

# Cat fur mite *Lynxacarus radovskyi* in India

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**Abstract** A Persian cat with the complaint of lustreless dry coat, salt and pepper appearance was brought to the dermatology unit of Madras Veterinary College, Chennai. Microscopical examination of the tape impression and hair coat brushings revealed *Lynxacarus radovskyi* mites with eggs adhering to the hair shaft. The cat was treated with Ivermectin @ 300 µg/kg body weight subcutaneously once a week for 5 weeks after getting owner's consent. The cat was free from the parasites 5 weeks post treatment. Fomite and close contact might aid the spread of infestation. Isolation coupled with full course of treatment favours complete recovery from the infestation.

**Keywords** Cat fur mite infestation · *Lynxacarus radovskyi* · Ivermectin in cats

## Introduction

Cat fur mite *Lynxacarus radovskyi* has been reported in Hawaii (Tenorio 1974), Newzealand (Heath and Mariadass 1999), Australia (Bowman and Domrow 1978), Malaysia (Han 2014), Fiji (Munro and Munro 1979), Florida (Greve and Gerrish 1981), Phillippines (Moya et al. 2004) and Brazil (Romeiro et al. 2007). The cat fur mite has not been reported from India as per the online search. The infestation results in dry dull and rust colored hair coat which

gives a granular appearance popularly called salt and pepper appearance due to mites and eggs on the hair (Craig et al. 1993). The present case reports the natural infestation of cats with *L. radovskyi* probably for the first time in India and its successful therapeutic management with Ivermectin.

## Materials and methods

A 5 year old Persian Tom cat weighing 3 kg reported to the Dermatology unit of Madras Veterinary College and Teaching Hospital with complaint of lustreless poor hair coat particularly around the neck and thoracic region. The colour of the black hair was dull. The cat had unkempt coat. On close examination there were danders close to the skin giving a typical salt peppered appearance (Fig. 1). The scraping taken randomly was negative for ectoparasites.

The hairs epilated easily. Hair plucks were examined microscopically under 10× which had few *L. radovskyi* mites clinging to the hair along the shaft. Few hair samples also had elongated eggs glued to the hair. Increased numbers of live mites and eggs were harvested by tape impression. To increase the sample amount for other processes the coat was brushed with fine toothed comb for about 10 min in the dander areas and the material was transferred to the glass test tube and examined with hand held magnifying lens. Live mites moving along the walls of the glass tube was observed with naked eye. The collected material was transferred to 10% sodium hydroxide. This was boiled and centrifuged. The features were examined to confirm *L. radovskyi* (Bowman and Domrow 1978; Craig et al. 1993). The mite measured 0.4 mm in length and 0.15 mm in width at the thoracic level. The body was cylindrical, laterally compressed, elongated, dorsally

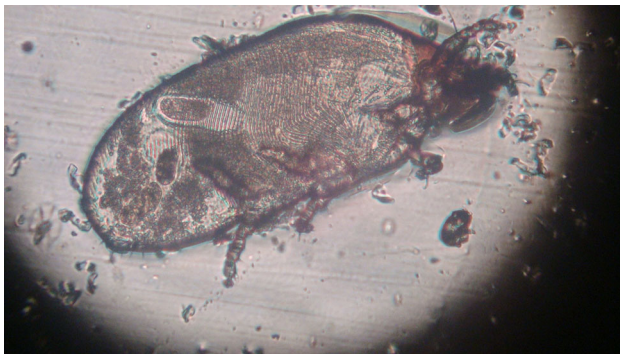
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**Fig. 1** Salt peppered coat of infested cat



**Fig. 2** Adult *Lynxacarus radovskyi*

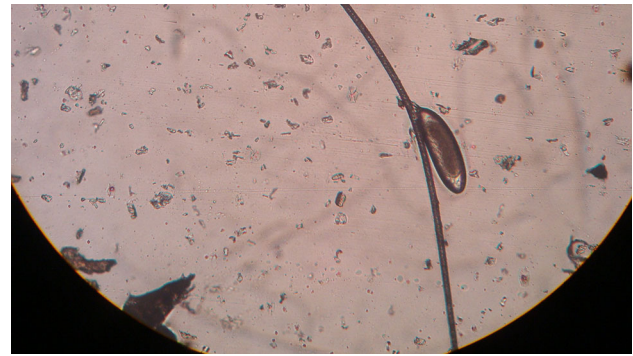
arched, head ventrally directed, body heavily striated with well developed propodosomal plates. Femur 1 with a conspicuous preapical dorsal sclerotised prominence was observed (Jefferey et al. 2012) (Fig. 2).

Egg measured 0.25 mm in length and 0.08 mm in breadth. It was found attached to the hair with a small projection. Yolk also had a small projection at the posterior edge (Fig. 3). The parasite was confirmed as *L. radovskyi*.

The owner did not report pruritus or discomfort. On close examination there were no skin lesions. The affected cat was maintained along with 5 other cats which were all negative for *L. radovskyi* mite on day 1.

## Result and discussion

Based on the features observed under microscopical examination the parasite was confirmed as *L. radovskyi* on the first visit. So with the owner's consent Ivermectin (Ivotek®, GO-ISH remedies limited, Krishnapura, Salon, India) @ 300 µg/kg was administered subcutaneously (Foley 1991) once a week for 5 weeks. The coat brushings



**Fig. 3** Egg of *Lynxacarus radovskyi*

were collected and examined microscopically to assess the response to treatment every week. The second week brushings and examined and it revealed few dead mites and many live mites. During third and fourth week there was reversal in live and dead mite count. More dead mites were noticed with altered morphology. After fifth week of treatment there were no live mites.

Similarly, the eggs observed on the day 1 started decreasing in the following weeks. Few eggs were observed during the second week. During the third week of treatment no eggs could be found which indicate that the active life of the mite has been impaired.

The salt and pepper appearance improved during the fifth week of treatment and the coat condition improved in appearance.

The owner was advised on the first day to isolate the infested cat from other cats and hence other cats in the same household were negative for the fur mite infestation even after 5 weeks.

Clinical signs of hypersensitivity and pruritus have been reported by Han 2014. *L. radovskyi* may also affect human beings handling infested cats inducing dermatitis in the form of papular rash (Foley 1991). These were not observed in the present reported case.

*Lynxacarus radovskyi* should be considered for differential diagnosis of parasitic dermatitis in cats henceforth in India. As limited published reports are available regarding this parasitic infestation in cats there is further scope in vector status, pathological, therapeutic and control aspects.

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