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Prevalence of intestinal parasitic infections among patients attending al 'ahwar sector in Nasiriyah City southern Iraq

***Nuha J.. Alrikaby;**Alyaa Abed Al-Hussein Hafedh;*Athraa ooda Hussain;*Noor Ali Badur AlAssady;**

***Bio. Dept. Coll. Sci. – Thi- Qar Univ.**

Pathological analysis Dept. Coll. Sci. – Thi- Qar Univ.**

Emails: Nuha_bio@sci.utq.edu.iq,

athraa.hussain_bio@sci.utq.edu.iq

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Abstract

Gastrointestinal helminthes and protozoan parasites can cause ,acute and chronic human infections , There is inadequate reliable studys on the epidemiology of these parasites among patients attending al 'ahwar sector in Thi- Qar province . This study was conducted using health centers data obtained from al' ahwar Laboratories Unit.

A total of 801 stool samples were recorded from January 2017-December 2017. Intestinal parasitic infections were recovered in 40.7% (326) of the stool samples . The commonest pathogenic parasite was *Entamoeba histolytica* . the prevalence of this protozoon 25.2%, then the nematode *Enterobius vermicularis*, the prevalence of this helminthes was 10.9%. finally the protozoon *Giardia lamblia* the prevalence was 4.6%.

Keywords: helminthes, protozoa, epidemiological study, Thi-Qar.

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انتشار الطفيليات المعوية بين المرضى المراجعين لقطاع الأهوار لمدينة الناصرية جنوبي العراق.

***نهى جبار عبد الركابي ;**علياء عبد الحسين حافظ ;*عذراء عودة حسين ;*نور علي بدر الاسدي; *بسعاد عقرب العبودي**

*** قسم علوم الحياة , كلية العلوم , جامعة ذي قار,** قسم التحليلات المرضية , كلية العلوم , جامعة ذي قار**

الخلاصة

تسبب الديدان المعوية والطفيليات الابتدائية إصابات حادة ومزمنة للإنسان كما انه ليس هناك دراسات وبائية كافية لتلك الطفيليات للمرضى المراجعين لقطاع الاهوار في محافظة ذي قار اذ استندت هذه على البيانات المستحصلة من وحدة مختبرات الاهوار.

جمعت 801 عينة خروج من شهر كانون الثاني 2017 الى كانون الاول 2017 ,ظهرت نسبة الاصابة بالطفيليات المعوية (326) 7.40% وكانت اكثر الطفيليات المعوية انتشارا هي *Entamoeba histolytica* اذ كانت نسبة اصابته 25.2% ثم الدودة الخيطية *Enterobius vermicularis* اذ كانت نسبة اصابته كانت 10.9% واخيرا *Giardia lamblia* كانت نسبة انتشاره 4.6 %

Introduction

Intestinal helminthes and protozoan parasites consider important public health problems in developing countries (Handzel *et al*.,2003).

The prevalence of many kinds of parasitic infections depends upon environmental ,social and economical factors (Reeder,1994).

Various surveys have shown that parasitic infection can cause malabsorption, diarrhea and stopped growth of people (Musaiger,1989)

Intestinal parasites are transmitted through fecal contamination of water, soil and food or through poor hygiene and living conditions (Bauer *et al*., 1974).

Protozoan parasites more commonly caused gastrointestinal infections compared to helminthes, Intestinal parasites cause a significant morbidity and mortality in endemic places.(Cappello,2004)

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The aim of this study was to determine the frequency of intestinal parasitic in population referred to the health centers in Thi-Qar province , Southern of Iraq.

Materials and Methods

The study was conducted at Sayed Dakhil Health Center, main al'iislah Health Center, typical al'iislah Health Center, Al-Zahra Health Center, Dr. Nawal Daddoush Health Center,main alfuhud Health Center, typical alfuhud Health Center, alhayu aleaskariu Health Center, aleamayara Health Center, alshahid taseid al'asadi Health Center and albaqir ealayh alslam Health Center. All these health centers return to Marshlands sector south of Dhi-Qar.

The data covered the period of 12 months from January 2017 to December 2017. The routine stool examination method was a direct smear.(WHO,1991).

Results

The total prevalence is 40.7%, the total tested samples is 801 and infected samples is 326 (table 1)

Table 1: The numbers of examining and infected persons and intestinal parasites prevalence

No. of examining	No. of infected	Prevalence %
801	326	40.7

Overall the protozoan infections with amoebiasis 25.2% were higher than the helminthes infections with enterobiasis 10.9% while the giardiasis 4.6%.table 2

Table 2: The number of infected persons and type of intestinal parasites prevalence

Type of infection	No. of infected	Prevalence%

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Enterobius vermicularis	**87**	**10.9**
Entamoeba histolytica	**202**	**25.2**
Giardia lamblia	**37**	**4.6**

40.7% (326) Table 3

Table 3: The prevalence of parasitic infection among the months of year

months	No. of examining	Prevalence with **Enterobiasis**	**Prevalence Amebiasis with**	**Prevalence with Giardiasis**
January	73	15.2	27.5	4.5
February	60	9.5	17.2	0
March	62	11.6	48.8	9.2
April	79	15	32.2	4.2
May	74	0	86	13.8
June	35	29.6	55.5	14.7
July	50	13.4	0	29.2

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August	62	20.3	18.4	0
September	57	12	22.9	5
October	68	21.6	15.2	0
November	109	4	30	3
December	73	23.3	28	1.5
Total	801	10.9	25.2	4.6

Males was more infected 24% than females 16.7% table 4

Table 4: Distribution of parasites in relation to gender

	Male	Female
No. of infected	192	134
Prevalence %	24	16.7

Discussion

The infection of intestinal parasitic are endemic worldwide and remain noteworthy public health worry in many tropical and subtropical countries

The total infection rate in the current study is 40.7%, which is an approach to what is recorded in(Al -Mozan ,2011 and Alrikabi,2006)

As the results of this study showed that *Entamoeba histolytica* was the most common in intestinal parasites 25.2%.

This is due to the direct transition through food and water contaminated with mature cysts (Abu-madi *et al.*,2008) and insufficient attention to hygiene and poor treatment for drinking water due to the scarcity of materials used in water sterilization ,also eat non-washing fruits and vegetables leads to

increased proportions., and flies and cockroaches serve as vector of this parasitic protozoa ((Zeibig,1997).

Giardia lamblia was 4.6%,This parasites is one of the most prominent parasites affecting children because of the transition during the play contact and exchange of food and decrease their natural immunity.,

E. histolytica and *G. lamblia* cysts are resistant to chlorine which consider disinfectant . (Tsuyuoka *et al.*, 1999)

E. vermicularis 10.9% is one of the common children worms infections especially in crowded areas like orphan and schools (Prince,1998).

amoebiasis 25.2% were higher than the helminthes infections with enterobiasis 10.9% while the giardiasis 4.6%.table 2which might be due to more outdoor activities of males .

This result is agreement with the results of the study done by (Shrestha *et al.*,2012)

Conclusion

The prevalence of intestinal parasites in this study was 40.7% (326) amoebiasis 25.2%were higher than the helminthes infections with enterobiasis while the giardiasis was the less and the consumption of contaminated food and water and poor hygiene were important factor to increased

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