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Research Article

**PREVALENCE OF PARASITIC INFECTIONS IN PATIENTS  
PRESENTING TO MAYO HOSPITAL LAHORE****<sup>1</sup>Dr. Farwa Nazir, <sup>2</sup>Dr. Muhmmad Kamran Ijaz, <sup>3</sup>Dr Hifza Rani**<sup>1</sup>District Headquarter Hospital Khushab<sup>2</sup>District Headquarter Hospital Khushab<sup>3</sup>Independent Medical College Faisalabad**Abstract:**

**Objectives:** The objective of this research work was to conclude the occurrence of infections caused by parasites in the patients of Mayo Hospital Lahore. This research work was conducted in the summer season in the year of 2017.

**Methodology:** Direct examination, concentration of formalin ether and Ziehl-Neelsen staining of the stool samples carried out. For the identification of the *stercoralis strongyloides*, the culturing of the stool samples carried out on NAM (nutrient agar medium).

**Results:** The examination of two hundred and five patients carried out. More than twenty-nine percent patients found infected from only one parasite. The percentages were as follows: *Blastocystis* was about 20.9%, *Giardia lamblia* was more than five percent, *Iodamoeba* was only 0.48%, *Dientamoeba fragilis* was also 0.48%, *Trichomonas hominis* was also 0.48%, and *Endolimax nana* was about one percent. Both *Enterobius vermicularis* & *Taenia* were 0.48%.

**Conclusion:** The outcome of this study showed the importance of the infection caused by *Giardia* in children with its specific signs. 76.74% patients of infection caused by *Blastocystis* have showed the signs of intestines complications. More research works are required to detect the association of *B hominis* and its related symptoms.

**Key Word:** Parasite, giardia, infection, complications, blastocystis, NAM.

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**INTRODUCTION:**

Most of the problems of gastro intestines like lack of body weight, pain in the abdomen, vomiting, no hunger, diarrhoea and sometimes mental abnormalities are the results of the infections caused by parasites [1]. The parasitic infections are the major health problem in the countries which are under development especially in areas of tropical & sub-tropical regions [2]. Various aspects as unclean health surroundings, poor economic status, weather and overcrowding of people in small areas are the main reasons on increasing the infections caused by parasites. Discrimination of parasitic means is very vital level for the start of proper treatment and prevention from these complications.

So, proper health condition in the communities and detection of the diseases are of vital importance. Surveys on the development and causes of diseases conducted in various countries had proved that the occurrence of the infections caused by parasites increases in summer season due to the increase in temperature and utilization of the water reservoir in large quantity which are very dangerous due to pathetic sanitary state. So, the research works on such topics are very necessary for the creation of the methods which can control this problem. Priorities of the case studies in the countries which are under development include the study condition of the infections of intestines. The main purpose of this research work was to conclude the occurrence of infections caused by parasites in the people who were referred to Mayo Hospital Lahore during summer season of the year 2017 for the help of the authorities of the health departments to start the treatments and prevention programs to tackle the infections caused by parasites.

**METHODOLOGY:**

The stool samples of two hundred and five patients who were admitted in Mayo Hospital Lahore in the year of 2017 were gathered for the examination of the cause and types of the parasites. A special form was

in use for the each and every participant in which the information such as gender, age, the availability of the intestine infection signs and complaints of the participants was filled by the participants of the research work. These stool samples were sent to the special laboratory of parasitology. For the discovery of the ova of parasites, cysts of protozoa, various types of protozoa, the method which was in use was the direct microscopy [1].

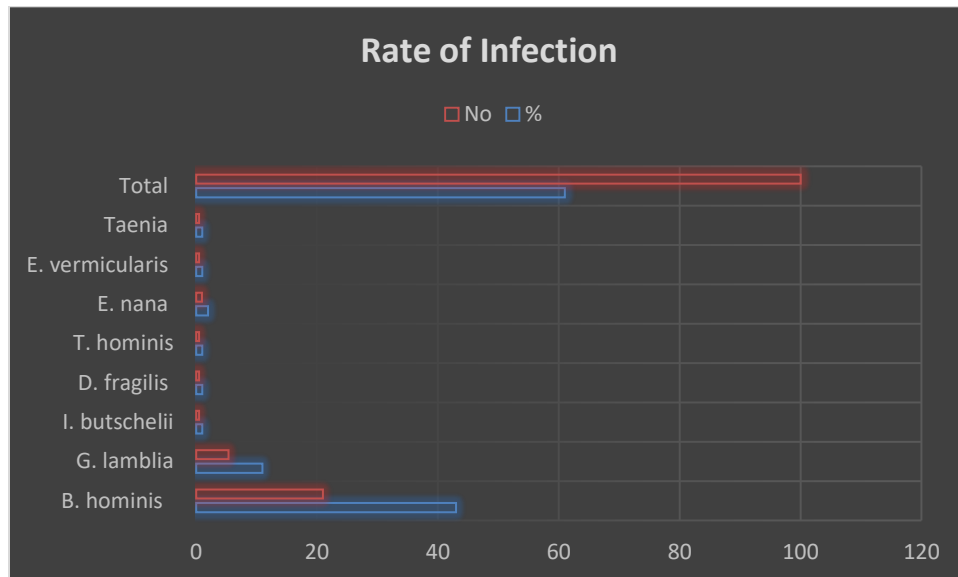
In the following step, to know the concentration in the collected samples, the concentration method of formalin ether was performed following the complete roles of protocol of Garcia [1]. Coccidial detection carried out with the help of staining with Ziehl-Neelsen [1], in addition to the above mentioned methods. For the detection of strongyloides stercoralis, four grams of the faeces was placed on the upper layer of the nutrient agar plate and parafilm was used for its sealing to avoid any type of blemish. After forty-eight hours and for seven continuous days the plates were under consideration larva and young conditions of worms, nematodes.

