

A CASE REPORT ON *HAEMONCHUS CONTORTUS* INFESTATION IN AVIKALIN FEMALE SHEEP

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ABSTRACT

Sheep can be reared as free range or under house inside a shed. It is a very important component in dry land farming system. With very low investment sheep farming can be made in to a profitable venture for small and marginal farmers and landless labourers. *Haemonchus contortus* is singly the most important of all the gastrointestinal nematodes that constrain the survival and productivity of sheep and goats in developing country like India. *H. contortus* is prominent amongst the reports of anthelmintic resistance that has emerged in all countries of the world that produce small ruminants. In present case report sheep was showing the swelling of lower jaw (bottle jaw), anaemic and weak. All symptoms were correlated to the bottle jaw conditions and treatment was done accordingly. As a treatment anthelmintic, antibiotic, anti-inflammatory, B-complex with liver extract, anti-histaminic etc. were given for five days and sheep was recovered.

Keywords: *Haemonchus contortus*, anthelmintic, antibiotic, anti-inflammatory, B-complex.

INTRODUCTION

Sheep with its multi-facet utility for wool, meat, milk, skins and manure, helps in rural economy upliftment of the country like India. It provides a dependable source of income to the farmers through sale of wool and animals. Infestation with the gastrointestinal nematode *Haemonchus contortus* in small ruminants (sheep and goats) can cause severe economic losses to the farmers. Small ruminants are extremely susceptible to internal parasites, especially gastrointestinal nematodes. *Haemonchus contortus* (Rudolphi) Cobb, also known as barber pole worm or red worm, is a blood sucking nematode that uses sheep as a host and

causes haemonchosis characterized by anaemia and digestive disturbances. *Haemonchus contortus* is active mainly in warm and humid climates in the summer months. Adult worms colonize in the abomasal mucosa of sheep and suck their blood. The eggs they produce are drop in the faeces, hatch, and ingested by a new host sheep through the consumption of grasses (Machen *et al.*, 1998; Burke, 2005). *H. contortus*, as the highest egg producer of all sheep worms, is one of the most devastating internal parasites (Besier, 2009). Haemonchosis, if untreated, can lead to protein deficiency, anemia, bottle jaw, swelling of lower jaw and finally death of the animals (Machen *et al.*, 1998; Williams, 2010). The adult female can lay up to 5,000 eggs daily and together the worms can consume up to 1/10th of an animal's blood in 24 hours (Hepworth *et al.*, 2006). Young and lactating sheep are the most susceptible to *H. contortus* which leads to greatest economic loss (Stear *et al.*, 2007). Young sheep have immunological hypo-responsiveness and lactating ewes experience a temporary loss of immunity for several weeks after they lamb (Besier, 2009; Colditz *et al.*, 1996). All these facts suggests that *H. contortus* is a highly pathogenic nematode in small ruminants especially sheep.

Case History and Observations

Internal parasites damage the health of sheep, causing significant production loss influencing a considerable impact on the economy of the country. Internal parasites are a major limiting factor to sheep production on pasture land. These parasites can restrict the production of infested animals and if animals remain untreated resulting to death. The three most prevalent forms of internal parasites include *Haemonchus contortus*, *Ostertagia circumcincta*, and *Trichostrongylus colubriformis*. Among the three the blood sucking, *H. contortus* is the parasite that affects sheep most. Sheep infested with the parasite are showing symptoms include scours, weight loss and weakness. Further condition became grave due to accumulation of fluid in lower jaw and anaemia.

One sheep of the sheep and goat farm of Veterinary and Animal Sciences, Institute of Agricultural sciences, Banaras Hindu University, Varanasi, was showing swelling of lower jaw and face, weak, anaemic, dull and depressed. Facial swelling was found more during the evening and reduces in morning time. Gum was pale in colour indicating anaemic condition. As the animal grazes during the day, the fluid builds up in the lower jaw and produces “bottle jaw” condition (Fig. 1A and B). Over night the fluids may partially drain away as a result swelling reduces during morning time.



A) Swelling of Jaw in evening.



B) Swelling of Jaw in morning time.

Fig.1. Showing the bottle jaw conditions (swelling of lower face) in evening (A) and morning time (B).



Fig.2. Showing swelling of jaw disappearance after five days of treatments.

TREATMENT AND DISCUSSION

As per the sign and symptoms of sheep, it appears that animal was suffering from *H. contortus* infestation. Accordingly treatment of suffering sheep was done for five days using following drugs includes,

- 1) an anthelmintic (Triclabendazole and Ivermectin suspension),
- 2) an anti-inflammatory (Meloxicam),
- 3) a broad spectrum antibiotic containing (streptomycin + Procaine Penicillin-G)
- 4) B-complex with liver extract Injection,
- 5) Tribivet injection (Vitamin B1, B6 & B12)

Also calcium supplement and extra concentrate feed were given. After five days of treatment, animal was recovered and fluid accumulation at lower jaw disappeared (Fig. 2). Treated sheep was recovered indicating that animals might be suffering from blood sucking *Hemonchus contortus*. Similar finding were reported on Haemonchosis that if untreated, can

lead to protein deficiency, anaemia, bottle jaw conditions and finally death of the animals (Machen et al., 1998; Williams, 2010).

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