



ZOONOTIC SCABIES: A CASE STUDY

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Sarcoptes scabiei has been known to cause sarcoptic mange or scabies in many domestic and wild mammals throughout the world (Bhatia *et al.*, 2010). Different species of the genus parasitize different host animals and all these forms belong to different physiological races of one species, *Sarcoptes scabiei* (Soulsby, 2005). It is one of the few mites that have got zoonotic potential (John and Petri, 2009).

A one month old rabbit was presented to the Veterinary College Hospital, Mannuthy with a history of intense itching, loss of fur and rashes on the skin. The owner had localized pruritic papules and itching on the lower stomach region (Figure 3) and complained of having contracted the infection from the rabbit. All family members handling the animal had similar lesions as reported by the owner. The animal was subjected to clinical examination. The respiration rate was 128 /min, mucous membrane was pale and rectal temperature was 40.2°C. Dermatological examination revealed intense pruritus, alopecia, erythematous lesions on the ears and legs (Figure 1).

Deep scrapings were taken from the affected area with a sterile blade. The scrapings were taken in a test tube and 5 ml of 10% potassium hydroxide was added. The test tube was heated till a homogenous suspension was obtained. The suspension was transferred to a centrifuge tube and centrifuged for two minutes at 2000 rpm. A drop of sediment was examined under the low power objective of a compound microscope. Microscopic examination revealed mites which were identified as *Sarcoptes sp.* (Figure 2). The *Sarcoptes* mite seen in rabbits is *Sarcoptes scabiei var cuniculi* (Soulsby, 2005).

The animal was diagnosed to be positive for sarcoptic mange or scabies.

The treatment given was ivermectin (200 microgram / kg body weight) as sub cutaneous injection along with local application of benzyl

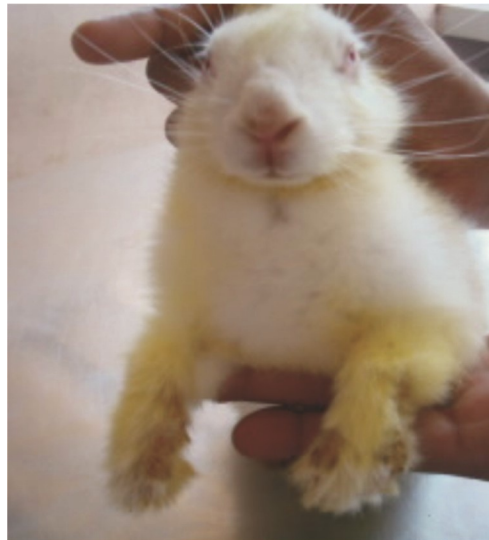


Fig. 1: Lesions on the legs (erythema, alopecia)

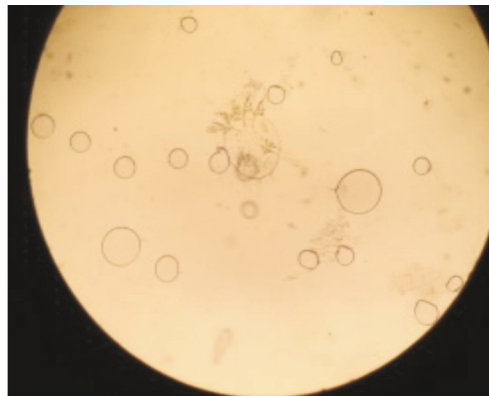


Fig. 2: *Sarcoptes sp.*



Fig. 3: Pruritic papules on the body

benzoate. Occasional cases of human scabies have been reported following exposure to animal scabies, but these infestations are generally self-limiting (Walton and Currie, 2007). In the present case severe pruritus was reported by the owner in the non protected body regions that came in direct contact with the animal, ie, on the arms, legs and upper body (figure 3) and was more intense during night. After being dislodged from its host, the mite can survive for 24- 36 hrs at room temperature with normal humidity and even lower temperatures with high humidity (Walton and Currie, 2007). The owner was advised to consult a medical practitioner and was advised to take necessary precautionary measures while handling the infected animal. There are cases of animal infestations being transferred to humans while they are different from human scabies in a number of important respects. These include their atypical distribution on human skin compared with *S. scabiei var hominis*; the papules lack burrows, the incubation period is generally shorter, and the symptoms are generally transient in nature (McCarthy *et al.*, 2004). Treatment of scabies in human with a double dose of ivermectin at 2-week interval provided a cure rate of 95% but ivermectin may not be effective against all the stages in the life cycle of the parasite. While a single application of permethrin was as effective as two doses of ivermectin. Permethrin-treated patients recovered earlier (Usha and Nair, 2000).

Summary

A case of sarcoptic mange in a one month old rabbit and its public health significance is reported.

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