Infection Series:
Canine Bacterial Skin Infections, “Pyoderma”

What is pyoderma & what does pyoderma look like?

Bacterial skin infections (pyoderma, folliculitis, furunculosis) of the skin and hair follicles are very common problems in the dog. These lesions often represent an infection or “over colonization” of the skin by Staphylococcus species. (S. pseudintermedius, S. schleiferi).

Bacterial skin infections have a certain characteristic appearance similar to how “acne” appears on the skin of our face or back. The most common appearance is a red rash. Look closely at your dog’s rash and you will see red papules (“bumps”, sometimes there is a hair in the center), pustules (“whiteheads”) and comedones (“blackheads”). A unique lesion is the epidermal collarette- this is a circular area of hair loss surrounded by a ring of scale. Because of its circular appearance the epidermal collarette is often mistaken for “ringworm” (a fungal infection which affects both animals and humans). In dog breeds with shorter hair coats (Boxer, Pit bull, Labrador and others) bacterial skin infections can appear as “moth eaten” hair loss (also often circular!).

Which bacteria cause the infection?

Staphylococcus pseudintermedius (not S. aureus) is the most common cause of these infections. But here is the important part… this bacteria normally live on (“colonize”) the skin of healthy dogs. In healthy dogs these bacteria cause no problem (much like the S. aureus that lives on us and causes no problem)! However, when the normal “balance” of the skin is upset these normal inhabitants of the skin are given the opportunity to cause disease. To prevent recurrence of skin infection you and your veterinarian must identify these underlying causes. Common causes include: allergies, parasite infestation, hormonal imbalances, keratinization disorders, immunodeficiencies, and metabolic disorders.

Superficial Pyoderma (Folliculitis)

Superficial pyoderma most commonly occurs secondary to an underlying disease as discussed above. Most cases of superficial pyoderma are associated with minimal itching but some dogs may experience moderate to severe itching. In these cases veterinary dermatologists often suspect a possible hypersensitivity (allergy) to the
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*Staphylococcus* is the most common cause.

Allergic dogs are prone to recurrent skin & ear infections.

You can significantly help your dog through regular use of topical therapy.

Make Canine Skin Solutions™ Recovery Shampoo & Spray a part of your dog’s life!

Staphylococcal bacteria itself! When itching is a feature, it can be helpful to your veterinarian if you are able to determine if antibiotic therapy is helpful at resolving both the rash AND the itching. In cases where the lesions are generalized or clinically severe, systemic (oral or injectable) antibiotic therapy is recommended. In these cases, veterinary dermatologists generally recommend appropriate antibiotic treatment for a minimum of 3 weeks in combination with topical therapy. In milder cases, topical therapy alone (antibacterial shampoos combined with sprays) may be effective as the sole therapy and is now the treatment of choice in many dogs. This is especially important with the emergence of antibiotic-resistant strains of bacteria. Ideally, steroids should be avoided during this evaluation period.

Superficial pyoderma over abdomen of a German Shepherd Dog

**RECURRENT SUPERFICIAL PYODERMA:**

This diagnosis refers to bacterial skin infections that are always coming back despite appropriate treatment. In your dog you may notice that the infections may recur within days, weeks or months after previous antibiotic therapy. Unfortunately, recurrent superficial pyoderma is a common and frustrating problem. If a specific underlying cause (such as allergies) cannot be determined (and controlled) then efforts must be made to control the bacterial population on the skin’s surface. In these cases frequent use of appropriate antibacterial shampoos and sprays are of benefit. The goal is always to minimize the reliance on oral antibiotic therapy. By decreasing the number of times antibiotics are used, we can help prevent bacterial resistance, minimize the negative side-effects of long-term antibiotic usage in our dogs and decrease cost of treatment over time (these antibiotics are often expensive medications!).
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Deep Pyoderma:

As its name implies- this refers to a deeper and more serious bacterial skin infection. Like superficial pyoderma, most of these cases involve a Staphylococcal infection of the hair follicles (folliculitis) that has become severe and led to rupture of the hair follicle (furunculosis). Think of furunculosis as an explosion of the hair follicle! This explosion leads to tremendous inflammation (the type of inflammation you see with ingrown hairs secondary to shaving or waxing but multiplied by 10!). On your dog you may also see severe redness, swelling and drainage. Unlike superficial infections- these deeper skin infections can cause your dog to feel bad or to sometimes have a fever.

Your veterinarian or veterinary dermatologist will want to perform a complete medical evaluation to eliminate the possibility of other underlying diseases as contributing factors. A skin biopsy and/or surgically obtained tissue culture of the skin are sometimes helpful in characterizing this disease.

Systemic antibiotic therapy is necessary for these dogs- often for 4-8 weeks (your veterinarian will determine the length of therapy appropriate for your dog). Topical therapy is also necessary as it helps to remove the infectious and inflammatory debris from the skin’s surface, helping to resolve the infection sooner… and more importantly make your dog feel better quicker!

PODODERMATITIS:

Pododermatitis is a form of deep pyoderma that affects the skin between the toes and underneath the feet (the area between the footpads). Because the skin is so thick in these areas it can be the area slowest to improve. As with other causes of skin infection a thorough work-up by your veterinarian is recommended to rule out other diseases that can mimic bacterial skin infections (i.e. Demodectic mange, Malassezia, etc.). Oral antibiotics are needed for an extended period similar to deep pyoderma.

An excellent source of updated information on resistant Staphylococcal infections in pets (and information on other infectious diseases) can be found at www.wormsandgermsblog.com