

## Therapeutic Management of Canine Pyoderma - A Study of 10 patients

Rajni Prabha Mahto and Suman Biswas<sup>1</sup>

Division of Veterinary Medicine  
Indian Veterinary Research Institute  
Izatnagar  
Bareilly - 243122 (Uttar Pradesh)

### Abstract

Ten dogs suffering from skin lesion with history of pyotraumatic dermatitis, furunculosis, cellulitis, folliculitis and complaints of extreme pruritus were diagnosed as refractory canine pyoderma. Clinical diagnosis of canine pyoderma was based on history, physical examination and complementary examinations. They were treated with Lincomycin parenterals and chlorhexidine topically; all dogs recovered uneventfully.

**Keywords:** Canine; lincomycin; pyoderma

### Introduction

Pyoderma is one of the most common and the persistent cause of canine skin diseases worldwide (Ihrke, 1987; Hill and Moriello, 1994). Lesions may be quite superficial and affect only the epidermis or may involve deeper structures in the dermis or subcutaneous tissue. The primary pathogen of superficial pyoderma cases involves *Staphylococcus intermedius*, a member of the normal flora in most dogs (Noble and Kent, 1992; Hill and Moriello, 1994; Ihrke, 1996; Scott *et al.*, 1998). *S. aureus* also plays a major role in dermatitis (Harvey *et al.*, 1996; Paradis *et al.*, 2001). However, *Proteus* spp., *Pseudomonas* spp., *E. coli*, *Actinomyces* spp., *Actinobacillus* spp., *Fusobacterium* spp., and *Mycobacterium* spp. were reported to cause deep pyoderma (Debouer, 1995; Paradis *et al.*, 2001). For treatment of canine pyoderma, antibiotics should be selected upon their good skin penetration ability and spectrum of antibacterial activity (especially, *S. intermedius*). In addition, the selection of antibiotic depends on the type of infection, efficacy and safety profile.

### History

Total of 10 dogs of varying breeds (Pomerians -3, Labradors-2, German Shepherds- 3 Stray dogs-

1, Pug-1) and sexes (4 female and 6 male) were diagnosed with pyoderma between March-May'12. All dogs exhibited various clinical manifestations like itchiness, pustules, crusted skin, small raised lesions and loss of hair (alopecia) and accumulation of dried cheesy material in affected area. The infection was limited mostly on the superficial layers, of the dog's skin, whereas three dogs had deep lacerated lesions on deeper skin.

### Materials and Methods

All cases were ruled out for scabies, demodicosis by KOH digestion and microscopic examination of skin scraping. For microscopic examination, sterile swabs were immersed in sterile normal saline and samples of skin lesions were collected from 2-3 sites. Thin smears on glass slide were made, air dried and Gram-stained. After microscopical examination, gram<sup>+</sup> cocci identified on the basis of microscopic appearance and Gram's staining. The dogs were treated with Alincomycin vet<sup>a</sup> (@ 22mg/kg, twice daily) initially for two weeks, Anistamin<sup>b</sup> (1mg/kg, twice daily) and omega-3 fatty acids syrup along with aminoacids (Nutricoat Advance<sup>c</sup>). Application of antibacterial shampoo containing chlorhexidine (Micodin<sup>b</sup>) was advocated in all the cases.

### Results

After continuation of the above treatment for a period of two weeks, all animals have recovered from previous clinical findings with appearance of normal body coat without persistent itching.

1 Corresponding author:

E-mail: sumanvet.09@gmail.com

a - Brand of Zoetis Animal Health, Mumbai

b - Brand of Intas Animal Health, Ahmedabad

c - Brand of Cargil Animal Health, Bengaluru

## Canine pyoderma

Lincomycin hydrochloride is a bacteriostatic agent, mainly inhibits protein synthesis of bacterial microorganism. Chlorhexidine topically assisted faster recovery and effective cure of pyoderma. Omega-3 fatty acids are good anti-inflammatory agent and also help to maintain the shiny coats by increasing the blood circulation.

### Discussion

*Staphylococcus* sp is a normal commensal of dog skin but due to some change of the skin macro and micro environment, it becomes pathognomic and causes pyoderma. For superficial pyoderma and deep pyoderma, bacteriostatic and bactericidal antibiotics are effective respectively.

### Conclusion

Canine pyoderma is a group of various skin diseases and an accurate diagnosis is mandatory. An appropriate antibacterial therapy is required in most cases of canine pyoderma, in association with topical therapy. Antibiotics must be selected carefully and used with appropriate dosage and duration of treatment. Surface lesions in deep pyoderma commonly heal more rapidly than deeper lesions, although sequestered foci of infection may not be visible.

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