

Therapeutic Management of Staph Spp Skin Infection in Labrador

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ABSTRACT

A three years old black male Labrador was presented with clinical sign of alopecia, pruritus, eczema on dorsal region of paw of right forelimb and chin region. Antibiotic sensitivity test of skin scraping revealed the infection of coccal bacteria undifferentiated from staphylococcus spp., with highly sensitivity to gentamycin. Intramuscular injection of genticyn along with immunomodulation therapy resulted in remission of clinical signs and improvement of healthy condition.

Keywords: Staphylococcus, Gentamycin, Pyoderma.

I. INTRODUCTION

Skin diseases are the most common health problems in dogs. The condition of dog's skin and coat are important indicator of its general health. Skin disorders of dogs vary from acute, self-limiting problems to chronic or long-lasting problems requiring lifelong treatment. They also need to be differentiated on the basis of being of primary or secondary in nature, making diagnosis complicated ^[1]. The skin is a milieu for controlled bacterial growth. Skin supports the growth of commensally bacteria, which protect the host from pathogenic bacteria. Environmental and local factors, host immunity, and organism adherence and virulence are intricately related to systemic infection. *Staphylococcus aureus* and *Streptococcus pyogenese* notoriously pathogenic in the skin (Chiller, *et al.*, 2001). Among this Staphylococcal infection is a common skin disorder of the dog. Infections may be superficial (folliculitis), deep (furunculosis), or both. *Staphylococcus intermedius* is the most commonly isolated bacterium (Scott, *et al.*, 2001) which was isolated from 88.6% and 49.4% of skin and ear samples, respectively, during the years 1992 through 1997, and frequency of isolation remained unchanged (Petersen, *et al.*, 2002). Despite their frequency of occurrence, many pyodermas are misdiagnosed or improperly managed (Lhrke, P. J., 1987).

Chronic skin infections leads to pyoderma which includes symptoms like scaling, crustiness, hair loss, and the development of papules, pustules, and pus/discharge on the skin. It can be tentatively diagnosed by visual examination but definitive diagnosis may require examination of hair and discharge, and skin cultures of the lesions (Michael Dym, Holistic & Conventional Veterinarian (Bio)).

History and Clinical Examination:

A 3 years old male Labrador was presented to the Teaching Veterinary Clinical Complex, OUAT, Bhubaneswar, with the history of alopecia, pruritus, Eczema on dorsal surface of paw of right forelimb and also on chin region. On physical examination serosanguineous fluid was found to be oozing out of it. Skin scraping examination didn't reveal any presence of parasitic infection like mites but antibiotics sensitivity test suggested coccal infection undistinguishable from Staphylococcus species which is highly sensitive to Gentamycin and Amikacin.

Treatment

Prior to clinical test the dog was treated with Inj. Ivermec- 1ml s/c ly (Ivermectin @ 1 ml upto 20kg body weight), Lixen (Cephalexin-600mg @ 1 tab per 20 kg B.wt) 1tab daily for 3 days, Cetrizine- 1 tab orally daily

for 3 days, Curable Ointment- 25gm to be applied liberally and Multistar Pet- 1phl, 10ml orally twice. Following antibiotic sensitivity test, on fourth day it was treated with Inj. Genticyn- 2ml i/m ly (Gentamycin) daily for three days, Curable ointment and Multistar Pet to continue. On day 7, a substantial clinical improvement was noted, based on complete lack of pus and blood oozing out of it.

Discussion

Ivermec was given as ecto-endo parasiticide for the treatment of any parasitic infection, lichen contain cephalixin antibiotic given for the treatment of bacterial infection causing Soft tissue infection, Pyoderma (Skin infections due to coagulase positive Staphylococci), cetirizine was given as antiallergic medication, Multistar Pet is multivitamin which was given to enhance the immune system and for regeneration of healthy epithelium, curable contain terbinafine hydrochloride(antifungal), ofloxacin (antibacterial), ornidazole (antiprotozoan) and clobetasol propionate(corticosteroid used to treat various skin disorders including eczema and psoriasis) which was given for the treatment of various types of skin problems.



Figure 1. Moist Eczema of the chin region



Figure 2. Pyoderma with pus and blood on the dorsal surface of paw region of right forelimb (acral granuloma)

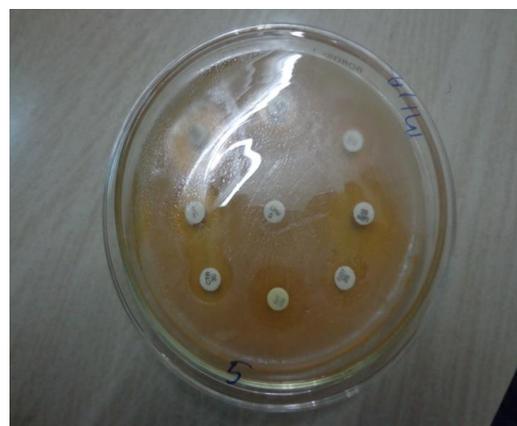


Figure 3. Antibiotic sensitivity test showing bacterial sensitivity to Gentamycin.

II. CONCLUSION

Use of sensitive antibiotics along with supplementation of systemic immunomodulation therapy will be more effective in localized canine pyoderma cases compare to conventional routine treatment.

III. REFERENCES

- [1] Dog Health Guide, Disease and Conditions Canine Skin, 2011.
- [2] Ihrke, P.J., 1987. An overview of bacterial skin disease in the dog. *British Veterinary Journal*. Vol. 143, Issue 2, March–April, pp. 112–118.
- [3] Chiller, K., Selkin, B.A. and Murakawa, G.J., 2001. Skin Microflora and Bacterial Infections of the Skin. *Journal of Investigative Dermatology Symposium Proceedings* (2001) 6, 170–174.
- [4] Guardabassi, L., Schwarz, S. and Lloyd, D.H., 2004. Pet animals as reservoirs of antimicrobial-resistant bacteria. *Journal of Antimicrobial Chemotherapy*. Vol. 54, pp: 321–332
- [5] Petersen, A.D., Walker, R.D., Bowman, M.M., SchottII, H.S. and RosserJr, E.J. (2002). Frequency of Isolation and Antimicrobial Susceptibility Patterns of *Staphylococcus intermedius* and *Pseudomonas aeruginosa* Isolates From Canine Skin and Ear Samples Over a 6-Year Period (1992–1997). *Journal of the American Animal Hospital Association*: Vol. 38, No. 5, pp. 407-413.
- [6] Scott D.W., Miller W.H. Jr, Griffin, C.E. Muller & Kirk's (2001). *Small Animal Dermatology VI*. Philadelphia: WB Saunders, 2001:274–309.
- [7] Medleau, L., Long, R.E., Brown, J. and Miller, W.H. (1986). *American Journal of Veterinary Research*. Vol. 47(2): 229-231.
- [8] I. S. Mason, 2008. Canine pyoderma. *Journal of Small Animal Practice*. Volume 32, Issue 8, pages 381–386, August 1991.