DERMATOPHILOSIS IN A BUFFALO: A CASE REPORT

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ABSTRACT

Dermatophilosis is caused by *Dermatophilus Congolensis*, pandemic but more prevalent in tropical countries. The present paper reports the successful diagnosis and treatment of dermatophilosis in a graded Murrah buffalo heifer. Three year-old graded Murrah heifer and weighing approximately 200 kg was referred to teaching veterinary clinical complex with the history of inappetence, pruritus, dirty yellow colored scabs and crusts all over the body. The scabs and crusts were collected for direct microscopy with the presence of filamentous and branching zoospores in the impression smears confirmed the dermatophilosis. The animal was treated initially with Oxytetracycline 10 mg/kg body weight intravenously along with intramuscular Chlorpheniramine maleate 0.2 mg/kg for first five days and it was followed by long acting Oxytetracycline 20 mg/kg through intramuscular route. The animal was showed marked improvement after 9 days of therapy. Complete clinical improvement was noticed after 16 days of therapy with the disappearance of scabs and crusts.

Keywords: *Bubalus bubalis*, buffaloes, dermatophilosis, graded Murrah, skin, scabs, oxytertracycline

CASE HISTORY AND CLINICAL EXAMINATION

A three year old graded Murrah buffalo was referred to Teaching Veterinary Clinical complex, Veterinary College and Research Institute, Orathanadu, Tamilnadu, India with the history of inappetence, pruritus, dirty yellow colored scabs and crusts all over the body except head, limbs, inguinal and perineal region.

On clinical examination the animal had moderate degree of pruritus. Few ticks were noticed with normal palpable lymphnodes. The skin examination revealed papules and dirty yellowish to brown colored scabs and crusts all over the body except head, limbs, inguinal and perineal region. Scabs and crusts were hard to remove because of smaller in size and the color varied from yellowish to brown (Figure 1). There was no pytriasis. The hairs over the infected site were erect. Skin scrapings were collected to examine the presence of fungus and mite. The rectal temperature and other vital parameters like heart rate and pulse rate were within normal range.

The scabs were removed from the skin

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surface and soaked in normal saline over a night and made impression smear in a glass slide. They were fixed by heating and stained with Gram's stain and Giemsa's stain (OIE, 2008). The presence of branching filaments forming ribbons of sphericalor ovoid cocci was confirmed as dermatopholosis (Figure 5 and 6). The skin scrapings were also examined under direct microscopy using 10% potassium hydroide to detect presence of fungal elements or mites. Collected swabs were cultured for *D. congolensis* on sheep blood agar. The isolates were stained by Gram's method and based on it morphological, cultural, biochemical and sugar fermentation tests of the isolates were determined as per the methods described by Barrow and Faltham (1993). Peripheral blood smears was negative for blood protozoa with normal complete blood count. Skin scrapping didn't revealed any mite or fungal infection.

TREATMENT AND DISCUSSION

The animal was treated with Oxytetracycline 10 mg/kg body weight I/V in normal saline along with Chlorpheniramine maleate 0.2 mg/kg I/M for about 5 days. Then it was continued with longacting Oxyteracycline 20 mg/kg I/M for another two weeks. The progression of illness was halted after 5 days therapy. The animal showed marked improvement after 9 days of therapy (Figure 2). Complete clinical improvement was noticed after 16 days of therapy (Figure 3 and 4) with the disappearance of scabs and crusts.

