DIARRHOEA DUE TO *Balantidium coli* INFECTION IN A PIGLET - A CASE REPORT

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ABSTRACT

Balantidium coli is a zoonotic protozoan parasite that causes diarrhoea in pigs. A two month old piglet was presented to the Teaching Veterinary Clinical Complex with the history of weakness and chronic diarrhoea since one month of age but with the normal feed and water intake. On examination, piglet was weak, temperature - 101.2^{0}F, pale conjunctival membrane and yellowish watery foul smelling diarrhoea. Fecal sample examination revealed numerous moving *B. coli* trophozoites and cysts. The current case report deals with the diagnosis and management of balantidial diarrhoea in a piglet which was successfully treated with potentiated sulphanamides and metronidazole.

Keywords: *Balantidium coli*, trophozoites, potentiated sulphanamides, metronidazole

INTRODUCTION

Balantidium coli is a single cell commensal protozoan organism, found as a normal inhabitant in the caecum and colon of pigs. Pigs are considered as natural reservoir of this organism. Usually, it is a secondary invader after bacterial or viral infections. But as a sole entity, has a potential to cause colitis which is manifested as chronic diarrhoea and poor doer syndrome in piglets. This ciliate is the only one definitely known to be parasitic in man and it presents a public health concern as well. Cysts of the organism present in the environment favors the direct and indirect propagation between pig and human.

The highest occurrence rate was reported in farms with sanitary and husbandry problems. Parasite has a direct life cycle, and the cysts and trophozoites are released with the faeces to the environment. The cysts are infectious to animals and humans, they can be infected by ingesting contaminated feed and water. Balantidiasis presents an economic concern in piggeries.

CASE HISTORY AND OBSERVATION

Two months old male Tamworth piglet (Fig.1) was presented to the Teaching Veterinary Clinical Complex, Mannuthy with the history of diarrhoea and weight loss since one month of age. On observation, temperature was 101.2^{0}F, conjunctival mucous membrane of the eye was pale, piglet was voiding yellowish watery foul smelling diarrhoea and was emaciated. Haematology results revealed no abnormality (Mean values were WBC - 22.0x10^3/µl, RBC -6.81x10^6/µl, Hb - 10.9g/dl and platelets - 299x10^3/µl). Direct microscopic examination of the fecal sample revealed moving ciliate

protozoan cysts and trophozoites (Fig. 2). Based on the morphological features (presence of two nuclei, long and sausage shaped macronucleus and spherical shaped micronucleus which is nested next to macronucleus, cysts are round and smaller than trophozoites), they were confirmed as cysts and trophozoites of *B. coli* (Soulsby, 1982).

Fig. 1: Affected piglet

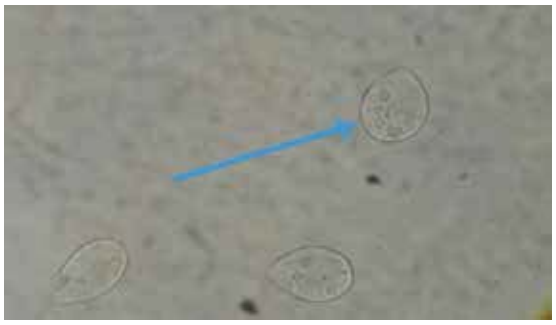

Fig. 2: Trophozoites of *B. coli*

TREATMENT AND DISCUSSIONS

From the history, clinical signs and laboratory findings, the case was diagnosed as balantidiasis. The animal was treated with sulphamethoxazole-trimethoprim @ 20mg/ kg body weight intramuscularly. Treatment was continued orally with metronidazole @ 20mg/kg body weight and sulphamethoxazole-trimethoprim @ 20mg/kg body weight for the next four days. On the review of the sixth day, there was no diarrhoea and the fecal sample was negative for *B. coli*.

From the haematology report, bacterial and viral causes of diarrhoea was ruled out. Presence of numerous cysts and trophozoites of *B.coli* in the fecal sample gives the definite proof for the diagnosis (Gracia, 2016). Pale conjunctival mucous membrane might be due to ulcerations of the gastrointestinal tract which might lead to loss of blood. Colitis caused by *B. coli* is the reason for diarrhoea and consequent poor doer syndrome (Chatterjee, 2009).

SUMMARY

Metronidazole, potentiated sulphanamides and oxytetracycline have been proven as efficacious in treating balantidial diarrhoea in pigs. High incidence of *B. coli* gastrointestinal protozoal infection is due to poor management conditions like lack of hygiene. Hence hygiene is an important criteria to prevent balantidiasis in the piggery farm.

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