Sarcoptic Mange in Goats and its Transmission to Man

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ABSTRACT

Four goats were presented in the Veterinary clinics and teaching hospital with the history of severe itching, alopecia, pityriasis, thickened and wrinkled skin of face, around eyes, neck and dorsum of body. There was also itching and eruptions on hands, elbows, thighs and legs of the children handling and playing with the goats. Skin scrapings and blood were collected and examined. Goats were diagnosed to be suffering from *Sarcoptes scabiei*. Infected goats were treated with Ivermectin @ 200 µg/kg b.wt subcutaneously along with other supportive therapy. Owner of the goats was advised to treat the children with benzoyl benzoate (25%) lotion. Both goats and children recovered with treatment.

Keywords: Children, goats, ivermectin, mange, sarcoptes.

Sarcoptic mange caused by the mite *Sarcoptes scabiei*, affects human beings and wide range of animals *viz.*, sheep, goat, cattle, pig, equine, dog, fox, rabbit and other animals. Scabies is characterized by the presence of small papules and general erythema of the skin, intense pruritis, thick brown scabs overlying raw surface and thickening and wrinkling of surrounding skin. The disease is of zoonotic importance and is communicable to human beings (Mitra et al., 1995). The present clinical report describes sarcoptic mange in goats and its transmission to man and its management.

Four goats (1-1½ years old) with the history of severe itching were presented in the Veterinary Clinics and Teaching Hospital. Clinical examination revealed alopecia, pityriasis and thickening and wrinkling of skin over face, around eyes, on ears and neck extending on the dorsum of body (Fig. 1). Skin scrapings were collected from active lesions of all the animals in 10% KOH and were processed as per standard technique for mite examination. Blood sample (2-3 ml) was collected from each goat in disodium EDTA for hematology. Hemoglobin, packed cell volume, TLC and DLC were determined as per method described by Jain (1986). Naidu and Rao (1999) had observed decrease in hemoglobin, packed cell volume, and erythrocyte count, and increase in total leukocyte count, neutrophils, eosinophils...
Fig. 1. Sarcoptic mange infestation in goat showing alopecia, pityriasis and wrinkling of skin over face, around eyes, on ears and neck.

Fig. 2. Sarcoptes scabiei and its egg demonstrated from skin scrapings of affected goats.

and mean corpuscular volume in sarcoptic mange of goats. Neog et al. (1996) reported increase in PCV and decrease in TLC and neutrophils and eosinophils in treated goats. Parija et al. (1995) conducted clinico-pathological studies in 10 Black Bengal goats, naturally infested with sarcoptic mange and reported macrocytic anemia with a marked reduction in hemoglobin content, packed cell volume, erythrocyte count and an increase in the total leukocyte count and mean corpuscular volume. Macroscopic changes consisted of localized erythema and crust formation in the initial stage, but later on, the affected skin was much thickened and wrinkled with loss of hairs. All the goats were treated with ivermectin @ 200 µg/kg b.wt s/c at weekly interval, Pheneramine maleate @ 1 ml/goat intramuscularly twice a day for 3 days and seven injections of Vitacept @ 2 ml/goat on alternate day. After second injection of ivermectin, lesions disappeared completely. Skin scrapings were collected and examined after a week, and all the samples were found negative for mites.

Scabies was transmitted to children of goat owner with papular eruptions on hands, thigh, neck and face region, and mostly in young children handling the affected animals, whereas adults did not get infection. In an epidemiological survey of sarcoptes higher incidence of infection were reported in 1-20 years age group of human beings with low incidence in adults (Chakarborti, 1985).

Children were treated with application of benzyl benzoate. Shekhar et al. (2007) also treated...
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References


Sarcoptic mange in goats with ivermectin @ 300 µg/kg b.wt s/c repeated at 15 days interval. Benzyl benzoate and equal part of soft soap or methyl alcohol for topical application and ivermectin @ 200 µg/kg b.wt s/c were highly effective in treatment of sarcoptes in animals (Soulsby, 2005). Bazargani et al. (2007) reported Sarcoptes scabies in four freshly dead and three net captured gazelle. Four handlers during capture and sampling were exposed to zoonotic scabies. Two relatives of one of the handlers had been also affected by familial contact.

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