

Successful management of chorioptic mange infestation in a kid

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Abstract

A three-month old non-descript male kid with a history of retarded growth, severe scratching, scales, extensive hair loss with poor body condition, rough hair coat, swollen pre-scapular lymph nodes and crusty skin lesions on all four legs with normal vital parameters was reported. Faecal examination and skin scrapping examination revealed the presence of oocysts of *Eimeria*, ova of *Strongyle* and Chorioptic mites, respectively. The case was diagnosed with concurrent ecto and endoparasitic infection, and treated with inj. ivermectin, inj. chlorpheniramine maleate and bolus Feritas. After two weeks of treatment, the skin lesions disappeared, and the kid had an uneventful recovery.

Keywords: Chorioptes, Endoparasite, Goat, Ivermectin

Highlights

- Kids are commonly affected by ecto and endoparasites.
- Chorioptic mange infestation is an obligatory host-specific parasite that cause severe purities in goats.
- Due to infections, kids may suffer from anemia and debility resulting in mortality.
- Early diagnosis and prompt therapy will resolve the diseases.

Goat rearing is the basic entity used by landless farmers for their income in India. The parasite, as the term indicates causes damage not only to the concerned host but also to the poor farmers. A goat mite (*Chorioptes* spp.) is a non-burrowing obligatory parasite that affects the skin of the legs and the forefeet of the animal, which spreads along the regions of the body. The mite essentially requires 19 to 28 days to complete life cycle (Kutz *et al.*, 2012). It is host-specific and is transmitted by close contact with infected animals or inanimate objects. The lesions observed in the affected parts of the animals are hair loss, followed by erythema, crust formation, pruritus and dermatitis. The clinical signs will be exhibited in the advanced stage of mite infestation. However, it requires immediate attention as it may lead to outbreaks in rural areas and cause huge economic loss.

A three-month old non-descript male kid was presented to the Department of Veterinary Medicine, Large Animal Unit, Veterinary Clinical Complex, Rajiv Gandhi Institute of Veterinary Education and Research, Puducherry, with the history of skin lesions, scratching, scales and extensive hair loss. The animal was not dewormed and vaccinated. Clinical examination showed poor body condition, rough hair coat, dull, pale pink conjunctival mucous membrane, swollen pre-scapular lymph nodes, rectal temperature of 99.4°F, heart and respiration rates were 120 beats per minute and 28 breaths/minute respectively and crusty skin lesion were more confined on all the joints of the four legs (Fig. 1). The blood was collected into EDTA vacutainer and subjected to complete blood count (CBC). CBC revealed haemoglobin 3 g%, PCV 11% and total leucocyte count 14,650

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Fig. 1. Erythematous crusty lesions on the leg before treatment in a kid



Fig. 2. Resolving of skin lesions after two weeks of treatment in a kid



Fig. 3. Chorioptes mite on 10X microscopic examination

cells/cmm. The differential leucocyte counts were neutrophils 30%, lymphocytes 68%, eosinophils 1% and monocytes 1%. Faecal sample was collected and examined under a 10X microscope for detecting ova and oocyst of endoparasites as a part of routine analysis which revealed the presence of oocysts of *Eimeria* spp. and ova of *Strongyle* spp. Skin scrapings were collected at different sites and examined under a 10X microscope which revealed the presence of *Chorioptes* mites (Fig. 3). The case was diagnosed as mange infestation (*Chorioptes*) and endoparasite infection with severe anaemia.

Mite infestation occur in goats, when the barn or house is not cleaned or disinfected properly. In the present study, the mites were observed on skin scraping examination and it was identified as *Chorioptes* spp., as per morphological characters described by Soulsby, 1982. It primarily attaches itself onto the host's leg and moves to the other regions of the body. The affected goat scratches and bites its own leg due to severe pruritus which is agreement with the present study. Although the animal reported to the Veterinary Clinical Complex only for skin lesions, the routine faecal examination has hinted the presence of oocysts of *Eimeria* spp. and ova of *Strongyle* spp. The kid harbours endoparasites but sub-clinically. The animal was treated with inj. ivermectin @

0.2 mg/kg body weight (bw) s/c at weekly interval for two weeks, inj. chlorpheniramine maleate 0.5 mg/kg bw. i/m and bolus Feritas 1/4th PO daily for two weeks. Ivermectin is an ideal drug of choice and effective for both endoparasitic (Tramboo *et al.*, 2017) and ecto parasitic (Abdullah Jesse *et al.*, 2015) infection. Coccidian parasite is also self-limiting, where the animal recovers spontaneously without any therapeutic intervention. The goat was examined two weeks of post treatment and it showed significant recovery (Fig. 2). Supplements (Bolus Feritas) was given to recover from anaemia and enhance the growth of the affected goats.

Conflict of interest: Authors have no conflict of interest in this study.

Author's contribution: SA: Carried out the clinical examination, diagnosis, treated the cases and drafted the manuscript; ND: Supervised, analysed the work and revised the manuscript; PV, KR, AA: Read, corrected and approved the final manuscript.

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