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Clinical Management of Sarcoptic Mange in Rabbits

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Dermatological problems are one of the most common clinical entities in domestic pets and fur bearing animals (Deshmukh *et al*., 2010). Amongst them, sarcoptic mange is one of the most common and major constraint in commercial rabbit production in India (Darzi *et al.,* 2007). Sarcoptic mange is the most obstinate, resistant and contagious disease with zoonotic importance (Kumar *et al.,* 2002). It is mainly characterized by pruritis, alopecia and in prolonged illness; the animal becomes emaciated and may even die due to cachexia (Roy *et al.,* 2001). Being a contagious parasitic skin disease, mites are generally spread by direct contact between infected and healthy rabbits (Panigrahi and Gupta, 2013). Sarcoptic mange, if left untreated may cause significant morbidity and economic loss in the livestock. Moreover, high costs are associated with acaricides used in infested livestock (Rehbein *et al.,* 2003 and Walton *et al.,* 2004). The avermectin compounds can be used to treat rabbits which are naturally infected with scabies (Kachhawa *et al.,* 2013 and Eraslan *et al.,* 2010). The present communication reports the successful management of sarcoptic mange in rabbits.

Case History and Observations

Five male rabbits were presented to Teaching Veterinary Clinical Complex, College of Veterinary Science and Animal Husbandry, Mhow, with the history of intense itching, erythema, dandruff, white indurated dry crust like lesions on the face near the upper lip, nose, eyelids, edges of ear and paws (Fig. 1).

Parasitological Examination

The skin scrapings of affected parts of rabbits were collected from periphery of the lesion and were boiled in 10% potassium hydroxide, centrifuged and supernatant was discarded. Few drops of sediment were placed on a glass slide and microscopic examination was performed (Soulsby, 1982).

Fig.1. Rabbit showing crusty and scabby lesions on ear, nose, eyelid and paw

Treatment

Infected rabbits were subcutaneously injected with ivermectin @ 200 μg/kg body weight at weekly interval for 4 weeks. Benzyl benzoate was applied topically twice a day and pheniramine maleate was injected intramuscularly to reduce the itching sensation. Disinfection of the rabbit cages were advised with a blow lamp at weekly interval for 4 weeks.

Results and Discussion

The skin scraping examination revealed large number of *Sarcoptes* spp. (Fig. 2), characterised by globose body, short legs, I and II pairs of legs were present anteriorly and III and IV pairs of legs did not cross margin of the body, the dorsal surface was bearing spines, scales and striations, the anus was placed terminally by which they were differentiated from the genus *Notoederes.* Hence, based on the microscopic examination, sarcoptic mange was confirmed as a cause of disease in affected rabbits. According to Birchard and Sherding (2000) mite infestation is generally confirmed by skin scraping examination. The present study recorded symptoms like intense itching, erythema, dandruff, white indurated dry crust like lesions on the face near the upper lip, nose, eyelids, edges of ear and paws. Panigrahi and Gupta (2013) observed similar symptoms like intense itching, pruritis, pyoderma, crust formation, scar production, thickening and wrinkling on skin of affected areas. Similar kind of symptoms like anorexia, anaemia, intense itching, dandruff, white indurated dry crust like lesions on ears, nose, face, around the ears, paws and genitalia were reported by Mitra *et. al.* (2014). Darzi *et al.* (2007) recorded the symptoms like scale formation, alopecia, scab formation, pruritis and intermittent scratching of affected area in rabbits infected with *Sarcoptes* spp., *Notoedres* spp. and *Cheyletiella* spp.

The affected rabbits were treated with ivermectin along with topical application of benzyl benzoate and marked clinical improvement was observed after two weeks of treatment with reduced lesions, which was also evident by skin scrapping examination as it revealed less number of mites. Complete removal of crusts and disappearance of lesions was in evidence after 3 weeks of treatment in case of 3 rabbits, while

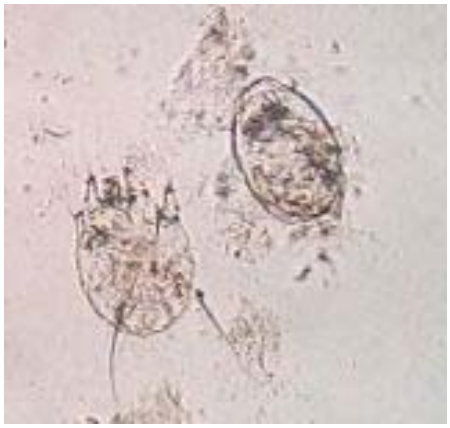

Fig. 2. Skin scraping examination showing *Sarcoptes* spp. (10x)

4 weeks were required for their complete recovery. However, it took 6 weeks for remaining 2 rabbits for the complete recovery. Anorexia, alopecia and anaemia were not observed after 4 weeks of treatment. At the same time, general body condition was improved and skin lesions were disappeared. Birchard and Sherding (2000) also recorded cent per cent efficacy of ivermectin in controlling scabies in rabbits. Panigrahi and Gupta (2013) successfully treated sarcoptic and psoroptic mange in rabbits with 4 doses of ivermectin at weekly interval. Mitra *et al.* (2014) successfully treated sarcoptic mange by ivermectin which was given at weekly interval for 4 weeks. Kumar *et al.* (2002) used ivermectin as an alternative to organophosphorous compounds. Darzi *et al.* (2007) reported cent per cent efficacy of doramectin for treating the concurrent sarcoptic and notoedric acariosis in rabbits. Further, Bharadwaj *et al.* (2012) reported high efficacy of ivermectin against *Sarcoptes* and *Psoroptes* than that of doramectin. Use of ivermectin in the present study resulted in complete recovery of infected animals such as skin lesions produced due to scratching were disappeared and hair were grown on affected area. Present study demonstrated the use of ivermectin and topical application of benzyl benzoate along with effective managemental practices like disinfection of rabbit cages and isolation of infected animals as an effective method for successful control of mite infestation in rabbits (Darzi *et al.*, 2007 and Mitra *et al.*, 2014).

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Conflict of Interest:

All authors declare no conflict of interest.

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