Superficial Pyoderma (superficial bacterial folliculitis)

Features

Superficial pyoderma is a superficial bacterial infection involving hair follicles and the adjacent epidermis. The infection usually occurs secondary to an underlying cause; allergies and endocrine disease are the most common causes (Box 3-3). Superficial pyoderma is common in dogs and rare in cats.

Superficial pyoderma is characterized by focal, multifocal, or generalized areas of papules, pustules, crusts, and scales, epidermal collarettes, or circumscribed areas of erythema and alopecia that may have hyperpigmented centers. Short-coated dogs often present with a "moth-eaten" patchy alopecia, small tufts of hair that stand up, or reddish brown discoloration of white hairs. In long-coated dogs, symptoms can be insidious and may include a dull, lusterless hair coat, scales, and excessive shedding. In both short- and long-coated breeds, primary skin lesions are often obscured by remaining hairs but can be readily appreciated if an affected area is clipped. Pruritus is variable, ranging from none to intense levels. Bacterial infections secondary to endocrine disease may cause pruritus, thereby mimicking allergic skin disease.

Staphylococcus intermedius is the most common bacterium isolated from canine pyoderma and is usually limited to dogs. *Staphylococcus schleiferi* is a relatively new bacterial species in dogs and humans that is emerging as a common canine isolate in patients with chronic infections and previous antibiotic exposure. Additionally, methicillin-resistant *Staphylococcus aureus* (human MRSA) may be becoming more common among veterinary species.

BOX 3-3

Causes of Secondary Superficial and Deep Pyoderma

- Demodicosis, scabies, *Pelodera*
- Hypersensitivity (e.g., atopy, food, flea bite)
- Endocrinopathy (e.g., hypothyroidism, hyperadrenocorticism, sex hormone imbalance, alopecia X)
- Immunosuppressive therapy (e.g., glucocorticoids, progestational compounds, cytotoxic drugs)
- Autoimmune and immune-mediated disorders
- Trauma or bite wound
- Foreign body
- Poor nutrition

Top Differentials

Differentials include demodicosis, dermatophytosis, scabies, and autoimmume skin diseases.

Diagnosis

1. Rule out other differentials
2. Cytology (pustule): neutrophils and bacterial cocci
3. Dermatohistopathology: epidermal microabscesses, nonspecific superficial dermatitis, perifolliculitis, and folliculitis. Intralesional bacteria may be difficult to find
4. Bacterial culture: *Staphylococcus* species

Treatment and Prognosis

1. The underlying cause should be identified and corrected.
2. Systemic antibiotics (minimum 3-4 weeks) should be administered and continued 1 week beyond complete clinical resolution (see Box 3-1).
3. Concurrent bathing every 2 to 7 days with an antibacterial shampoo that contains chlorhexidine, ethyl lactate, or benzoyl peroxide is helpful.
4. If lesions recur within 7 days of antibiotic discontinuation, the duration of therapy was inadequate and antibiotics should be reinstituted for a longer time period.
5. If lesions do not completely resolve during antibiotic therapy, or if they recur weeks to months later, an underlying cause should be sought (see Box 3-3).
6. No response to antibiotic therapy suggests antibiotic resistance or a nonbacterial skin disease.
7. If lesions resolve but pruritus persists, underlying ectoparasitism or an allergy is probably present.
8. The prognosis is good if the underlying cause can be identified and corrected or controlled.