

Pyoderma Primer

Pyoderma is most commonly associated with *Staphylococcus intermedius* infection. Between 1992 and 2005, 66 isolates from 20 dogs with skin disease revealed *Pseudomonas aeruginosa* upon skin culture. Seven of the 20 dogs had no history of skin disease before presenting with severe deep pyoderma. The remaining 13 had a history of recurrent bacterial pyoderma and prior antibiotic therapy. In 16 dogs, areas of deep pyoderma were found. The lesions were generalized in 5 dogs and were focal and located on the dorsum in 11. In 4 dogs, the lesions were compatible with a superficial pyoderma. In the 7 dogs with acute deep pseudomonal pyoderma, the lesions were confined to the dorsum from the neck to the tail base. Clipping the hair coat was needed to see the painful lesions, which were primarily papules and hemorrhagic bullae. Histopathologic examination revealed deep perforating suppurative folliculitis and furunculosis. A *Pseudomonas* species was isolated from a tissue biopsy specimen in 14 dogs and from culture of a hemorrhagic bulla in 6 dogs. One dog was euthanized before treatment could be started, and 1 with superficial lesions on the dorsum was treated successfully with 1% silver sulfadiazine cream. The remaining 18 dogs were treated with systemic antibiotics, including enrofloxacin ($n = 8$ dogs), norfloxacin ($n = 5$ dogs), marbofloxacin ($n = 3$ dogs), and cephalexin ($n = 2$ dogs). Eight of the isolates showed in vitro resistance to fluoroquinolones; 14 of 16 dogs were treated successfully with fluoroquinolones. Nine of 18 dogs received concurrent topical therapy. Total treatment length varied from 3 to 12 weeks.

COMMENTARY: There are several important take-home points in this case series. First, conventional practice is to treat for *S intermedius* and expect that the *Pseudomonas* infection will resolve once the “primary pathogen” is gone. According to the findings in this case series, this may not be the case. When multiple pathogens are isolated, attention to all cultures and sensitivities should be given, especially if the dogs present with deep pyoderma. Second, the authors describe a unique clinical presentation of acute deep pseudomonal pyoderma. These dogs had acute deep pyoderma on the dorsum. Third, patients required long-term (3 to 12 weeks) treatment. Finally, rods were not always seen on cytology. Culture should be done in cases of recurrent bacterial pyoderma or deep pyoderma.—
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Pyoderma caused by *Pseudomonas aeruginosa* infection in dogs: 20 cases. Hillier A, Alcorn JR, Cole LK, Kowaski JJ. *VET DERMATOL* 17:432-439, 2006.