

Case report

Clinical Management of Sarcoptic Mange in Deoni Calf: A Case Report

Abstract

A Deoni cattle calf presented with history of pruritus, scratching, self biting, erythema and alopecia. The skin scraping examination revealed *Sarcoptes scabiei* infestation. In haematological profile, marked neutropenia and eosinophilia were observed. The calf showed uneventful recovery with doramectin along with supportive treatment.

Keywords: sarcoptic mange, Deoni, cattle calf, doramectin

1. INTRODUCTION

Parasitic diseases cause animal suffering through annoyance, irritation, pruritus, disfigurement and secondary infection. Mange mite is one of the skin diseases of cattle that can cause huge economic loss through a decrease in production (Kebede and Hirpa, 2022). Sarcoptic mange is the most commonly occurring parasitic condition in pigs but all species of animals may be affected and has zoonotic consequence as the infection can be transmitted to human beings (Sharma *et al.*, 2021). Scabies is a contagious skin condition caused by epidermal mite, *Sarcoptes scabiei*. It is transmissible directly from animal-to-animal by contact. Scabies causes considerable economic loss in terms of decreased production, thickening and wrinkling of skin, thus lowering the market value of hides (Jalajakshi *et al.*, 2015) . The present case reports severe *Sarcoptes scabiei* mite infestation in a deoni calf.

2. CASE HISTORY AND DIAGNOSIS

A four-month-old Deoni calf referred to Department of Veterinary Medicine with history of pruritus, scratching, self biting, erythema and alopecia. On detailed dermatological examination calf had a very distinct skin lesions which included intense pruritus, scaling, papules, exudative crusts, generalized alopecia and erythema on face, neck, shoulder and rump region (Fig.1 and 2). Feed intake of the calf was slightly

reduced while temperature, respiration rate and heart rate were within the normal physiological range. The skin scrapping from active lesion was collected and treated with 10% potassium hydroxide revealed adult mite (Fig.3) of *Sarcoptes scabiei* (Soulsby, 2005). The 2 ml blood sample was collected from jugular venipuncture in EDTA vial for hematological investigation. On the basis of history, typical dermatological symptoms and laboratory examination case was diagnosed as Sarcoptic mange.

3. TREATMENT AND DISCUSSION

The calf was treated with Inj. Doramectin @ 0.2 mg/kg BW SC weekly for three weeks. The supportive therapy included antihistaminic, multivitamin preparations for five days. The clinical recovery was evaluated on the basis of absence of pruritus, erythema and regrowth of hairs. The calf showed uneventful recovery after 24 days (Fig.4 and 5).

Sarcoptic mange, is a highly infectious dermatological disease transmitted by direct contact between infested animals or by contaminated fomites. The skin lesions caused by this burrowing mite first starts on the head, neck and shoulders and can spread to other parts of the body. The whole body may be involved in 6 weeks (Ketzi, 2023). The young animals showed a higher infestation rate of *S. scabiei* than the adults and this could be attributed to soft and tender skin, dense hair coat, huddling tendency and relatively low level of immunity in young animals (Patel *et al.*, 2003) reported in buffalo calf. The scratching and rubbing of the affected areas to hard objects to mitigate the itching and the scratching leads to excoriation and erythematous lesions on the skin surface. The disease spreads speedily in dairy and breeding herds due to overcrowding, malnutrition and meager managemental surroundings. Burrowing and feeding activities of mite causes mechanical damage, secretion of irritant substances or immunological hypersensitivity to foreign antigen of mite (Nazir *et al.*, 2014) resulting in inflammation and severe itching.



Fig.1: Deoni calf with papules, exudative crusts, generalized alopecia and erythema on face, neck, shoulder and rump region (Before treatment)



Fig. 2: Adult mite of *Sarcoptes scabiei*



Fig. 3: Calf with absence of erythema, crust and regrowth of hair (24th day After Treatment)

4. CONCLUSION

Considering the public health hazard of scabies, the animals infested with mange if treated properly and timely will recover early. The skin diseases further prevents economic losses and market values.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Authors hereby declare that NO generative AI technologies like large language models (ChatGPT, COPILOT etc.) and text to image generators have been used during writing or editing of the manuscript. The written manuscript and images are real and not generated by AI.

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