**RESULTS:**

Two hundred and five faecal samples examination carried out in which ninety-five were from the male participants and one hundred and ten were from the female participants. Forty-three participants were children having less than twelve year of age and one hundred and sixty-two were the young participants. One hundred and fifty-five participants had the symptoms of infections in the intestines. The outcome of the research work showed that sixty-one patients out of two hundred and five participants had the infection of at least one type of the parasite affecting the intestines.

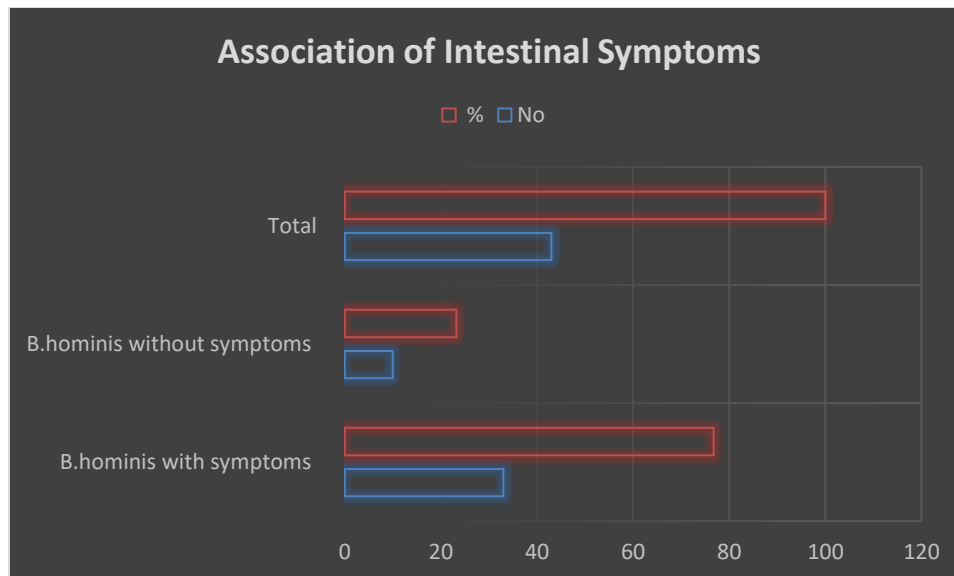
The frequency of each parasite infection is available in Table-1 as per the outcome of this research work. The parasite, which was most prevalent, was Blastocystis hominis, it was constituting about twenty-one percent of the totals.

Parasite Subjects	No	Percentage
B. hominis	43	20.97%
G. lamblia	11	5.36%
I. butschelii	1	0.48%
D. fragilis	1	0.48%
T. hominis	1	0.48%
E. nana	2	0.97%
E. vermicularis	1	0.48%
Taenia	1	0.48%
Total	61	100



There were eight children and thirty-five young participants among the thirty-three people affected from this particular parasite, overall thirty-three participants had the symptoms of infections caused by parasites as mentioned in Table-2 as pain in the abdomen and dysentery complication. Giardia lamblia was 2<sup>nd</sup> most infection creating parasite. The victims of this parasite were eleven, all eleven participants were children with less than twelve year of age and they were displaying the complications of intestine problems.

	B.hominis (symptoms)	B.hominis (without symptoms)	Total
No	33	10	43
Percentage	76.74	23.25	100



### DISCUSSION:

In this research work, about thirty percent of the participants had the infection of the intestine due to parasites. There was not any association present between the age and sex of the participants having infection of parasites in intestines. Infections due to Protozoa were very higher than the infections caused by the helminthes. The occurrence of the helminthes in the intestines had decreased to much as compared to the past many years [2-6]. Parasites of helminthes & protozoa were most prevalent according to a study carried out by Rezaeian in the year 1986 who described that about fifty-four percent infection was caused by the parasites of intestines (about 18.3% due to helminthes & forty-five percent due to parasite of protozoa) in the patients transferred to the Tehran Medical University from 1980 to 1983 [7]. In this research work, all the patients of Giardiasis were children having less than twelve year of age. This is very much similar to various other research works [1, 2], describing the higher occurrence of this particular parasite in the small age patients and its association with the complications of the intestines in this group of small age patients.

The most common parasite of causing infection was *B. hominis*. Yazici carried out a research work in 2007 on fifty-eight food workers in the hospitals of Aydin located in Turkey with the same outcomes [8]. Shahbazi concluded the complete opposite results in his research work carried out on seven hundred and fifty-five patients in which he concluded that only 1.6% infection was caused by this particular parasite in the non-urban areas of Saveh in the Markazi Province of Iran [5]. These opposite outcomes are because of sample groups which were chosen from a

population in the research work of Shahbazi conducted in 2006 [5], but in this research work it was on those patients who were transferred to the hospitals, most of the participants were displaying the medical signs. In this research work, only thirty-three participants displayed the medical signs among the total infected patients with the parasite of *B. hominis*.

we conclude in his research work which conducted in 2017 on twenty-three patients with medical signs, parasite of *B. hominis* was the only reason of those signs [9]. Dogan in 1998 described in his research work that all the eighty-eight patients suffering of the parasite of *B. hominis* had medical signs such as pain in the belly and lack of hunger [10]. But the infection due to this particular parasite is still a controversial issue [1, 11].

### CONCLUSION:

The outcome of this research work support the role played by this particular parasite in the creation of the infection in intestines. Future research works on the large populations are, especially on the people suffering of infection from this particular parasite, in need which will modify our information about the association of this particular parasite of *B. hominis* and its related medical signs.

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