skin of the face and ears, characterized by reddening of the skin [erythema] and lesions containing pus)
- Replace plastic or rubber dishes—particularly if roughened edges cause abrasions
- Application of water-resistant sun-block ointments or gels (with a SPF greater than 30) to depigmented areas
- Vitiligo and nasal depigmentation—no treatment

#### **ACTIVITY**

- Restrict outdoor activity to minimize exposure to sunlight—systemic lupus erythematosus (autoimmune disease in which the body attacks its own skin and other organs), discoid lupus erythematosus (autoimmune disease involving the skin only, usually the face) and pemphigus erythematosus (autoimmune disease involving the skin of the face and ears, characterized by reddening of the skin [erythema] and lesions containing pus)

#### **SURGERY**

- Skin biopsy

### **MEDICATIONS**

Medications presented in this section are intended to provide general information about possible treatment. The treatment for a particular condition may evolve as medical advances are made; therefore, the medications should not be considered as all inclusive.

- Vary based on underlying cause
- Systemic lupus erythematosus (autoimmune disease in which the body attacks its own skin and other organs)—immunosuppressive therapy with steroids (such as prednisolone or dexamethasone) and chemotherapy drugs (such as azathioprine [dogs] or chlorambucil [cats])
- Medications to decrease the immune response (known as “immunosuppressive therapy”)—to treat systemic lupus erythematosus (autoimmune disease in which the body attacks its own skin and other organs), pemphigus foliaceus (autoimmune disease involving the skin, characterized by inflammation with crusting and lesions containing pus), pemphigus erythematosus (autoimmune disease involving the skin of the face and ears, characterized by reddening of the skin [erythema] and lesions containing pus)
- Cyclosporine to decrease the immune response in autoimmune disorders
- Steroids applied to the skin directly (known as “topical steroids”)
- Tacrolimus, 0.1% gel applied daily to lesions in combination with or to replace steroids
- Combination of tetracycline and niacinamide administered by mouth
- Antibiotics for bacterial skin infection (known as “pyoderma”)
- Medications to treat fungal infections (known as “antifungal drugs”) to treat dermatophytosis (fungal infection on the surface of the skin)

### **FOLLOW-UP CARE**

#### **PATIENT MONITORING**

- Varies with specific disease and treatment prescribed

**PREVENTIONS AND AVOIDANCE**

- Restrict outdoor activity to minimize exposure to sunlight—systemic lupus erythematosus (autoimmune disease in which the body attacks its own skin and other organs), discoid lupus erythematosus (autoimmune disease involving the skin only, usually the face) and pemphigus erythematosus (autoimmune disease involving the skin of the face and ears, characterized by reddening of the skin [erythema] and lesions containing pus)

**POSSIBLE COMPLICATIONS**

- Systemic lupus erythematosus (autoimmune disease in which the body attacks its own skin and other organs)—scarring

**EXPECTED COURSE AND PROGNOSIS**

- Vary with specific disease

