ACTINOMYCOSIS IN A CROSSBRED COW - A CASE REPORT

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Actinomycosis also called as lumpy jaw is a local or systemic, chronic, suppurative and granulomatous disease characterized by granulomatous abscess; frequently involves mandible, maxillae or other bony tissue in the head, though the rare cases may involve soft tissues, particularly the alimentary tract (Bertone and Rebhum, 1984). It is caused by *Actinomyces bovis*, a gram positive, rod shaped non-motile, non-sporulating, anaerobic bacterium which is normal inhabitant of oral and pharyngeal mucous membranes (Radostits *et al.,* 2005). The disease is seen when *A. bovis* is introduced to underlying soft tissue via penetrating wounds of the oral mucosa from wire or coarse hay or sticks. Various treatment protocols have been documented in the literature for the lumpy jaw but with sub satisfactory responses (Brunton *et al.* 2005; Mettler *et al.*, 2009). The present report of lumpy jaw revealed complete recovery with combination of both surgical intervention and drug therapy.

HISTORY AND CLINICAL OBSERVATION:

A crossbred cow aged four years was presented to the TVCC, LUVAS, Hisar with the history of fever, anorexia since five days, swelling in mandible region which was proceeding to brisket region and having excessive salivation. On clinical examination, it was observed that mucous membrane was pale and lymph node was enlarged, with pyrexia (102.5^0F). Explorative procedure was performed with a sterilized needle in the mandibular region. Watery yellowish pus containing fluid oozed out. Exudate (pus) was collected and stained with Gram's staining for identification of *Actinomyces bovis*.

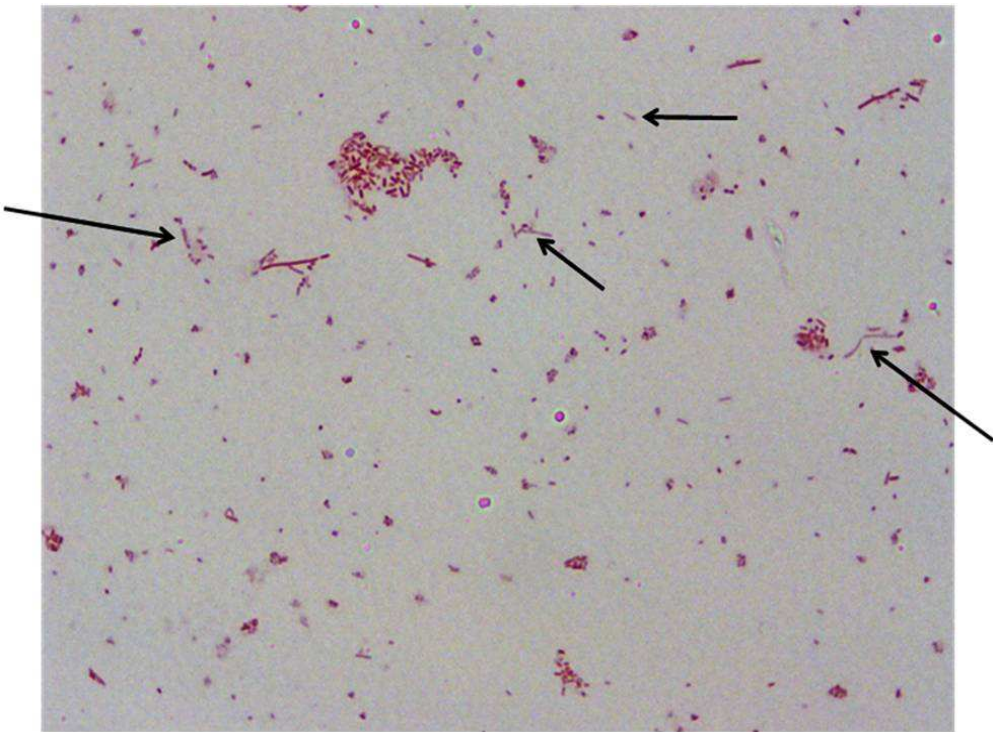
DIAGNOSIS:

The tentative diagnosis of actinomycosis was made on the basis of clinical signs, which was confirmed by the demonstration of Gram positive rods in aspirated purulent material using Gram Staining (Photo). Haematological examination showed haemoglobin (8 g/dl), total leukocyte count (14200μl), Neutrophils (70%) and lymphocytes (30%) indicating absolute neutrophilia with anemia.

TREATMENT AND DISCUSSION:

The site was prepared for surgical intervention and local anaesthetic (2% xylocaine) was infiltrated around the swelling. Debridement of mandible lesion was done and pus drained out surgically. Gauge soaked in betadine was inserted in the incised area. Potassium Iodide was given orally @ 10 g/day for one week. Combination of Streptomycin sulphate and Procaine Penicillin @ 5 g/day was given intramuscularly for five days along with supportive therapy. Cow showed complete recovery after a period of one week.

Brunton *et al*. (2005) and Radostits *et al*. (2005) reported that traditional therapy for lumpy jaw includes oral or intravenous dosing of iodides and/or antibiotics such as penicillin and streptomycin but with variable results which was also in accordance with the present findings. In the present case, surgical intervention was carried out for proper management of the condition. Same observation



was also made by Leaper (2000) and Mettler *et al. (*2009). Appropriate debridement sets the stage for the conversion of chronic wounds into acute ones, with eventual healing (Ennis and Menesses, 2000). Diagnosis was made on the basis of clinical signs and was confirmed later on by the presence of gram positive rods in aspirated purulent material. In this case, sharp surgical debridement along-with systemic antibiotics lead to complete recovery with no recurrence and complications. Thus, this procedure is a better option for the field veterinarians for the effective treatment of cases of actinomycosis under field conditions.

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