

A NOTE ON AIR SAC WORMS AND ITS TREATMENT IN FALCONS

Shihabudheen P.

Introduction

Falcons and falconry have formed an integral part of life in the deserts of the Middle East since ancient times. For Arabs, falconry is an opportunity to go back to desert, where they once belonged and to reunite with a way of life that has already disappeared. Arrival of petrodollar has increased the value of falcons and improved the facility for their breeding, management and medical care. Last year the Sheik of Dubai presented a beautiful Saker Falcon to the Amir of Kuwait and the cost of falcon was 400,000 US Dollars or 2 crore rupees.

One of the important disease conditions seen in the falcons in Middle East is Serratospiculosis. These worms are seen in the air sacs of falcons. So they are called air sac worms or lung worms. There are nine species of this nematode and *Serratospiculum seurati* is the most common. Though more commonly seen in Saker Falcons, Gyr and Peregrine are also infected.

Life Cycle

Insects like beetles, grass hoppers and locusts acts as intermediate hosts for serratospiculosis. Falcons commonly eat beetles that wander around the perches. Inside the falcons, the beetle is digested and serratospiculum larvae migrate from the stom-

ach to the air sac. In the air sac, these larvae grow into adults (Figure 1) and lay eggs which move to trachea. The coughed up eggs are swallowed and are excreted through faeces. Insects and beetles get infection through ingestion of eggs in infected faeces. In the body of intermediate hosts, the egg develops to filarial larva.

Clinical Manifestation

Clinical signs in heavy infestation include dyspnoea, vomiting, reduced speed and strength in flight, weight loss, anorexia/ poor appetite and lethargy. Haemorrhagic nodules are seen in proventriculus as the L3 larva penetrates the wall of the proventriculus and develops in to adult filarial parasite within air sac. Clinical symptoms are not pathognomonic. Smaller number of the parasite usually does not cause any clinical manifestation in falcons.

Figure 2: Isoflurane anaesthesia for endoscopy

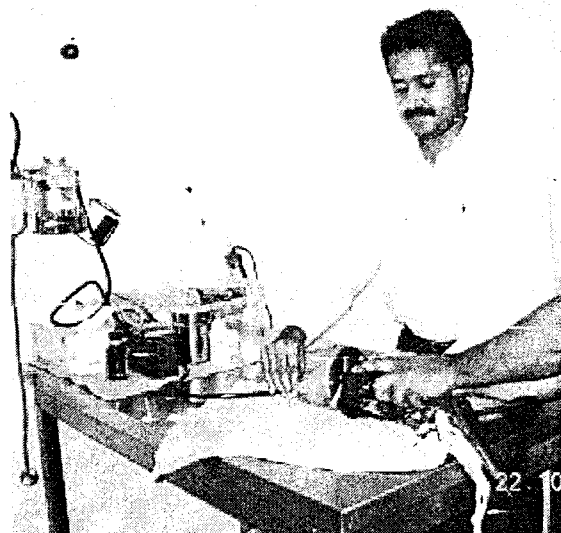
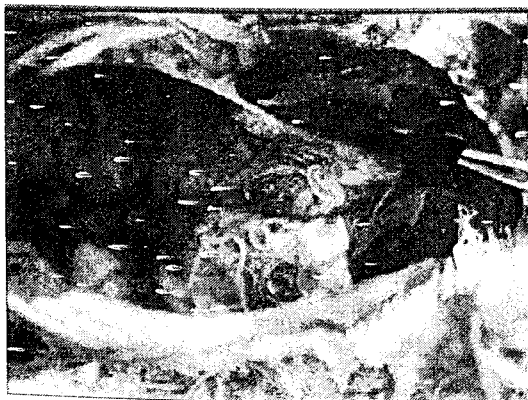


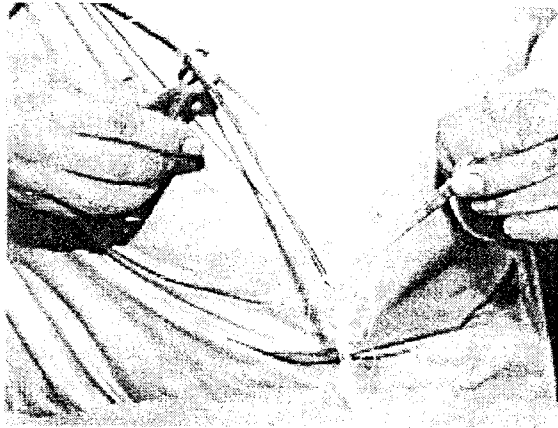
Figure 1: Worms in air-sac



Diagnosis

The disease is diagnosed from clinical signs, by detection of ova in faeces or detection of adult worms in air sacs by endoscopy.

Figure 3: Removal of air-sac worms



Treatment

1. Surgical removal of the adult worm with endoscope after isoflurane anaesthesia (Figure 2 and 3).

2. Medical treatment is with filarial adulticide, Melarsomine at the rate of 0.25 mg/kg, IM for 2 days, and 10 days after melarsomine therapy, larvicidal/ ovcidal ivermectin is administered at a dose rate of 1mg/kg IM (This combination of medicines is also effective for *Dirofilariasis* in Dogs).

In a study conducted in Kuwait, fresh faeces obtained from 1,706 falcons were microscopically examined and 149 samples were positive for *serratospiculosis*. In 97% cases melarsomine proved fast and effective in eliminating clinical signs and eggs from faeces.

Author

Dr. Shihabudheen. Palakkuzhiyil,
Poultry Disease Specialist,
Animal Health Department, Kuwait.
shihabpk2003@yahoo.co.in