

Therapeutic Management of Actinomycosis Infection in Cross Bred Dairy Cattle in Field Condition

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ABSTRACT

Two 4 years old lactating cross bred dairy cattle with hard swelling and halitosis lesion were diagnosed to be positive for *Actinomyces* infection based on the clinical and microscopical examination. The animals were treated with broad spectrum antibiotic along with anti-inflammatory therapy for three days. The efficacy of therapy was judged on basis of clinical recovery of animal and blood smear examination. Both the animals recovered after three days with Dicrysticin therapy and without rational iodide therapy.

Keywords: Bovine; Dicrysticin and Oxytetracyclin; Actinomycosis

INTRODUCTION

Actinomyces bovis is a common inhabitant of the oral cavity and the infection is started to occur through wounds to buccal mucosa caused by the sharp pieces of feed/ foreign material. Lumpy Jaw is an economically important disease and it causes economic losses indirectly by decreases in milk production and slaughtering of affected animals. The common clinical finding of the disease is Osteomyelitis and rarefying of Jaw bone and adjunct hard tissues (Bertone and Rheburn 1984). Due to granulomatous lesion in the Jaw there is disturbance in the prehension, mastication and digestion resulting in the starvation and emaciation of the animal. Various treatment protocols were followed by the different authors but complete recovery of the disease is questionable (Mettler *et al.*, 2009). The present study explains the typical case of *Actinomyces bovis* infection in high yielding dairy cattle during summer month and their management in for successful recovery in field condition.

HISTORY AND OBSERVATION

A four year, cross bred high yielding lactating dairy cow was noticed with swelling on the mandible region. History revealed that during summer month the cow was sent to the grazing land with dry fodder for last 45 days and the swelling exhibited about 4 days ago. Animal not able to swell and masticate due to

granulomatous lesion on the mandibular bone (Fig 1) and appetite decreases gradually. Clinical examination revealed immovable painful swelling with increased temperature and anorexia. The tentative diagnosis of Actinomycosis was made on the basis of clinical signs and history of animals. Later it was confirmed by the presence of pus having "sulphur granules" with the filamentous organism.



Fig1. Swelling of mandible region



Fig2. Swelling cured completely after treatment

TREATMENT AND DISCUSSION

The cow was medicated with Dicrysticin@ 5 gram/day/3 days and Oxytetracyclin (LA) 10mg/Kg, Bolus Melonex plus 2 Bolus/day/3 days and Mgso₄ paste were applied on the granulomatous lesion. Oral potassium Iodide is standard treatment for actinomycosis infection (Radostits *et al.*, 2005). The animal started to recover slowly day by day. Actinomycosis response usually dramatic and permanent as iodide has effect against gram negative filamentous organism. The early recovery of the animal might be due to Dicrysticin along with Melonex plus instead of iodide therapy (Fig 2). Many authors have reported that Sulphonamides, Penicillin, Streptomycin and the broad spectrum antibiotics are used. Streptomycin given by intramuscular injection 5 gam/day for 3 days and repeated if necessary, has given good results in actinomycosis in cattle combined with iodides and local surgical

treatment (Iqba*etal.*,1991). Efficacy of Dicysticin against bovine Actinomycosis assessed based on clinical recover when used in combination of supportive and symptomatic therapy.

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