

A NOTE ON SUCCESSFUL TREATMENT OF TOXOCAROSIS IN BUFFALO CALVES

Gajendra Namdeo Bhangale^{1,*}, Vivek Natthuji Khandait² and Bapurao Sambhaji Khillare¹

ABSTRACT

In an attempt to obtain a enteroparasitic profile of a flock of cattle and buffalo calves with complaints of mild to severe loose feces from an organized farm, an incidence of 2 positive cases (N=10) for toxocarosis was found. Those were successfully treated with closantel. The severity of infection and effect of drug was monitored through EPG count.

Keywords: *Bubalus bubalis*, buffaloes, toxocarosis, buffalo calves, closantel

INTRODUCTION

It is a prerequisite of any livestock enterprise that the new born calves should be survived and raised in with complete health. However, mortality of calves within its first year of life remains a cause of concern leading to a considerable loss to livestock economy. The causes of such calf-hood Mortality was attributed to conditions like diarrhea and pneumonia (Singh *et al.*, 2009). Amongst others, toxocarosis in buffalo

calves is considered as one of the commonest infestation which at times leads to high mortality if left unnoticed. Toxocarosis is recognized as one of the major afflictions leading to calf morbidity and mortality (Radiostits *et al.*, 2000). There will be severe pathological changes in visceral organs such as liver and lungs due to migrating larvae in infected calves while adult worms responsible for intestinal occlusion. The present case report is about successful treatment of toxocarosis infected buffalo calves from an organized farm.

CLINICAL HISTORY

To resolve the complaint of diarrhea in cattle and buffalo calves (N=10) from an organized farm, a coprological investigation was done in the month of September 2017. The 2 buffaloes calves of around 3 months old were reported with a complaint of watery diarrhea. Initially a treatment was given to these calves with antidiarrheal and antibiotics. The symptoms of diarrhea noted were abnormally loose consistency of feces and classified according to the clinical signs present in these calves (anorexia, depression, weakness, pale

¹Department of Parasitology, Maharashtra Animal and Fishery Sciences University, Sub-Centre Udgir, College of Veterinary and Animal Sciences, Maharashtra, India, *E-mail: gajumanu@gmail.com

²Maharashtra Animal and Fishery Sciences University, Sub-Centre Udgir, College of Veterinary and Animal Sciences, Maharashtra, India

mucus membrane *etc*).

Laboratory diagnosis and treatment

At the first instance the fecal samples of all the calves were subjected to fecal examination through floatation method which revealed presence of considerably high number of eggs of *Toxocara vitulorum* in two buffalo calves while others were negative for any enetero-parasitic ova/cysts. To assess the severity of the infection, the fecal samples were then processed quantitatively by Stoll's Dilution method and Eggs Per Gram (EPG) count was obtained. EPG counts of the samples were as high as 4700 and 1900 which indicated that the calves were in urgent need of anthelmintic treatment. They were treated with Closantel at the dose rate of 10 mg per kg of body weight orally. In addition, supportive treatment with intravenous dextrose and liver extract with Vitamin B complex was also given. The quantitative fecal sample examination on the 3rd, 7th and 14th day post treatment revealed EPG as 200, 0, 0 for the first calf and 0, 0, 0 for the second calf respectively.

DISCUSSION

Toxocarosis in buffalo calves is considered as one of the most common ailments and is responsible for high mortality. *T. vitulorum* larvae are passed in great numbers in the colostrum 2 to 5 days after calving, worms are matured in the intestine of the calves by 10 days of age and eggs are passed by 3 weeks and then the adult worms are expelled from the intestine by 5 months of age, and for this reason, toxocarosis has been considered as calfhood disease. (Radostit, 2000). In the present case, history and clinical findings supported by laboratory examination provided

the confirmatory diagnosis of toxocarosis and it was treated accordingly. The EPG count was found nil on 7th day post treatment and the case was recovered to normal health. These findings corroborates the earlier reports by Verma and Kalra (1974) who also reported high mortality in buffalo calves up to 3 months of age. Closantel at the dose of 10 mg per kg body weight showed 100% efficacy against toxocarosis which was in agreement with the findings by Mitra and Basu (2005). In recent times, Westers *et al.* (2016) advocated the use of closantel as a viable alternative on farms with documented multi-drug resistance particularly to haemonchosis which delay the onset of resistance to benzimidazoles and macrocyclic lactone compounds.

REFERENCES

- Maiti, S.K., A.K. Santra and B.D. Sahu. 2009. Toxocarosis in buffalo calves: A report of two cases. *Vetscan*, **4**(2): 46.
- Mitra, J. and A.K. Basu. 2005. Therapeutic efficacy of closantel (zycloz) against gastrointestinal nematodes in buffalo calves. *Indian Vet. J.*, **82**(7): 714-715.
- Radostits, O.M., C.C. Gay, K.W. Hinchcliff and P. Constable. 2006. *Veterinary Medicine*, 10th ed. W.B. Saunders Co., USA. p. 1556-1557
- Singh, D.D., M. Kumar, P.K. Chaudhary and H.N. Singh. 2009. Neonatal calf mortality: An overview. *Intas Polivet*, **10**(2): 165-169. Available on: <https://www.cabi.org/isc/FullTextPDF/2010/20103049235.pdf>
- Verma, P.C. and D.S. Kalra. 1974. Mortality in buffalo calves (*Bos bubalis*). *Indian J. Anim. Sci.*, **44**(3): 163-168.
- Westers, T., A. Jones-Bitton, P. Menzies, J.V.

Leeuwen, Z. Poljak and A.S. Peregrine.
2016. Efficacy of closantel against
ivermectin and fenbendazole-resistant
Haemonchus sp. in sheep in Ontario,
Canada. *Vet. Parasitol.*, **228**: 30-41. DOI:
10.1016/j.vetpar.2016.08.009