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IDENTIFICATION OF Trichuris trichiura WORMS EGGS IN 6-8 YEARS OLD ELEMENTARY SCHOOL CHILDREN AT GKPS PRIVATE ELEMENTARY SCHOOL, SARIBUDOLOK, SIMALIKUTA, SIMALUNGUN

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ABSTRACT

Tricuriasis is an infection caused by the eggs of the Trichuris trichiura worm which is often found in humans, can show symptoms such as diarrhea, anemia, lack of protein energy, weight loss and accompanied by headaches and fever. Trichuris trichiura is an intestinal nematode worm habitat in the human digestive tract, including a group of worms that are transmitted through soil (Soil Transmitted Helmints). Research has been carried out at the Chemistry-Biology Laboratory, Sari Mutiara University. This study aims to identify Trichuris trichiura worm eggs in the feces of elementary school children aged 6-8 years at SD Swata GKPS Saribudolok City, Silimakuta District, Simalungun Regency in 2022.

Keywords: Trichuris trichiura worm eggs, feces, elementary school children

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PRELIMINARY

Worm infection is one of the most common diseases that spreads and infects people throughout Indonesia. Until now helminthiasis is still a problem due to social, economic and scientific conditions in several parts of Indonesia. In general, helminthic infections rarely cause serious illness but can cause chronic health problems, where worms suck human nutrition, making the physical condition weak and weight loss in sufferers. [1]

Worms are generally caused by parasites of the Nematoda class. Habitat in the human digestive tract Nematodes are divided into two classes, namely Intestinal Nematodes and Tissue Nematodes. Among the intestinal nematodes there are several species that are classified as "Soil Transmitted Helminths", namely Nematodes in their life cycle require soil with certain conditions to reach the infective stage..[2]

The most important soil-transmitted helminths nematode that infects humans consists of Ascaris lumbricoides (roundworm). Trichuris trichiura (Whipworm). Strongyloides stercoralis (thread worm) and Hookworm (hookworm), namely Necator americanus and Ancylostoma duodenale. Other species are Trichostrongylusorientalis, Oxyuris vermicularis (pinworms) and Trichinella spiralis. Among the species that are often found in human feces are Ascaris lumbricoides and Trichuris trichiura

*Trichuris trichiura*in Indonesian it is called whip worm or trickuriasis disease. This parasite can infect both adults and children. but usually more often in children, because they do not understand how this worm infection occurs, lack of personal health care, for example the habit of washing hands before eating, eating clean food and drink and defecation habits that are not in place. If flies land on feces containing worm eggs, this can cause a source of infection if they land on food and drink as well as cutlery. The use of feces as plant fertilizer can cause a source of infection, especially if eating vegetables that are not cleanly washed or raw are contaminated with eggs from the soil.[4]

These worms are spread throughout the intestine and rectum. These worms cause bleeding at the attachment site and can cause anemia and lack of protein energy. Sufferers, especially children with severe and chronic Trichuris trichiura infection, show obvious symptoms such as diarrhea with scanty stools containing a small amount of blood, anemia, weight loss and sometimes accompanied by headaches and fever..[4]

An initial survey that was conducted at GKPS Private Elementary School, Saribudolok City, Silimakuta District, Simalungun Regency in children aged 6-8 in that the number of snacks that were not covered raised concerns that the snacks could be contaminated, both wind and wind. those who spread dust containing worm eggs or flies that land on feces containing worm eggs then land on the snacks, after playing the students immediately buy food that is sold outside the school and immediately eat it without wiping or not washing their hands first and it can be seen that the student's fingernails it's long and dirty. It is possible that the habits of students at home also do not

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maintain cleanliness. Lack of understanding of personal hygiene in children causes a high source of worm infection.

RESEARCH METHODS

The research that was conducted was qualitative descriptive in a cross-sectional way. In the examination of feces using the direct method (direct smear)

RESEARCH PLACE

This research was conducted at the Laboratory of Biological Chemistry, University of Sari Mutiara Indonesia, Jl. Captain Muslim No. 79 Medan.

RESEARCH TIME

The time of the research was carried out in September - December 2022.

POPULATION

The population in this study was all the feces of students aged 6-8 years at GKPS Private Elementary School, Saribudolok City, Silimakuta District, Simalungun Regency in 2022, namely 30 female students.

SAMPLE

Samplein this study were the feces of female students aged 6-8 yearsin GKPS Private Elementary School, Saribudolok, Silimakuta , Simalungun Regency in 2022, namely 30 students (the entire population was sample).

RESULTS AND DISCUSSION

Sampling was carried out in October 2022 at GKPS Private Elementary School, Saribudolok City, Silimakuta District, Simalungun Regency. Then the stool samples were immediately brought to the Laboratory of Biological Chemistry at Sari Mutiara University, Indonesia, as many as 30 samples were put in the refrigerator. With the condition of students limp, less clean. and an environment that does not maintain cleanliness, the following results are obtained.

