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Scabiosis in a rabbit: A case report

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Abstract
Sarcoptic mange is found to be one of them and its infection due to *Sarcoptes scabiei* is a major constraint in commercial rabbit rearing in India. Pruritic lesions are found, especially on the face, nose, lips, and external genitalia. Chronic cases of Sarcoptic mange leads to anorexia, lethargy, emaciation and can even cause death in rabbits. Diagnosis can be done with the clinical signs, lesions their locations and skin scrapping examination. Neomac LA at the dose rate of 700mcg/kg body weight through subcutaneous route is sufficient in eliminating *Sarcoptes scabiei* mites in naturally infested rabbits. So, the current observations conclude that ivermectin therapy along with supportive treatment is effective in control of mange in rabbits.

Keywords: sarcoptic mange, scabies, ivermectin, rabbit scabies

1. Introduction
Rabbits are very social and interactive to human beings hence considered as wonderful indoor pet now a day. As they are furry pets so more often, they encounter with dermatological problems. Sarcoptic mange is found to be one of them and its infection due to *Sarcoptes scabiei* is a major constraint in commercial rabbit rearing in India (Darzi *et al*, 2007) [4]. Sarcoptic mange is generally considered to occur via direct or indirect transmission of mites from infected hosts (Arlian *et al*., 2017). Severe infestation in both young or debilitated animals causes high mortality (Bornstein and Samuel 2001) [3]. Pruritic lesions are found, especially on the face, nose, lips, and external genitalia (Percy and Barthold, 1993) [6]. Chronic cases of Sarcoptic mange leads to anorexia, lethargy, emaciation and can even cause death in rabbits (Scott *et al*. 2001) [7]. Increased housing density and poor hygiene are the most important predisposing factors in case of *Sarcoptes scabiei* infestation (McCarthy *et al*. 2004) [5].
Mange infestation caused by *Sarcoptes scabiei* is common in rabbit, which is characterized by presence or absence of pruritis, specific morphology of mite and pattern of lesion distribution (Bhardwaj *et al*, 2012 [2]. Lesions are mainly found in the ear margins, nose, face and legs. Diagnosis can be done with the clinical signs, lesions their locations and skin scrapping examination.

2. Case History
A male rabbit of 4 months age was brought to Veterinary clinical complex, College of veterinary science and animal husbandry, Jabalpur (M.P.) with a history of anorexia, severe alopecia, intense itching, and dandruff all over the body (Fig.2). The rabbit was kept in a moist, dirty and ill ventilated place. Clinical examination revealed severe pruritis and crusty lesions in ears, around nose, face and both the legs. The condition of the infested rabbit was weak and body coat was ruffled.

3. Diagnosis
Skin scrapping were collected and processed according to the standard protocol as described by Soulsby (1982) [9]. Both superficial and deep skin scrapings were collected from ear margins, face, nose and foot which were then processed using 5 ml of a 10% potassium hydroxide (KOH). The microscopic examination revealed large no. of *Sarcoptes scabiei* mites under low power objective. Based on the history, clinical examination of skin scrapings *Sarcoptes* infection was confirmed (Fig.1).

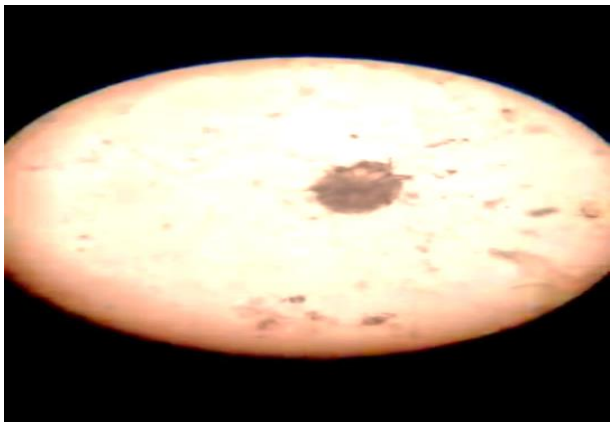

Fig 1: *Sarcoptes sp*. under microscope.

Fig 2: Rabbit affected with mange before treatment.

Fig 3: Recovered rabbit after 28 days of treatment.

4. Treatment & Discussion

Treatment was initiated with single dose of long acting injectable Ivermectin formulation 3.15% w/v (Neomec LA, Intas Pharmaceuticals Ltd.) subcutaneously at a dose rate of 700 mcg/kg body weight. Along with this supportive treatment with liquid Vita-care (multivitamin) 4 drops once a day added to drinking water. Topical application of lotion Almizole (Miconazole nitrate) was applied topically twice a day. Examination of skin scraping on 14th and 28th day of presentation revealed absence of *Sarcoptes scabiei*. The clinical findings of alopecia, pruritus, scaly crusts and intense itching were completely reduced (Fig.3).

Although clinical signs can be employed to identify possible scabies in rabbits, most ectoparasites in rabbits show similar clinical manifestations as scabies such as pruritus and scaling, hence proper sampling and morphological observations are needed for treatment. Diagnosis is confirmed using skin scraping examination. *Sarcoptes* sp. is a burrowing fur mite, produce their pathological effects by burrowing deep into the epidermis causing intense itching, and allergic reactions to some of their secretions (Wall and Shearer 1997) [10]. Therapeutic management of scabies in the rabbit can be done by using injectable macrolytic lactones like Ivermectin, Doramectin and Moxidectin. More specifically subcutaneous administration of single dose of long acting injectable Ivermectin (3.15%w/v) Neomac LA at the dose rate of 700mcg/kg body weight through subcutaneous route is sufficient in completely eliminating *Sarcoptes scabiei* mites in naturally infested rabbits (Sharun *et al*. 2019) [8]. So, the current observations conclude that ivermectin therapy along with supportive treatment is effective in control of mange in rabbits.

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