

# Therapeutic Management of Sarcoptic Mange in a Sheep

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## Abstract

A two year old sheep was presented with the history of itching and alopecia over the face and ears. Scaly excoriated lesions with alopecia were observed on the nose and ear flaps. Microscopic examination of skin scraping revealed *Sarcoptes scabiei* mite infestation. The affected animals were treated with two doses of Ivermectin at dose rate of 200 µg/kg body weight subcutaneously at weekly intervals, along with supportive therapy. The skin scraping examinations on 7<sup>th</sup> day post treatment revealed absence of mites. Complete improvement was noticed after 15 days of post treatment.

**Key words:** *Sarcoptes scabiei*; Sheep; Skin scrapings; Ivermectin.

## Introduction

Mange is an important skin condition which affects a wide range of animals including sheep (Nwoha, 2011). It is common in sub tropical countries like India especially during rainy and winter season due to low temperature and high humidity. Animals in poor condition are mostly susceptible. Infestation by *Sarcoptes scabiei* is a rare condition in sheep, but may occur occasionally, leading to severe mange lesions on face, ears and legs (Wall and Shearer, 2001). The tunneling activities of these mites cause intense itching and scratching leading to the development of sores and scabs. The present case reports the infestation of *Sarcoptes scabiei* in a sheep and its therapeutic management with Ivermectin at field condition.

## Case history and Observations

A 2 year old sheep weighing around 20 kgs was brought to the Veterinary dispensary, Chakrayapeta of Kadapa district Andhra Pradesh with the history of itching and alopecia over the face and ears. Scaly crust lesions with alopecia were observed on the nose (Fig. 1) and ear flaps (Fig. 2). The affected areas were superficially excoriated because of scratching and pruritus. Deep skin scrapings were collected from ears and face lesions over the microscopic slide with liquid paraffin for the examination of mite under the field condition. A cover slip was placed over the sample on the prepared slide which was then viewed under the microscope at low power magnification (10X). *Sarcoptes scabiei* mites (Fig. 3) were seen which confirmed the diagnosis of Sarcoptic mange.



**Fig. 1**

**Fig. 2**

**Fig. 3**

**Fig.1** Crusted lesions with alopecia over the nose; **Fig. 2** Crusted scabby lesion over the ear margins. **Fig. 3** *Sarcoptes scabiei* mites in skin scrapings.

## Treatment and Discussion

Ivermectin injection was administered subcutaneously at the dose rate of 200 µg/kg body weight at weekly intervals for two times along with the supportive therapy of livoferrol syrup. The skin scrapings were examined after 7 days post treatment and they were found negative for sarcoptic mites. Complete elimination of infestation was observed along with improvement of skin texture i.e. disappearance of alopecia, itching, disappearance of scabs and appearance of fresh and shiny skin with hairs was noticed after 15 days of post treatment. The present findings are in agreement with the findings of Akomas *et al.*, (2011). Murthy *et al.*, (2013) also in his study treated all mange infested sheep in a flock with Ivermectin subcutaneously at 200 mcg/kg b.wt at weekly intervals and complete recovery was obtained 10–15th day post treatment in all affected animals.

In sheep, *Sarcoptes scabiei* affects only sparsely haired parts of the body such as face and ears (Solusby, 1982 and Radostits *et al.*, 2000). The findings in the present case were in correlation with the above reports. Sarcoptic mange leads to itch, dermatitis and intense pruritis due to which animals loose much of the grazing time and hence loose general body condition. Later on, vesicles and papules appear,

skin becomes thickened, covered with pale scabs and wool is lost (Radostits *et al.*, 1994). Ivermectin is derived from avermectins isolated from products generated from *Streptomyces avermitilis*. Subcutaneous injection of the drug improves its bioavailability and subsequently its effectiveness hence the subcutaneous route was applied in the present case.

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