

PINWORM INFECTION IN AN INDIAN PALM SQUIRREL (*FUNAMBULUS PALMARUM*), IN KERALA

Reghu Ravindran and K. Madhavan Pillai

Department of Parasitology, College of Veterinary and Animal Sciences, Mannuthy, Thrissur, Kerala 680 651, India

Introduction

Pinworms are very common nematodes infecting the large intestine of man and other animals. Species of the genera *Syphacia* and *Aspicularis* are pinworms of rodents. The present paper reports a very heavy infection of *Syphacia* sp. in an Indian Palm Squirrel. The squirrel found near the college premises appeared very weak, dehydrated and unable to move. It was taken to the laboratory with the intention of nursing but died within few minutes. On autopsy large number of small nematodes were found actually occluding the posterior part of intestine and the gut was practically empty. The worms were collected, washed in a saline solution and cleared in lactophenol to study the morphological characters.

Results and Discussion

The worms were small in size, with distinct lips, prominent posterior bulb for oesophagus and lateral alae. The males had single spicule with an accessory piece.

Male

Male worms were 1.7 to 1.82 mm long and 0.112 mm broad. Oesophagus including the bulb was 0.367 mm long with the bulb alone 0.073 mm in diameter. The spicule was 0.142 to 0.176 mm long and gubernaculum 0.053 mm. The tail was 0.264 mm long. Close to the cloacal aperture were three nematons.

Female

Female worms were larger, 3.66 to 4.1 mm long and 0.264 to 0.337 in breadth. Oesophagus including bulb was 0.396 to 0.47 mm long and the bulb alone 0.122 to 0.156 mm in diameter. Vulva measured 0.882 to 0.95 mm from anterior end and was located in a prominence. The tail measured 0.73 to 0.8 mm long and the eggs in uterus measured 0.078 x 0.025 mm on an average.

The species of *Syphacia* reported in squirrels are *S. thompsoni* (Price, 1928), *S. sciuri* (Mirza and Singh, 1934), *S. lahorea* (Akhtar, 1955), *S. funambuli* (Johnson, 1967) and *S. pennanti* (Parihar & Nama, 1978). The present species resembles *S. sciuri* though the measurements are higher than the original measurements given by the author. Gupta and Kazim (1980) have reported that

this species has larger measurements especially the size of spicule when compared to the measurements recorded by Mirza and Singh (1934). Hence the present species is identified as *S. sciuri*.

Though pinworm infection is considered as nonpathogenic, Karpukhin and Kolevatova (1973) regarded *S. thompsoni* infection as a possible natural regulator of squirrel populations. In the present case there were no other lesions in the host except the unusually higher number of worms in the gut with little or no intestinal contents. There were about 30,000 worms and certainly this would have caused the death of the host. The gravid female worms lay eggs in the perianal region and this becomes a continual source of oral infection. The grooming activities of the rodents and the licking or biting of perianal region to relieve the irritation caused by egg laying could have caused the transfer of infective eggs to the mouth.

Acknowledgement

The authors are thankful to the Dean, College of Veterinary and Animal Sciences for the facilities provided for the study.

References

- Akhtar, S.A. (1955). *Syphacia lahorea* sp. nov. - A new nematode parasite in Pennants' squirrel. *Pakistan J. Sci. Res.* 7(1): 1-3.
- Gupta, S.P. and M. Kazim. (1980). Nematodes of mammals. *Indian J. Helminthol.* 30(2): 129-136.
- Johnson, S. (1967). A new nematode of the genus *Syphacia* (Oxyuridae) from the squirrel, *Funambulus pennanti* from Rajasthan, *Indian Proc. Zool. Soc. Calcutta* 20(1): 83-85.
- Karpukhin, I.P. and A.I. Kolevatova. (1973). The helminths of the squirrel in forest of Vyatka. *Referativnyi Zhurnal Biologia* 3: 95 (Cited in *Helm. Abst.* 1978, 47(1) No. 5013).
- Mirza, M.B. and S.N. Singh. (1934). *Syphacia sciuri* sp. nov. - A new Oxyurid worm from *Sciurus palmarum*. *Current Science* 2(9): 345-346.
- Parihar, A. and H.S. Nama. (1977). On three species of the genus *Syphacia* Seurat, 1916 (Nematoda: Oxyuridae). *Revista Brasileira de Biologia* 37(3): 557-561. (Cited in *Helm. Abst.* 1978, 47(3) No. 1074).
- Price, E.W. (1928). Two new nematode worms from rodents. *Proc. U.S. Nat. Mus.* 74(4): 1-5.

Received 24 April 1999;

Accepted 15 June 1999