

DERMATOPHILOSIS IN CROSS-BRED CATTLE IN Y.S.R. DISTRICT OF ANDHRA PRADESH

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Abstract: Chronic dermatitis due to *Dermatophilus* was recorded in thirty five cross bred cattle in YSR district. All the cattle had matted hair, raised, confluent scabs and crusted lesions over the back, sides of the body, neck, head and on legs. Skin scrapings and impression smears were collected and processed. Direct microscopy of smears from the active lesions, exudates and stained with Giemsa staining revealed typical organisms showing transverse and longitudinal septation. The clinical, direct microscopic impression smear examination and cultural studies revealed the presence of *Dermatophilus*. Treatment was attempted with topical application of povidone iodine, parental administration of penicillin and streptomycin for five consecutive days along with supportive therapy.

Key words: Cattle, *Boophilus*, Dermatophilosis, treatment.

Introduction

Dermatophilosis is a contagious skin disease caused by *Dermatophilus congolensis*. The disease is non-pruritic, and is characterized by exudative, proliferative or hyperkeratotic dermatitis, accompanied by the production of crusts and folliculitis. The causative organism is an aerobic, a gram-positive bacterium that produces motile zoospores; it invades the skin and causes an acute, sub acute or chronic skin disease. The disease affects a wide variety of animals, and humans occasionally (Radostits *et al.*, 2007). It is a cause for reduction of milk production down grading of hides quality, skin and wool and affecting weight gain and reproductive performance (Woldemeskel, 2000; Dalis *et al.*, 2007). The current study was carried out to record the occurrence and the management of Dermatophilosis in Y.S.R.District of Andhra Pradesh.

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Materials and Methods

Thirty five cross-bred cattle with chronic dermatitis were referred to the Teaching Veterinary Clinical Complex, College of Veterinary Science, Proddatur from December 2012 to May 2014. Among thirty five cattle twenty two were adults and thirteen were calves. All the animals were free from other systemic disease as their respiration, pulse rate, body temperature were in normal range. All the cattle had tick infestation and ticks were collected for species identification. Cattle had skin lesions all over the body. Superficial and deep skin scrapings and hair plucks were collected for detection of mites and fungal spores. Samples of crusts and scabs were collected into sterile tubes for cultural isolation and subjected for both Dermatophytes and Dermatophilosis. Impression smears taken were stained with Gram's and Giemsa for direct microscopic examination.

Results

Presented cattle had skin lesions over the back and sides of the body, followed by neck, ventral abdomen, head region and legs (Figure-1). Lesions were as a circumscribed moist patch, often with raised or matted hairs, hyperkeratotic scab and crust. Scab had variable thickness and on removal of it showed a concave underside coated in thick, yellowish exudates, leaving a raw, bleeding epidermis (Figure-2). Itching was not observed in any of the cattle. Diagnosis was done based on clinical and cultural examination. Direct microscopic examination of skin lesions revealed typical hyphae-like forms, showing elemental hyphae with zoospores (Figure-3). Microscopic examination of ticks on affected cattle revealed the presence of *Boophilus spp.* (Figure-4). All the animals were treated with injections of Strepto penicillin @ 10, 000 IU/kg body weight deep I/M, BID, inj. Chlorphenaramine maleate @ 0.5 mg kg body weight IM for continued for 5 days. Multivitamins (Inj. Intavita H @ 6 ml per day) was given for first two days of therapy. Advice was given to the owners weekly once spraying of deltamethrin (Butox @ 2ml in one liter of water) to control tick infestation during the period of treatment. Regular topical application of povidone iodine 7% (w/v) to the skin lesions was done. The animals were enquired for clinical response of the drugs after the treatment and the cattle recovered from the skin lesions with hair growth and complete after one month of therapy.

Discussion

It is an economically important disease of livestock caused by *Dermatophilus congolensis* (Pal, 2007). During our study direct microscopic examination of lesions and exudates revealed typical coccus form with branched hyphae and it is in agreement with Seifert (1996). The clinical cases were observed mainly in winter season during the study. Admasu and Alemu (2011) reported the higher prevalence of Dermatophilosis in cross-bred cattle during winter season which were infested with ticks. All the infected cattle had *Boophilus* infestation during our observatory period. Tick infestation was strongly associated with the occurrence of extensive lesions of Dermatophilosis (Kahn, 2005). Formers were advised for careful managerial practices to avoid trauma to the skin, regular grooming of hair and weekly once spraying of deltamethrin to prevent tick infestation.

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Figure-1: Cattle suffering with *Dermatophilus* **Figure-2:** Close up view of the skin lesions



Fig 3



Fig 4

Figure-3: Microscopic examination of *Dermatophilus* (40X)

Figure-4: Microscopic examination of *Boophilus* spp.