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CASE STUDY

THERAPEUTIC MANAGEMENT OF TWO FORMS OF ACTINOMYCOSIS IN TWO DIFFERENT CATTLE

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ABSTRACT

The present paper reports the successful therapeutic management of one lumpy jaw in a Holstein Friesian crossbred cow and another suppurative abscess in the buccal cavity of a non descriptive heifer. The Lumpy jaw was treated successfully with intravenous injections of Lugol's iodine (5%) @ 20 ml at every alternate day for 3 occasions. The second case of soft tissue abscess due to Actinomycosis was also recovered with Ceftriaxone Injections @ 20 mg/kg body weight, IV, daily for 5 days. Moreover, the abscess was excised, drained out and dressed with Povidon iodine daily for 3 days.

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INTRODUCTION

Actinomycosis is a chronic infectious disease of all domesticated animals found to affect Cattle most commonly. The disease is characterised either by soft tissue abscess or rarefying mandibular osteomyelitis (Agrawal and Chandra, 2014). It is a Gram + ve branching filamentous organism known as *Actinomyces bovis*. The organism produces disease when it invades the underlying tissue via the wound of oral mucosa (Kahn, 2010). The infection may spread to the bone of the jaw to produce osteitis leading to outward swelling of thickened hard mass (Lumpy jaw) interfering seriously with the Chewing and mastication (Moniruddin *et al.,* 2010). The present communication reports successful therapeutic management of one lumpy jaw in a Holstein Friesian crossbred cow and another suppurative abscess in the buccal cavity of a non descript heifer.

History, diagnosis and treatment

Case No. 1

One Holstein Friesian crossbred cow was reported to have a swelling on lower part of the mouth with normal feeding behaviour. On examination, a thick, hard mass could be palpated on the ventro-lateral aspect of right mandible at the middle position. The lump was found to grow in continuation with the mandible (Fig. 1). On examination through oral cavity no any abnormality could be detected. Clinically the case was diagnosed as Lumpy jaw and treated with intravenous injection of Lugols iodine (5%) @ 20 ml at every alternate day for 3 occasions.

Case No. 2

A two years non descript heifer belong to Lakhimpur College of Veterinary Science, Assam Agricultural University, Instructional Livestock Farm, had developed one swelling on left cheek posterior to the left muzzle Commissure (Fig. 2). On examination the swelling was found hot and fluctuating. Fine needle aspiration revealed thick pus material. Gram positive filamentous organisms could be isolated from the anaerobic culture of the pus (Fig 3). On the basis of the clinical findings and laboratory investigation reports the case was diagnosed as Actinomycosis of soft tissue. Treatment was initiated with Ceftriaxone injection @ 20 mg/kg body weight, IV daily for 5 days. Further, the abscess was excised to drain out the pus. Dressing was done with Povidon iodine daily for 3 days.

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Fig. 1. Lump on the mandible (lumpy jaw)

Fig. 2. Soft tissue abscess

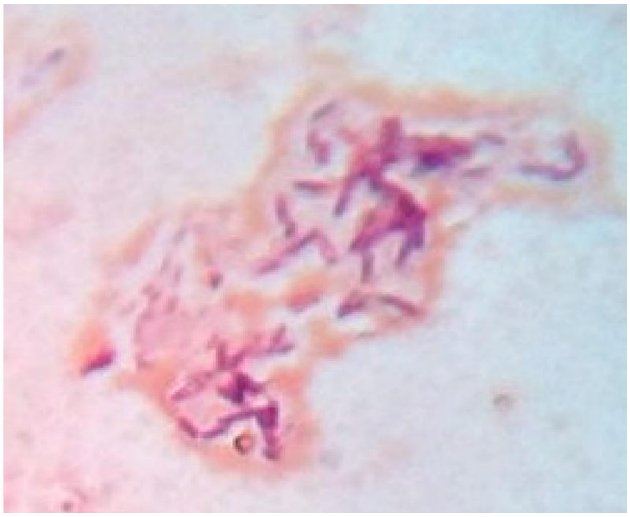

Fig. 3. *Actinomyces bovis* in pus material

RESULTS AND DISCUSSION

The lump of the Holstein Friesian cow was started reducing in size and on the 7th day after beginning of treatment it attained the half of the pre-treatment size. On examination at 15th day post treatment revealed complete reduction of the lump and cow recovered completely. Many workers have suggested Sulphur, Penicillin – G, Isoniazide, Streptomycin (Yadav *et al*., 2015), Tetracycline, Clindamycin, Erythromycin etc. (Lerner, 1988) as effective drug or antibiotics against *Actinomyces bovis* infection. Kahn (2010) has mentioned Potassium Iodide as most sensitive drug for Lumpy jaw. However, IV Lugol's iodine has been found very effective and low cost medicine against lumpy jaw in this present study.

The second case of the present communication was also recovered nearing to normal 5 days after treatment. Yadav *et al.* (2015) mentioned Potassium iodide and Sodium iodide as specific against soft tissue infection with *Actinomyces bovis*. The treatment result of second case was in accordance with Moniruddin *et al.* (2010) findings where Ceftriaxone was stated to be the sensitive to soft tissue Actinomycosis.

Conclusion

The Intra Venous lugol's iodine (5%) solution and Ceftriaxone can effectively be used in the treatment of Lumpy jaw and soft tissue infection, respectively with *Actinomyces bovis* in cattle.

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