Bovine dermatophilosis is an economically important skin disease of cattle in tropical countries (Tresamol and Saseendranath, 2013). Dermatophilosis has already been reported in different states of India (Sharma *et al*., 1992; Pal, 1995) but their incidence is more frequently reported recently in Tamilandu (Ranjthkumar *et al*., 2012a) and Kerala (Tresamol *et al*., 2015; Tresamol and Saseendranath, 2014). The prevalence of the disease is higher in animals living in warm and humid conditions. It was reported that the disease is more common during post monsoon season (Ranjithkumar *et al*., 2012b). Further the incidence of dermatophilosis is more common in cross bred European cattle than native Indian Zebus (personal communication from field veterinarians). It is more commonly reported as generalized form (Tresomal and Saseendranath, 2014) lower leg infections (Tresamol and Saseendranath, 2015) and even in one week old white cattle calf (Tresamol *et al*., 2013) in Kerala. To our knowledge it may be the first report of the disease occurrence in a buffalo. The endemic nature of this disease in this region, prevailing agro-climatic condition during post monsoon season, sharing of common grass land with others, animal to animal contact and concurrent infections might be the reasons for this disease spread to this buffaloe. The exudative dermatitis forming scabs, crusts, matted hair at their base forming thick horny crusts and projecting from skin is the characteristic features of dermatophilosis in cattle (Tresamol and Saseendranath, 2014). The lesions were similar in buffalo except that they were smaller in size compare to white cattle. The reason is not known. The lesions were all over the body except head, limbs, inguinal and perineal region. Similar observations were reported in cattle also (Gebreyohannes and Gebresselassie, 2013). There was no significant leukocyte index change in this buffalo. Similar observations were already made in affected cattle by Tresamol and Saseendranath, (2014). Under field conditions a single injecton of long acting Oxytetracycline was found effective in treating dermatophilosis (Ilemobade *et al*., 1979).

The sensitivity of this organism to tetracycline was reported 94.7% by Tresamol and Saseendranath (2013). Oxytetracycline 10 mg/kg was used daily for first 5 days and followed by long acting dose 20 mg/kg until complete recovery. The coadministration of chlorphenaramine maleate is to reduce the pruritus. Complete clinical recovery (Figure 4) was noticed after 16 days of therapy. The present paper reports the incidence of dermatophilosis in a heifer buffalo and its complete clinical recovery to Oxytetracycline therapy from India.

Figure 1. Animal with scabs and crusts (Day 0).

Figure 2. After 9 days therapy.

Figure 3. After 16 days therapy.

Figure 4. After complete recovery.

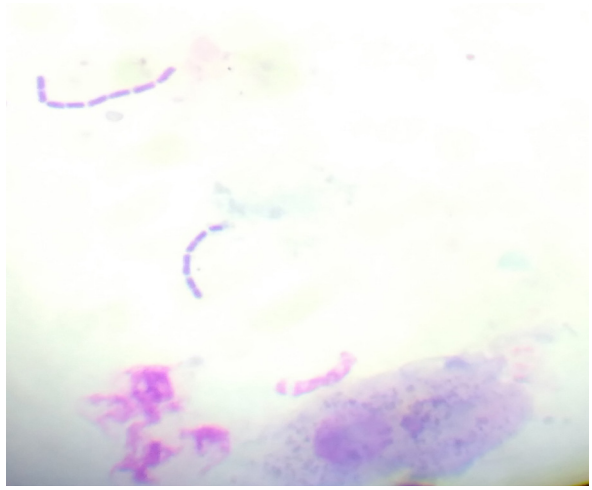

Figure 5. Classical filamentous structure of Dermatophilosis (Giemsa stain).

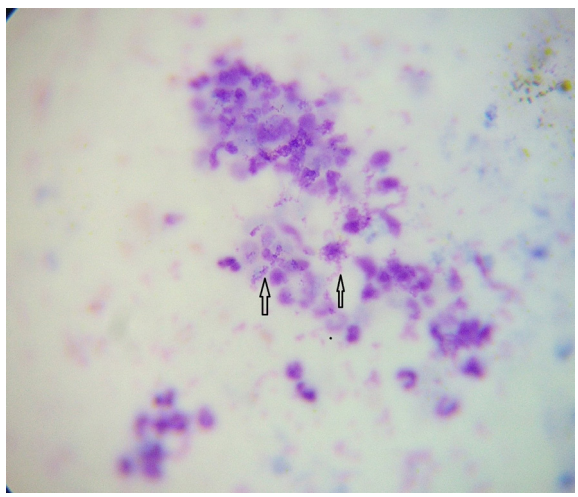

Figure 6. Classical rail road appearance of Dermatophilosis (Giemsa stain).

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