International Journal of Science, Environment and Technology, Vol. 6, No 5, 2017, 2907 – 2910
ISSN 2278-3687 (O)
2277-663X (P)

SUCCESSFUL MANAGEMENT OF *Heterakis* sp. IN A TURKEY

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Abstract: A 3 year old turkey was brought to Small Animal Medicine Unit, TVCC, RIVER, with a history of anorexia, dullness and greenish watery diarrhea for the past three days. Clinical examination revealed that the bird was very weak with cloacal temperature of 41.4°C. Upon laboratory investigation, Haemogram revealed Hb – 13.5g %, PCV - 40%, TLC – 17,500/mm^3 and DLC: H – 33% and L – 67 %. Cloacal swab examination revealed the presence of *Heterakis* sp. The bird was treated with Inj. Gentamicin, Susp. Pyrantel pamoate. The bird started taking feed and water with marked improvement in clinical signs.

Keywords: Turkey, *Heterakis*, Pyrantel pamoate.

Introduction

Backyard turkeys can be infected with many parasites and parasitic infections in turkeys are very important. Infection with huge number of parasites can have a consequence on growth, decreased egg production and general health (Soulsby, 1986). *Heterakis gallinarum* is non-pathogenic, but a vector for *Histomonas meleagridis* which is extremely pathogenic etiologic cause of "Black-head" infection fatal to chickens, turkeys, pheasants and other fowls. The occurrence of this parasite in free-range backyard chickens may cause severe debility and morbidity, mortality may happen in acute cases (Adang *et al*., 2008). Earth worms can provide as paratenic hosts for juveniles, allowing them to progress from the earth to a bird's gut. Economically significant since it acts as a host for the protozoan *H. meleagridis.* (Kaufmann, 1996)

Materials and methods:

A 3 year old turkey was brought to Small Animal Medicine Unit, TVCC, RIVER, with a history of anorexia, dullness and greenish watery diarrhea for the past three days.

*Received Aug 25, 2017 * Published Oct 2, 2017 * www.ijset.net*

Clinical assessment:

Clinical examination revealed that the bird was very weak, greenish watery diarrhea with cloacal temperature of 41.4°C.

Laboratory assessment:

Upon laboratory investigation, Haemogram revealed Hb – 13.5g %, PCV - 40 %, TLC – 17,500/mm^3 and DLC: H – 33% and L – 67 %. Cloacal swab examination revealed the presence of *Heterakis* sp.

Treatment:

The bird was initially treated with Inj. Gentamicin @ 4mg/ kg b.wt. IM, Inj. Nurokind – 0.5ml IM for two days, Susp. Pyrantel pamoate @ 10mg/kg b.wt. P.O (Powersil®, Sihil Pharma).

Result and discussion:

The Cloacal swab was negative for *Heterakis* sp. after one week of post treatment. The bird started taking feed and water with marked improvement in clinical signs.

Heterakis gallinarum occurs in the caeca of fowl, turkey and other gallinaceous birds. Life cycle is direct. Eggs undergo embryonation in the open and L2 stage develops in each, in about two weeks at optimum temperature and humidity. The eggs may stay feasible in the soil for several months. Infection of birds takes place on ingestion of infective eggs (Bhatia *et al*., 2010).

Backyard birds have an increased chance to come across the infective eggs, larvae, and intermediate hosts of parasites that can cause serious unbearable infections. Parasitic infections are significant reason for the hidden economic loss (Suhani and Kheirhkah, 2006). Primary infections are generally not noticeable. Secondary infections are characterized by the development of nodules in the cecum and the submucosa of the cecum. During serious infections, intestinal walls may thicken and show obvious inflammation (Pattison *et al*., 2007). Black head infection affects the liver and cecum of diseased birds, causing enough harm to be serious if left untreated (Kaufmann, 1996).

Because of the prolonged existence of the eggs, it is not easy to eliminate *H. gallinarum* from a domestic flock. Identification of *H. gallinarum* is based on the fecal examination for the isolation of eggs or direct detection of adult worms in the intestine (Roberts and Janovy, 2005). However, the eggs should be differentiated from those of *Ascardia galli,* another intestinal ascarid worm of poultry and other birds. Treatment for *Heterakis gallinarum* is benzimidazole compounds given at the dose rate of 5-15mg/kg body weight. Pyrantel

pamoate @ 5-10mg/kg body weight and piperazine @ 300-400mg/kg body weight orally.For prevention strict sanitation of poultry sheds and yards, proper disposal of faecal debris and maintenance of litter are necessary (Bhatia *et al*., 2010).

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Fig. 1 Bird was very dull

Fig. 2 Greenish watery diarrhea

Fig. 3 Post treatment – after one week