A 4 year old male Labrador dog was presented with the complaint of severe itching coupled with alopecia around eye region, forelimb, hind limb, abdominal region and was severely debilitated. On clinical examination the dog was showing cutaneous thickening with crusts, scabs and interdigital pyoderma. The skin on head, neck and abdominal region was erythematous and excoriating on application of little pressure. Pulse, respiration and heart rate were within normal range. Examination of skin scraping revealed no evidence of mites. The dog was treated with Tab Cefpet XL @ 5 mg/kg b.wt. orally O.D. for 6 days, Injection Anistamin (1 ml i/m) for 4 days, injection of Intavita (1 ml i/m) in alternate day for 6 days, three injection of Neomac @ 0.5 ml subcutaneous once in a week. Ascabiol lotion was applied twice daily for 10 days and Micodin antibacterial shampoo was applied once in a week for 3 weeks. The dog showed marked improvement after one week of treatment which was significant in the second week and complete recovery was observed in three weeks time. **Keywords:** Cefpodoxime, superficial pyoderma, dog.

**Introduction**

Pyoderma is one of the most common skin disease of canines (Nesbit and Ackerman, 1998). Based on the depth of infection in skin layers, it is of two types deep pyoderma and superficial pyoderma. In deep pyoderma infection from distal parts of hair follicle extends beneath and beyond the confines of hair follicles (Paradis et al., 2001). The primary pathogen involved in pyoderma is Staphylococcus spp. however; other gram negative bacteria are also involved (Reddy et al., 2011). Some breeds like Golden retriever, Dachshund, Beagle, Pointer and Gordon setter are prone to pyoderma (Paterson (2008). The exact cause and pathogenesis of the disease is due to increased susceptibility to Staphylococcus species which mostly proceeds to juvenile cellulitis (Prieur and Hargis, 1982). The lesions are mostly granular and pustular type, erythematous in appearances with crusts in outline. These typical lesions are commonly found on face, around muzzle area and ear pinna. Sometimes it also leads to otitis externa (Miller et al., 2013). For treatment of canine pyoderma, antibiotics
should be selected based on their good skin penetration ability and spectrum of antibacterial activity. Bacterial organisms and their sensitivity pattern also vary with location (Reddy et al., 2014 a).

**Case History and observation**

A 4 year old male Labrador dog was presented with the symptoms of severe itching, alopecia around eye region, fore limbs, hind limbs, abdominal region and tail (Figure 1). Weak and debilitated with loss of skin luster. On clinical examination the dog was showing Cutaneous thickening with crusts, scabs, interdigital pyoderma, licking of digits and alopecia. The dog was thoroughly examined clinically for presence of macroscopic lesions and ectoparasites. Laboratory examination was carried out by microscopic examination of glass slide impression smears and skin scrapping. Direct microscopic examination of skin scrap from both dog and his owner did not reveal presence of mites or fungal spores. Then samples were processed further for bacterial culture and antibiotic sensitivity. Commercially available antibiotics including amoxycillin, amoxyclav, ampicillin, cefpodoxime, ceftriaxone and penicillin-G were used for antibiotic sensitivity test.

**Laboratory Examination and Diagnosis**

Direct microscopic examination of skin scrap from both dog and his owner did not reveal presence of mites or fungal spores. Then samples were processed further for bacterial culture and antibiotic sensitivity. Commercially available antibiotics including amoxycillin, amoxyclav, ampicillin, cefpodoxime, ceftriaxone and penicillin-G were used for antibiotic sensitivity test. Gram positive cocci in clusters were detected on bacterial culture, which were suggestive of staphylococci. In AST Staphylococcus isolate was highly sensitive to cefpodoxime and ceftriaxone; intermediate sensitive to amoxyclav whereas resistant to other antibiotics used.

**Treatment and Discussion**

As the bacterial isolates were sensitive to cephalosporins, therapeutic regimen for Labrador dog included oral administration of cefpodoxime (Tab Cefpet XL) @ 5 mg/kg b.wt. orally O.D. for 6 days and after 2 days gap, given for next 10 days, Inj Anistamin 1 ml i/m for 4 days, Inj Intavita 1 ml i/m for 6 days, Inj Neomac 0.5 ml s/c Once in a week for 3 weeks, topical application of Ascabiol lotion for 10 days and Micodin shampoo weekly for 3 weeks Figure 2, 3, 4). Basic structural features of their skin make canines more susceptible to skin infections. Empirical diagnosis of pyoderma was based on history and physical examination followed by complimentary tests, such as skin scraping and culture test. Treatment usually
Therapeutic Management of Pyoderma in a Dog

Therapeutic management of pyoderma in a dog involves antimicrobial drug therapy on the basis of antibiotic sensitivity test. Cephalosporins are often used to treat canine skin infections because of their broad antimicrobial spectrum, established safety profile and reasonable cost. Cefpodoxime, an oral third generation cephalosporin having good effect for superficial and deep pyodermas due to its once daily administration sets it apart from other oral cephalosporin used in veterinary medicine (Reddy et al., 2014b). In the present study we used external application of shampoo and vitamin supplement as supportive therapy. Use of topical therapy (Micodin shampoo) assisted faster recovery in dog suffering with pyoderma. The clinical condition discussed above was diagnosed as superficial pyoderma based on the symptoms and culture examination and was treated successfully.

**Summary**

In the present case, staphylococci were detected as etiological agent in canine pyoderma as well as in the dog owner, which supports the possible zoonotic infection of staphylococci from dog to human being. Cefpodoxime along with supportive therapy was very successful for the treatment of Canine pyoderma. Routine bacterial culture and sensitivity test must be carried out before initiation of any therapy which not only treats the case but also avoids development of antibiotic resistance.

**References**


