HELMINTHIASIS IN STRAY HOUSE CATS IN BALI, INDONESIA

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ABSTRACT

This research aim was to identify and measure the prevalence of helminthes infected stray house cats in Bali. As many as 133 fecal samples collected from Bali, preserved in Sodium Acetic Formaldehide solution. Coproscopy method used to identify the eggs of helminthes by sedimentation concentration and flotation techniques. Based on fecal examination, in stray house cats identified 5 helminthes with the prevalence: *Toxocara cati* (75.19%), *Ancylostoma* (37.59%), *Cotyloda* (19.55%), *Eucestoda* (3.01%) and *Capillaria pelica* (0.75%). These data showed that the prevalence of helminthes in stray house cats in Bali were high, which can impact to their healthy. Therefore, need to make programs to reduce the prevalence of that helminthes.

Keywords: Stray house cat, helmithiasis, Bali

INTRODUCTION

Stray house cats are predators that highly susceptible to a variety of parasitic infections because they can go everywhere and get sources of parasite (loss et al, 2012; Borkataki, et al, 2013). Parasites in cats can impact to their health and to human in the vicinity (Krecek et al., 2010), *Toxocara cati* and *Ancylostoma spp* are known to cause larva migrans in human being (Beaver, 1956). So, public health education should be given to the pet owner/general public regarding the hazards of zoonotic diseases. Children are at most serious risk as they have the habit of playing with pet or even from the environment where cat feces may be present (Borkataki, et al, 2013).

Worldwide prevalence of *T. cati* in local cats have been reported, 39% in Poland (Luty, 2001), 52.8% in Iran (Sadjjadi et al., 2001), 60.9% in Surabaya (Kusnoto, 2005) and 48.8% in Denpasar, Indonesia (Nealma et al, 2013), but the data from all around Bali is not available. The prevalence of *Ancylostoma spp* was also high in develop countries, in Brazil that was 94.2% identified three species; *A. caninum* (67.3%), *A. braziliense* (21.1%) and *A. tubaeforme* (9.6%) (Coelho et al. 2011) and the recent study reported 60.69% cats in Brazil infected by *Ancylostina spp* (Ramos et al. 2013).

Other helminthes reported can infect cats such as Cotyloda (*Spirometra spp* and *Diphyllolbothrium latum*), Capillaria pelica and Eucestoda (Soulsby, 1982). Internal parasites can decrease endurance by absorbing essential nutrients and interfering with vital organs, making cats more susceptible to various diseases. Therefore it is necessary to conduct a research to identify and measure the prevalence of helminthes infected stray house cats in Bali.
MATERIALS AND METHODS

A total of 133 fecal samples collected from stray house cats in all around Bali, Indonesia. Samples put in a tube and preserved in Sodium Acetic Formaldehyde solution. Coproscopy method used to identify the eggs of helminthes by sedimentation concentration and flotation techniques (Marti and Escher, 1990).

RESULTS AND DISCUSSION

The prevalence of helminthes in stray house cats in Bali can be seen in following table. The result shows that the prevalence of *T.cati* in Bali was very high, compare to other previous study; in Netherland was 2,9% (Overgaauw, 1997), 10% in USA (Al-Jabr et al, 1996), 39,9% in Poland (Luty, 2001) and 43% in Colombia (Echeverry et al, 2012). This result is in agreement with the research conducted in Iran, Zibaei et al (2007) reported 92,9% of stray cats infected by *T.cati*. This is serious warning that it is a zoonotic agent.

Table 1 The prevalence of helminthes in stray house cats in Bali

<table>
<thead>
<tr>
<th>Helminth</th>
<th>Prevalence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Toxocara cati</em></td>
<td>71,19</td>
</tr>
<tr>
<td><em>Ancylostoma spp</em></td>
<td>37,59</td>
</tr>
<tr>
<td><em>Cotyloda</em></td>
<td>19,55</td>
</tr>
<tr>
<td><em>Eucestoda</em></td>
<td>3,10</td>
</tr>
<tr>
<td><em>Capillaria pelica</em></td>
<td>0,75</td>
</tr>
</tbody>
</table>

The prevalence of *Ancylostoma spp* in stray house cats in Bali was lower than in Brazil that was 94,2% identified three species; *A. caninum* (67,3%), *A. braziliense* (21,1%) and *A. tubaeforme* (9,6%) (Coelho et al. 2011) and the recent study reported 60,69% cats in Brazil infected by *Ancylostoma spp* (Ramos et al. 2013) but higher than in Colombia which was 7,4% (Echeverry et al, 2012). The prevalence of *Cotyloda* was 19,55%, they may consist of *Spirometra spp* and *Diphyllobothrium latum* (Soulsby, 1982) while *Eucestoda* was 3,01% and low prevalence of *Capillaria pelica* was 0,75%. The results indicated that a lack of veterinarian control of stray house cats in Bali.

REFERENCES