ABSTRACT

The present report is on infestation with *Psoroptes natalensis* in buffaloes. Four graded Murrah buffaloes of 3-5 years age were infested. Clinical signs included of alopecia, pruritis, small crusts and scabs. Lesions were confined to the neck, shoulders and rump. Skin scrapings were examined and eggs, larva, nymphs and adult mites were recovered. The infested animals were separated from others and treated twice at a weekly interval with flumethrin in the prescribed dose of 1 ml/10 kg body weight as a pour-on application. Signs of improvement were observed after the treatment.

Keywords: mange, buffalo, *Psoroptes natalensis*, flumethrin

INTRODUCTION

External parasites can be as big a problem as internal parasites and are a major constraint in production of animals. In India, with its hot and humid climate, the incidence of skin infections, especially mange is very high (Kumar, 1998). While in the past, psoroptic mange in the buffalo was considered rare (Radhawa *et al.*, 1997), it is today one of the main problems in buffalo management. Psoroptic mange causes severe economic losses due to weight loss, decreased milk production and increased susceptibility to other diseases in affected animals (Richard and Karin, 2006). The present paper reports the clinical manifestations and therapeutic management of *Psoroptis natalensis* in buffaloes.

MATERIALS AND METHODS

Four graded Murrah buffaloes of 3-5 years age were brought to the clinical complex of NTR College of Veterinary Science with a history of inappetence, loss of hair and mild pruritis (Figure 1). Clinical manifestations included alopecia, pruritis, and small crusts, and in addition, scab formation in one animal. General clinical examination revealed no apparent changes in body temperature or pulse rates, but all were dull and weak. Lesions were confined to shoulders and rump (Figure 2). The animals were restless and continuously rubbing their bodies against walls and bars. Scrapings from the periphery of the lesions from each animal were examined after treating with 10% KOH (Sloss, 1970) and identified by microscopic examination (Alanwalker, 1994). Subsequently the animals were managed with pour on application of Flumethrin, a synthetic pyrethroid compound, in the prescribed dose of 1 ml/10 kg body weight twice at an interval...
Figure 1. Buffalo with alopecia.

Figure 2. Crust formation.

Figure 3. Egg and larva of psoroptes mite.

Figure 4. Male psoroptes mite.

Figure 5. Male and female psoroptes mites.
of 7 days followed by chlorphenaramine maleate for 3 days. Simultaneously animals were supplemented with oral liver tonic and mineral mixture daily for one week.

RESULTS AND DISCUSSION

Eggs, larvae, nymphs and adult mites were recovered from the skin scrapings (Figure 3) and identified as *Psoroptis natalensis* (Alanwalker, 1994). Morphologically, the pedicels of the mites were long and segmented. The tarsal suckers occurred on the pedicels of the first, second, and third pairs of legs in the male mite and on the first, second, and fourth pairs of legs in the adult female mite. Although the psoroptic mange may not influence the mortality rate in the affected animals, reports indicate that a decline in milk production can be observed. All buffaloes in the present study, infested with psoroptic mange, showed alopecia that was prominent on the neck, shoulders and rump regions as pointed out by Bera *et al.* (2002). There was no change in the hemoglobin and total erythrocyte count of the infested animal as these are non-burrowing mites, but eosinophilia was apparent. The eosinophilia might be an inflammatory response of the body. Though injection and topical treatment would be used in conjunction with each other to kill all the mites, in the present study the pour on application of synthetic pyrethroid was preferred as psoroptic mites do not take blood and are less susceptible to systemic insecticides such as ivermectin (Kettle, 1995). In addition, pour-on drugs seem to have no adverse effect on milk production, as other forms of drug administration usually do, for they place an additional stress an animals which reduces their performance (Singh, 2009). The present study is in agreement with the findings of Bera *et al.* (2002), who reported that the synthetic pyrethroids were effective against mites, and El-Khodery *et al.* (2009), who reported that moxidectin pour-on had a significantly higher effect on mite count reduction than injectable ivermectin. Finally, the owner was advised to separate infested and treated buffaloes from non-infested for 9 days (Radostitis *et al.*, 2000) to prevent spreading of infection. Similarly, Khan *et al.* (2001) also recommended that enclosures suspected of mite contamination be vacated for at least 10 days before occupancy by clean rabbits where disinfections are not possible. Complete recovery with normal grazing habits were observed in all the infested animal after repeated treatment at a 7-day interval as this is necessary to kill the larvae that have hatched from the eggs in the meantime. No mites could be detected microscopically in the skin scrapings of the treated animals on the 14th day. In the present case, it was observed that pour-on application of Flumethrin was quite effective for the management of psoroptic mange in buffaloes.

ACKNOWLEDGEMENT

The authors are thankful to the Associate Dean, NTR College of Veterinary Science, Gannavaram, for the facilities provided.

REFERENCES


