

INCIDENCE OF SARCOPTIC MANGE AND ITS CONTROL WITH IVERMECTIN IN SHEEP

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Manuscript received on 30.04.2016, accepted on 14.06.2016

DOI: 10.5958/0973-9718.2016.00064.7

Key words: Incidence, Ivermectin, Sarcoptic mange, Sheep

Sarcoptic mange is a contagious skin disease caused by *Sarcoptes scabiei* and is characterized by crusty pruritic dermatitis and hair loss. It is frequently a flock problem causing debility, lot of morbidity and occasional mortality in most of the domestic and companion animals (Chhabra and Pathak, 2011). In India, a few reports are available on sarcoptic mange infestation in sheep (Vyas et al., 2002; Sawale et al., 2012). Control of sarcoptic mange in sheep was carried out by using closantel (Khan et al., 1999), ivermectin (Kumar and Sharma, 1995; Vyas et al., 2002) and herbal preparations (Dimri and Sharma, 2004). This paper reports the incidence and control of sarcoptic mange with ivermectin in sheep flocks at Maruthaadu village, Cuddalore district, Tamil Nadu.

A total of 256 sheep (222 Madras Red, 18 Mecheri and 16 Nellore) from six sheep flocks at Maruthaadu village, Cuddalore district (Tamil Nadu) was examined during January 2013 for the presence of mange infestation. Animals in four flocks were maintained on the mud floor with over-crowding (stocking density of 0.33 m² per sheep) and in two flocks, they were kept with the normal requirement of 1.2 to 2.0 m² per animal. Skin scrapings from affected sheep were collected and boiled in 10% sodium hydroxide solution and examined under a microscope for the presence of mites (Soulsby, 1982). The affected

animals were treated with ivermectin ([®]Neomec, Intas Pharmaceuticals Ltd., India) @ 200 µg/kg body weight subcutaneously.

The mite was identified microscopically as *Sarcoptes scabiei* var *ovis*. The skin lesions were characterized by loss of hair, focal thickening with crusts and scaly appearance with superficial erosions. The lesions were confined to muzzle (Plate 1) and extended towards the forehead in a few cases. Similar lesions were reported by Radostitis et al. (2007).

The overall infestation of sarcoptic mange in sheep was 24.22% and flock-wise ranged from nil to

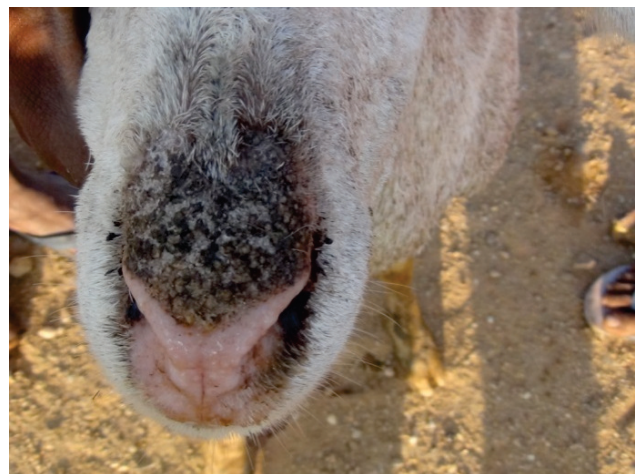


Plate 1. Sarcoptic mange infestation in the muzzle of sheep

38.23% (Table 1). This is similar to that of Khan et al. (1999) who reported 21.10 to 22.05% incidences of sarcoptic mange in sheep flocks at the ICAR-Central Sheep and Wool Research Institute, Avikanagar in Rajasthan. However, Vyas et al. (2002) and Sawale et al. (2012) reported 32.00 and 46.66% of sarcoptic mange infestation in sheep at Bikaner (Rajasthan) and in Bannur sheep in Mumbai (Maharashtra), respectively. Among the breeds, the incidence of sarcoptic mange infestation was more in Mecheri (44.44%) followed by Nellore sheep (37.50%) and Madras Red sheep (21.62%). Sex-wise distribution showed higher positivity in males (35.14%) than males (22.37%). Almost similar observations were reported by Sawale et al. (2012). Age-wise incidence was maximum (61.22%) in lambs followed by hoggets (35.71%) and adults (12.29%). Likewise from Ethiopia, Kassay and Kebebe (2010) reported higher incidences in young sheep than in adults. However, Sawale et al. (2012) reported higher incidence in adults than in young animals.

Out of six sheep flocks, two flocks each were heavily and moderately infested with mange. Other two flocks were free from mange infestation. Heavy and moderate infestation might be due to over-crowding with improper cleaning of the floor. Similarly, Radostitis et al. (2007) reported that over-crowding, poor nutrition, stress, cold weather, immunosuppression and poor management were main factors responsible for transmission of mites. The animals free of mange in two flocks were maintained with adequate floor space, cleaning and house management.

A total of 55 sheep infested with sarcoptic mange were treated with ivermectin and complete cure with the disappearance of the crust was noticed after 12 to 16 days of application. Second injection was given to seven animals which had the lesions up to forehead. Radostitis et al. (2007) and Sawale et al. (2012) observed complete cure of the lesion after two weeks post-treatment. Vyas et al. (2002) reported single subcutaneous injection of ivermectin @ 200 µg / kg body weight as curative in rural Bikaner. Ivermectin oral suspension at 200 µg/kg body weight in two doses

15 days apart was an effective treatment for simultaneous control of strongylosis and sarcoptic mange in sheep (Udupa et al., 2002). It was concluded that *Sarcoptes scabiei* is the major etiological agent for mange infestation in sheep and can be controlled by periodic injections of ivermectin.

Table 1. Incidence (%) of sarcoptic mange in sheep

Factor	% Incidence (No. affected/No. examined)
Overall	24.22 (62/256)
Flock	
1	25.00 (14/56)
2	12.50 (4/32)
3	38.23 (26/68)
4	32.73 (18/55)
5	0.00 (0/27)
6	0.00 (0/18)
Breed	
Madras red	21.62 (48/222)
Mecheri	44.44 (8/18)
Nellore	37.50 (6/16)
Sex	
Male	35.14 (13/37)
Female	22.37 (49/219)
Age	
Lamb	61.22 (30/49)
Hogget	35.71 (10/28)
Adult	12.29 (22/179)

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SUMMARY

A total of 256 sheep from six sheep flocks were examined for the presence of mange infestation. Out of those, 62 animals (24.22%) showed clinical lesions on the muzzle. The sheep infested with sarcoptic mange were treated with ivermectin (200 µg/kg body weight, s/c) and complete cure and disappearance of the crust was noticed after 12 to 16 days of application.

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