Therapeutic management of sarcoptic mange in a sheep flock

G. S. S. Murthy · A. M. Nagesha · K. Hemanna Gowda

Received: 6 June 2012 / Accepted: 28 July 2012 / Published online: 14 August 2012
© Indian Society for Parasitology 2012

Abstract Sarcoptic mange infested sheep showed pruritis, excoriation, crusts, lichenification and secondary alopecia on face and ears. All the infested sheep were treated successfully with Ivermectin at 200 µg/kg body weight and complete recovery of skin was observed between 10th and 14th day post treatments. Sarcoptic mange is highly contagious and the spread of *Sarcoptes scabiei* is usually by close contact but in goats not same because it has natural resistance against sheep mange.

Keywords Sarcoptic mange · Ivermectin in sheep and goat · Mange in small ruminants

Introduction

The mite infestation in domestic animals 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 appear to be most 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 (Arliann 1989; Wall and

Shearer 2001). The causative agent, *S. scabiei*, is usually considered to have a number of varieties each generally specific to a particular host species (Radostits et al. 2006). Female mites form shallow burrows in the lower stratum corneum of the skin. The present case reports the natural infestation of *S. scabiei* in twenty sheep's and its therapeutic management with Ivermectin at field condition.

Materials and methods

Twenty sheep weighing 10–15 kg were presented to veterinary dispensary, Voddaradoddi, Ramanagar taluk, Ramanagar District, Karnataka with the history of alopecia on both ears and face from few days. On detailed examination the affected area was intensely excoriated because of itching, scratching and biting. Also loss of hair, thick brown scabs overlaying lesions, thickened and wrinkled skin was observed. The lesions were prominent on the outer surface of the earflaps, nose and mouth (Figs. 1, 2).

The deep skin scrapings were collected from ears and face lesions in 10 % NaOH and brought to the Department of Parasitology, Veterinary College, Hebbal, Bangalore for mite examination. The microscopic examination revealed presence of *S. scabiei* mites (Fig. 3) which can be differentiated by rounded mouth parts, absence of eyes/stigmata, short posterior legs, presence of empodial claws and pulvillus on first two pairs of legs, presence of transverse ridges on dorsal surface of the body (Wall and Shearer 2001).

Results and discussion

All mange infested sheep were treated with Ivermectin S/C at 200 mcg/kg bw at weekly intervals and complete

G. S. S. Murthy (✉)
Department of Parasitology, Veterinary College,
Hebbal, Bangalore, India
e-mail: gssmurthy26@rediffmail.com

A. M. Nagesha
Department of AH&VS, Government of Karnataka,
Voddaradoddi, Ramanagar taluk, India

K. Hemanna Gowda
Department of Physiology, Veterinary College,
Hebbal, Bangalore, India

Figs. 1, 2 *Sarcoptes scabiei* lesions—nose, mouth and ear flaps

Fig. 3 Skin scrapings—*Sarcoptes scabiei*

resolution of mange in respect of skin texture i.e; disappearance of crusts, wrinkling, scabs and s/c appearance of fresh and shiny skin with hairs was noticed body weight 10–15th day post treatment in all sheep's. These findings were in agreement with those of Singh and Gill (1989), Hengge et al. (2006) and Kumar and Shekhar (2010). Sarcoptic mange is highly contagious and the spread of *S. scabiei* is usually by close physical contact. As a result single case may be observed rarely when the animals are in groups.

But, goats which were in the same herd were not affected by mange (Fig. 4). This signifies natural resistance of goats against sheep mange causing *S. scabiei* mites as mentioned by Arliann (1989), Wall and Shearer (2001).

Fig. 4 Goat flock—no mange affected

References

- Arliann LG (1989) Biology, host epidemiology *scabiei* relations, and of *sarcoptes*. Ann Rev Entomol 34:139–159
- Hengge UR, Currie BJ, Jager G, Lupi O, Schwartz RA (2006) Scabies: a ubiquitous neglected skin disease. Lancet Inf Dis 6:769–779
- Kumar A, Shekhar P (2010) Therapeutic management of notodermic mange in rabbits. J Vet Parasitol 24(1):103–104
- Radostits OM, Gay CC, Hinchcliff KW, Constable PD (2006) Veterinary medicine: a textbook of the diseases of cattle, horses, sheep, pigs and goats. Elsevier, London, pp 1608–1609
- Singh J, Gill BS (1989) Treatment of rabbits with ivermectin. Indian J Parasitol 13:115–118
- Wall R, Shearer D (2001) Veterinary ectoparasites: biology, pathology and control, 2nd edn. Blackwell sciences Ltd, Tokyo, pp 27–28