

Capillariasis in a Pigeon

A Case report



Egg of *Capillaria*
sp. in pigeons
(40X)

Pigeons (*Columba livia*) are found everywhere in nature and associated with human beings. Pigeons are used as pets, cultural and religious symbols (Sari et al. 2008) and are fed them by bird lovers. Hence, pigeons have developed a dependence upon people for their food and survival. Pigeons are probably one of the most common nuisance birds and occupying the premises of people in the urban environments. They cause contamination of surroundings with their droppings and also serve as a source for many zoonotic diseases (Karatpe et al. 2011). Pigeons can also carry flea, ticks, mites and gastro intestinal parasites (Sivajothi & Reddy 2015). *Capillaria* sp., are fine thread worm found in small intestines and produces eggs with characteristic features of lemon shaped bipolar eggs which is usually smaller, have thicker brownish eggs shell, possess pronounced plugs on both ends and contain a single cell. Due to increased risk factors such as confined housing, stress, illness or adaptation to new environments, this parasite can lead to serious problems in pigeons. A good knowledge about the parasitic diseases of the pigeons may help in uplifting of their survivability. Though, there is a huge literature

on avian parasitic diseases, little has been documented about the parasites particularly *Capillaria* sp. in pigeons. Therefore to document the incidence of *Capillaria* sp. in pigeons with a hope of providing new data and clarifying some other permanent issues, this study was undertaken.

History and Observation

The bird was brought with a history of anorexia and diarrhea. On physical examination the bird was found to be highly emaciated and dehydrated. The vent region was soiled with fecal matter was greenish and watery in nature. Fecal sample of the pigeon was collected by using a sterile swab from the cloacal orifice. Examination of the fecal sample was carried out by direct smear technique (Gupta & Singla 2012). A drop of water was mixed with fecal sample on a microscopic slide covered with cover slip and examined at low and high power. The parasitic eggs were identified according to keys developed by Soulsby (1982).

Results

In the faecal sample by direct smear examination method we were able to find with characteristic single celled lemon shaped bipolar eggs having thick brownish egg shell possessing pronounced plugs on both ends. The eggs were identified as *Capillaria columbae* with a length of 50 μ and width of 26 μ . It was successfully treated with fenbendazole @40mg/kg orally.

Discussion

The prevalence of capillariasis in pigeons was in agreement with Atkinson et al. 2008 who stated that the eggs of *Capillaria* sp. could be identified by the presence of the characteristic bipolar plugs. The bird was suffering from inappetence, diarrhoea and was emaciated. Urquhart et al. (1996) have described that heavy infections of *Capillaria* sp. cause diphtheritic inflammation leading to inappetence, emaciation and diarrhoea in such cases mortality might be high.

Pigeons with intense infections of *Baruscapillaria obsignata* could have decreased total protein and albumin due to severe diarrhoea (Chubb et al. 1964). Sivajothi & Reddy (2015) reported 17.4% prevalence of *C. columbae* in domestic pigeons (*Columba livia*) of Andhra Pradesh. Bahrami et al. (2013) reported that the young pigeons (squab) could be more

susceptible to parasitic infection as compared to adult pigeons of more than two year old birds.

Management of capillariasis in pigeons is not feasible. Captive pigeons should be examined and treated to prevent the development of clinical disease. Fenbendazole, febantel and levamisole are highly efficacious for treatment of capillariasis in numerous avian species (Atkinson et al. 2008). Levamisole @ 20-40 mg/kg orally could have 95-100 per cent efficiency against *Capillaria* sp. (Foreyt 2001). In pigeons, fenbendazole @ 20-50 mg/kg orally could be used for capillariasis infection (Carpenter 2013).

Conclusion

Capillariasis was encountered in a pigeon and it can be effectively treated with fenbendazole @ 40 mg/kg orally.

Acknowledgement

The authors are thankful to the Dean, Faculty of Basic Sciences, Madras Veterinary College and the Director of Clinics, Tamil Nadu Veterinary and Animal Sciences University for permitting them to undertake the work.

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Citation

Palanivelrajan, M., A. Prathipa & S. Prathaban (2017). Capillariasis in a Pigeon: A case report. *Vet Brief*, #1, In: *Zoo's Print* 32(2): 45-48.