ISOSPOROSIS AMONG STRAY PUPS

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ABSTRACT

Canine isosporosis is an enteric disease caused by the genus *Isospora* characterised by severe colitis and enteritis. The present study involved 12 non-descript stray pups of 2-3 months age which had diarrhoea, anorexia, dullness and found positive for *Isospora canis* by floatation method. On physical examination, pale mucous membrane, sub-normal temperature and dehydration were noticed. Haematology revealed anaemia (reduced haemoglobin, total erythrocyte count and packed cell volume). Pups were treated with sulphonamide trimethoprim @ 15 mg/kg intravenously for 5 days along with fluid therapy and iron supplementation. Marked clinical improvement was noticed by five days. The haematological parameters showed significant improvement after treatment.

KEY WORDS : Isosporosis, Colitis, Anaemia, Stray pups.

INTRODUCTION

Canine isosporosis is characterised by haemorrhagic diarrhoea in young and immuno-compromised dogs leading to severe losses (Mitchell *et al.,* 2007). Inadequate hygienic surroundings is one of the predisposing factors for this disease. Dogs are the definitive hosts for these species. The disease occurs in dogs of different ages, but is more prevalent in young animals (Papazahariadou *et al.,* 2007).Dogs *Isospora* includes four species like *Isospora canis*, *I. ohioensis*, *I. Neorivolta* and *I. burrowsi* (Susan, 1998). These parasites invade the intestinal mucosal lining, causing watery diarrhoea which later becomes bloody and can even be life threatening. Anorexia, vomiting, mental depression and ultimately death may be seen in severely affected animals (Nisar *et al.,* 2009). To overcome the losses, proper diagnosis and treatment of isosporosis is very important.

MATERIALS AND METHODS

The present study involved 12 non-descript stray pups of 2 to 3 months age which had diarrhoea with/without blood, anorexia and dullness. On physical examination, papery white mucous membrane, sub-normal temperature and dehydration were noticed in all the pups. Faecal samples were collected directly from rectum and examined using flotation technique. Whole blood was collected from cephalic/saphenous vein before and two weeks after treatment, subjected to estimation of haemoglobin, packed cell volume and total erythrocyte count using automated analyser. Pups were treated with potentiated sulphonamide (sulphonamide trimethoprim) @ 15 mg/kg intravenously for 5 days along with fluid therapy and iron supplementation (sharkoferrol syrup). Paired 't' test was applied for the comparison of haematological parameters before and 2 weeks after treatment.

RESULTS AND DISCUSSION

Faecal samples screened by flotation technique revealed the presence of *Isospora canis*. Infection was of varied severity even though the quantification of oocysts was not carried out.This study included stray pups, which grow in unhygienic surroundings that in turn predispose the animals to the disease. Young animals are highly susceptible to isosporosis. In the present study all the pups were 7 to 10 week old which is in agreement with Mitrea *et al.* (2006), who found 62 % prevalence in 30 to 50 days old pups, 19 % in 60 to 75 days old pups and 14 % in four to eight months old pups.

Table 1: Comparison of blood parameters before and after treatment using paired 't' test

Parameter	Before treatment	After treatment	't' value	'P' value
Haemoglobin (g%)	6.84±0.29	8.69±0.25	4.65**	0.01
RBCs (million/cmm)	3.00±0.14	3.80±0.11	4.00*	0.03
PCV(%)	24.30±0.90	29.10±0.80	4.00*	0.03

** Significant at 0.01 level; * Significant at 0.05 level.

Significant increase was noticed in haemoglobin from 6.84±0.29 to 8.69±0.25 g%, total erythrocyte count from 3.00±0.14 to 3.80±0.11 million / cmm and packed cell volume from 24.30±0.90 to 29.10±0.80 % after therapy indicating that isosporosis affects haematological parameters as reported by Nisar *et al.* (2009). The results of this study stressed the importance of early diagnosis and treatment of isosporosis along with proper management.

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