

Isospora heydorni Isolated in Brazil: Endogenous Stages in Dogs

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Introduction

Toxoplasma-like oocysts originating from dogs have been reported by Heydorn (1973) and Dubey and Fayer (1976) as small type *Isospora bigemina*. Following that, this coccidium was named *Isospora heydorni* by Tadros and Laarman (1976). Dubey in 1977 proposed that the name *Hammondia heydorni* was more suitable for it because the life cycle was obligatory heteroxenous (Heydorn, 1973; Dubey and Fayer, 1976). Therefore, an *I. heydorni*-like coccidium which was isolated from some animals as intermediate hosts has been reported as *I. heydorni* or *H. heydorni* (Dissanaike and Kan, 1977; Dubey and Williams, 1980; Warrag and Hussein, 1983; Nassar *et al.*, 1983). However, the tissue stages of this coccidium in the intermediate host have not yet been clarified. Such being the case, it is impossible to determine whether the same species of coccidium was reported in each of these studies. However, each showed three common biological characteristics, viz., (1) the final host was a dog, (2) *Toxoplasma*-like oocysts were shed, and (3) the tissue stages in the intermediate host were not clarified.

We have also isolated *Toxoplasma*-like

oocysts from the feces of a dog in Brazil and reported that the guinea pig was a suitable intermediate host (Matsui *et al.*, 1981). However, the tissue stages in guinea pigs have not yet been elucidated. In order to determine whether this coccidium and *Isospora* (or *Hammondia*) *heydorni* were the same species, the endogenous stages in dogs were studied and compared with the studies reported by Heydorn *et al.* (1975) and by Dubey and Fayer (1976).

Materials and Methods

Isospora heydorni oocysts

The oocysts used were first isolated from feces of a naturally infected dog in Brazil and were then transferred to guinea pigs and dogs to multiply as described in the previous paper (Matsui *et al.*, 1981).

Animals

Guinea pigs weighing about 250g were used as the intermediate host. Dog puppies weighing 980–4200g were obtained from the East Tama Area Branch, Tokyo Metropolitan Dog Retention Station, Japan and were used as the definitive host. Feces of all the animals were examined by the sugar flotation method (specific gravity of sugar, 1.266) prior to experimentation. Only the animals free from detected oocysts were raised in separate cages under a coccidium-free environment.

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