SHORT CASE REPORT

The First Case of Child Infestation with *Bertiella studeri* in Pendopo, Talang Ubi, South Sumatera Indonesia

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Abstract

This is the first case report of *Bertiella studeri* infestation in Pendopo, Talang Ubi, South Sumatera, Indonesia. The patient was a 2,5 year girl, noting some proglottids in her feces. The time and mode of infestation were unknown, but abdominal pain, anorexia and weight loss were noted. Pyrantel pamoate (Combantrin) and albendazole (Zentel) syrups were administrated, but with no result. Praziquantel (Tape Worm Tabs) single dose three tablets @23 mg was prescribed and two proglottids (a long and a short) were found in the feces, and no more proglottids were found after next three months, and the body weight of patient was increased from 9 to 13 kilograms.

INTRODUCTION

Bertiella is a cestode tapeworm parasites that primarily infects nonhuman primates, rodents and marsupials (DeLaney, 2010). Bertilla sp includes various species of worm in the family of Anoplocephalidae, of which, Bertiella studeri and Bertiella mucronata are found in man. The life cycle of this family involves two different hosts: the definite host is the monkey, and the intermediate is the mite. The mature worm lives in monkey intestines, and proglottids are disposed through the feces. The oribated mite that is present in the soil is infected when eating the eggs, which then develop into cysticercoids. Human are accidental hosts due to the ingestion of infected mites (Xuan *et al*, 2003). These infestations present can be asymptomatic or with symptoms similar to most tapeworm cases, and are frequently misdiagnosed. These can include intermittent epigastric pain, nausea, diarrhea, anorexia and loss of weight (El-Dib et al, 2004). Infestation cases have been reported from Asia, Africa, Europe and America. *B. studeri* is prevalent among children in the Old World, while *B. mucronata* is common among adults in the New World (Xuan *et al*, 2003). More than 45 cases have been reported in the world's literature, at least 21 cases from Indonesia, of which 16 cases from Sumatera (Anwar, 1998; Denegri and Perez-Serrano, 1997). This paper presents the first case of *B. studeri* detected in Pendopo, Talang Ubi, South Sumatera Indonesia.

CASE REPORT

The patient was a 2,5 year old girl, living in Pendopo township of Talang Ubi Subdistrict, Muara Enim District, about 160 km from Palembang the South Sumatera Province Capital. Since January 2011 when the patient was still 1,5 year old, her mother found "gumo" something white like milk in her feces, it goes out almost every day. Then when her mother believe it was a kind of helminth, she went to a drugstore and gave her child a single dose 10 ml antelminthic pyrantel pamoate (Combantrin) syrup, but without any result, because proglottids were still expelled.

Later her parents consulted to health officer. First doctor to be consulted was a general practitioner, who diagnosed it as an infestation of *Oxyuris vermicularis*, therefore the additional administration of pyrantel pamoate came also with no result. The second general doctors who also live near the Pendopo subdistrict was also a general practitioner, who diagnosed it as an infestation of hookworm since in laboratory findings there were no eggs of cestode. Then she was reversed to the District Prabumulih Hospital to see a paediatrician because of the patient complained of stomach discomfort and loss of weight. The stool examination was still no egg found. Finally it was reversed to the Palembang, a senior pediatrician who treated with albendazole and then consulted to our Parasitology Department.

History of disease was such as contact with monkey in early 2010. She had once took a picture together with Orangutan at the Jogja Zoo in Java, and also loved to watch the traditional show of Monkey Mask. Their neighbor also had a monkey pet in their backyard where she used to play around. She sometimes had been went to base camp of pulp industry in the deep forest. Time and mode of infestation were unknown. She never travelled abroad. There was not enough information for determination of the source of infection.

The patient's parents gave us the proglottids obtained at 2 different times, 2 short proglottids at the first time on December 13, 2011, before praziquantel treatment and 9 short proglottids second time on January 27, 2012, after treatment. The first time given proglottids, they were light yellowish, unpreserved, wider than long, all dead.

The second time given proglottids, they were white, 10% formaldehyde preserved (Fig 1). We noted that most of the proglottids were gravid, with few mature proglottids. All proglottids were longer than wide. This specimen consisted of 2 proglottids, the long one 17 cm and the short 1 cm. The long was broken became 8 short proglottids and all together consisted of 295 segments. An anatomical structure especially the reproductive organs were not studied yet.



Figure 1

Figure 2

The eggs were collected from the gravid proglottids of the first given proglottids. Fresh eggs were spherical, with thin transparent shell, pyriform apparatus, oncosphere, slender hooklets, horn like filaments and two-knob like structures (Fig 2). The measurement of the eggs was not studied yet. Based on the morphologic characteristics decribed (Stunkard, 1940 cit Galan-Puchades *et al*, 2000), the worm was identified as *Bertiella studeri*.

Praziquantel (Tape Worm Tabs) single dose three tablets @23 mg was prescribed and two proglottids (a long and a short) were found in the feces as stated above, and no more proglottids were found after treatment, and the body weight of patient was increased from 9 to 13 kilograms after next three months.

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