Actinomycosis in Cattle and its Clinical Management

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Actinomycosis in cattle is manifested by chronic osteomyelitis and rarefication of the bones particularly of the mandible and maxilla leading to serious impairment in feeding. The sulfonamides, Penicillin, Streptomycin and other broad spectrum antibiotics are suggested for its treatment (Radostitis et al., 2000). The present report deals with the successful treatment in four dairy cattle with antibiotics and potassium iodide.

Four cases of cattle (Two male and 2 female) aged 6-10 years attended at College Veterinary Clinics and Livestock Dairy Farm were observed having developed hard, painless swelling on mandible with unusual careful mastication (Fig. 1). The animals were examined as suspected cases of actinomycosis needing further investigation. After cleaning out the site of lesions, fluid material was collected using sterilized syringes and immediately transferred into sterilized tubes for investigation of the causative organism following standard procedures. Paper diffusion method (Bauer et al., 1966) was used for in-vitro drug sensitivity test. The samples from all the animals were found positive for Actinomyces bovis. The characteristics gram positive filaments with irregular clubs surfaces were observed under the microscope. Thus, the actinomyces bovis was confirmed on the basis of both the clinical and the microbiological examinations. The in-vitro drug sensitivity revealed that the organisms were sensitive to Penicillin, Streptomycin, Tetracycline, Bacitracin, Cloxacillin and Co-trimoxazole. Gopala Krishna Murthy and Dorairajan (2008) also recorded similar in-vitro drug sensitivity pattern of Actinomyces bovis.

The line of treatment followed was i.m injection of Dicysticin-S (large dose) 2.5 gm (marketed by M/s. Sarabhai Chemicals Pvt. Ltd., India; each vial contains Procaine Penicillin G 1500000 I.U., Penicillin G Sodium-500000 I.U. and Streptomycin sulphate-2.5 gm) daily for 5 days along with Potassium Iodide 10 gm orally daily for 7 days till the symptoms of iodism like salivation, lacrimation, inappetence and coughing developed. For complete recovery, repetition of the treatment was required twice at an interval of 10 days. Besides, local dressing of the wounds in the mandible region was required daily till complete cure. Treatment of Actinomycosis along with Potassium Iodide @ 6-10 gm/day orally for 7 to 10 days has been found effective (Radostits et al., 2000). Effective treatment of actinomycosis in cows with oral administration of potassium iodide in combination with Penicillin and Streptomycin or Oxytetracycline has also been reported (Pal et al., 1994, Hussain, 2006 and Gopala Krishna Murthy and Dorairajan, 2008).

Therefore, it could be concluded that the successful treatment of actinomycosis in cattle can

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be done by parenteral administration of Penicillin in combination with Streptomycin along with oral administration of potassium iodide and daily dressing of local wound. This study also substantiates the results of earlier studies.

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References