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Table 4.1 Results of Examination of Worm Eggs Using the Direct Method Using 2% Eosin

No	Sample Code	Age	*Trichuris trichiura*	Other Parasites
1	s1	6 years	(+)	(+) Ascaris Lombricodes
2	s2	6 years	(-)	(+) Ascaris Lombricodes
3	s3	6 years	(-)	(+) Ascaris Lombricodes
4	s4	6 years	(-)	(+) Ascaris Lombricodes
5	s5	6 years	(-)	(-)
6	s6	6 years	(-)	(-)
7	s7	6 years	(-)	(-)
8	s8	6 years	(-)	(+) Ascaris Lombricodes
9	s9	6 years	(-)	(-)
10	s10	6 years	(-)	(-)
11	s11	6 years	(-)	(-)
12	s12	7 years	(+)	(+) Ascaris Lombricodes
13	s13	7 years	(-)	(-)
14	s14	7 years	(-)	(-)
15	s15	7 years	(-)	(+) Ascaris Lombricodes
16	s16	7 years	(-)	(+) Ascaris Lombricodes
17	s17	7 years	(-)	(-)
18	s18	7 years	(+)	(+) Ascaris Lombricodes
19	s19	7 years	(-)	(-)
20	s20	7 years	(-)	(-)
21	s21	7 years	(-)	(-)
22	s22	8 years	(-)	(-)
23	s23	8 years	(-)	(+) Ascaris Lombricodes
24	s24	8 years	(+)	(+) Ascaris Lombricodes
25	s25	8 years	(-)	(-)
26	s26	8 years	(-)	(-)
27	s27	8 years	(-)	(+) Ascaris Lombricodes
28	s28	8 years	(-)	(+) Ascaris Lombricodes
29	s29	8 years	(+)	(+) Ascaris Lombricodes
30	s30	8 years	(-)	(-)

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Source: Results of Research Conducted at the USM-Indonesia Biology Laboratory in 2022

Description:
(+) Positive: Found an Egg *Trichuris trichiura*In Code Samples s1,s12,s18,s24 ,dan s29
(-) Negative: No eggs found *Trichuris trichiura* And *Ascaris Lumbricoides*

Table 4.2 Frequency Distribution of Stool Sample Examination Using 2% Eosin

No	Research result	Number of people)	Percentage(%)
1	Negative	16	54%
2	*Trichuris trichiura*	5	17%
3	*Ascaris Lubricoides*	14	46%
4	Total Sample	30	100%

Source: Results of Research Conducted at the USM-Indonesia Biology Laboratory in 2022

Based on the above data from 30 students, it was found that 5 sufferers were infected with Trichuris trichiura eggs (17%). This was because some of these students did not understand about clean and healthy living and most of them had not taken deworming medicine before. The possibility of negative results or the finding of Trichuris trichiura eggs in stool preparations is due to the limitations of the authors in conducting Trichuris trichiura egg-based research, it is thought that they can also be infected with other parasites such as Ascaris lumbricoides

Trichiura trichiura worm eggs were found in preparations with a 10x and 40x magnification microscope using the direct method. If Musca domestica (flies) land on feces containing worm eggs, this can cause a source of infection if it infects food and drink. The use of feces as plant fertilizer can also cause a source of infection, especially if eating vegetables that are not clean, washed or raw are contaminated with eggs from the soil.[5]

From the results of the data table 4.1, it can be obtained that out of 30 class I and II students, 14 were found to be infected with eggs*Ascaris lumbricoides*. Ascaris lumbricoides is a parasite of the Nematoda class that infects humans. The cause of the infection is a lack of personal hygiene, the surrounding environment, for example through vegetables that are not thoroughly washed, eaten raw or originating from cutlery contaminated by feces carried by vectors such as flies that perch on the stool of sufferers, as well as children who like playing on the ground and not washing hands before eating. This causes a person to become infected with the eggs of Ascaris lumbricoides or are called sufferers of Ascariasis.

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Humans infected with protozoa cysts are caused by eating food that has been contaminated by insects such as Musca domestica (flies) in the form of protozoa cysts. Habits are often found in homes with poor hygiene and open food storage.

Prevention of Trichuris trichiura sufferers is maintaining personal health by maintaining personal hygiene. cleanliness of toilets, cleanliness of the environment. washing hands with soap before eating, educating UKS and the importance of overcoming worms that are transmitted through the soil and the need for gradual counseling for students, teachers and parents where special attention is given to preventing infection with worms, especially*Trichuris trichiura.*[6]

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BIBLIOGRAPHY

Dareda, 2011, ***Hubungan antara higiene perongan dengan infestasi cacin usus pada siswa SDN 119 Manado***, Manado: Fakultas Kedokteran Universitas Sam Ratulangit.

Farida, 2013. *PHBS* (Perilaku Hidup Bersih Dan Sehat) Di Sekolah Kelurahan Tuntungan .*Skrips*i. Sumatera.

Hadidjaja Pinardi, Prof. Dr. dr, MPH, dkk, 2011. ***Dasar Parasitologi Klinik***, Edisi Pertama, Jakarta: Fakultas Kedokteran Universitas Indonesia.

Ideham B, 2007, ***Helmintologi Kedokteran***, Surabaya: Airlangga University Press.

Irianto Koes, 2013, ***Parasitologi Medis (Medical Parasitology)***, Cetakan kesatu, Bandung: Penerbit Alfabeta.

Natadisastra Djaenudin, dr., Sp.Park., dkk, 2009, ***Parasitologi Kedokteran (ditinjau dari Organ Tubuh yang diserang)***, Cetakan kesatu, Jakarta: Penerbit Buku Kedokteran.

Notoatmodjo Soekidjo, 2010, ***Metodologi Penelitian Kesehatan***, Jakarta: Rhineka Cipta.

Onggowaluyo JS, 2002, ***Parasitologi Medik I***, Edisi Pertama, Buku Kedokteran EGC, Jakarta:1-17.

Yunita, Ardiansyah. 2019. Identifikasi Telur Cacing Soiltransmitted Helmint Pada Feces Anak Sd Inpres 094151 Parapat Kabupaten Simalungun. Vol 4 No 2: Jurnal Analis Laboratorium Medik

Yunita. 2016. Identifikasi Telur Enterobius Vermicularis Pada Anal Swab Anak Usia 3-5 Tahun Di Desa Singkil Kecamatan Singkil Kabupaten Aceh Singki. Vol 1 No 1: Jurnal Analisis Laboratorium Medik

DOI: https://doi.org/10.51544/jalm.v7i2.3462