



**INTESTINAL PARASITE RECORDS IN KHARTOUM HOSPITALS
(CHINESE FRIENDSHIP AND IBN SIENA HOSPITAL)**

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<p>Article Info Received 15/01/2016 Revised 27/02/2016 Accepted 2/03/2016</p> <p>Key words: China Friendship, Ibn Siena hospital, Khartoum.</p>	<p>ABSTRACT Diagnosis records from daily entry books at the China Friendship and Ibn Siena hospital in Khartoum state was compiled and converted into monthly and annual data of 2011, 2012 and 2013. Routine diagnosis was by fecal smear or the current method of formol ether concentration. The data was processed with respect to gender and age the results showed annual fluctuation of referred fecal samples and erratic presence of <i>Ancylostoma duodenale</i> Schistosoma and Taenia. At China Friendship Hospital 2986, fecal samples were in records diagnosed 225 <i>Entamoeba histoletica</i>, 394 <i>Giardia lambilia</i>, and 134 <i>Ancylostoma duodenale</i>. At Ibn Siena hospital the total fecal samples received in three years was 818, <i>Entamoeba histoletica</i> was diagnosed in 44 cases and <i>Giardia lambilia</i> in 58, 42 samples were positive for Schistosoma and 4 cases of <i>Taenia saginata</i> were reported. Parasites were more prevalent in males than female and in above 26 years, Both China friendship and Ibn Seina hospitals were located at urban localities were personal and environmental hygiene status were less conducive for parasitic infections. Both hospitals were accessible for displaced and refugees and people in marginal communities were referred to specialists.</p>
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INTRODUCTION

Records keeping in daily diagnosis are the only efficient means of assessment of situation on endemic and epidemic diseases It is of less expense when well established learnt by technicians and implemented by health authorities. The record keeping, assessment compilation could be utilized as reference data for endemic parasitic diseases and the overall health and hygiene status. At present this process is poorly attended though intestinal parasites have a major effect on nutritional deficiency child growth secondary infections and bowel syndrome. In many countries most of efforts were towards malaria and schistosomiasis with little awareness on the impact of intestinal parasites. The Sudan with its wide area (2000 square km) bordering 9 countries ecological diversity has share a wide spectrum of parasites in the Afrotropical funa. The classical distribution trends of parasites had changed as a result of demographic changes enhanced by wars and

drought. The influx of war and drought affected towards big cities posed extra burden to health authorities. Therefore an efficient organized and well attended laboratory system is required. The situation of hospital diagnosis record has to be reviewed with the aim of evaluation and in order to highlight the species of intestinal parasite among current causes of intestinal disturbances Helminth and protozoa highly endemic in low socio-economic societies transmitted through oro-fecal, skin penetration of larvae or indirectly by consuming infected meat or contaminated food. In some hospital In Africa Middle, Near East and India processing of parasite diagnosis data in retrospective form was adopted Khalif (2006) and Abouty (2004). This study was based on evaluation of parasite diagnosis records of laboratory diagnosis of intestinal parasite and a review of techniques in two referral hospitals.



MATERIALS AND METHODS

Prevalence of human intestinal parasites among in-patients lab records in China friendship and Ibnseina Hospitals was compiled the daily records was converted to monthly data and the annual number of each parasite species. The data covered the years 2011, 2012 and 2013.

Study area

The study was conducted at China Friendship and Ibnseina hospital, they are both referral hospitals China Friendship Hospital is located in Omdurman in Ombada locality but provide a national medical care. Ibnseina referral hospital is situated at about 5 km south of the city center of Khartoum in ALamarat locality; both hospitals provide highly specialized medical services and also had an outpatient clinics.

The study examined sample records of laboratory result contained in paper notebooks of daily diagnosis. The method adopted was direct smear and 10% formol ether concentration technique (WHO, 1991). All stool sample records were examined and positive results for helminthes eggs, larvae and protozoan cyst or trophozoite infections were recorded. Variations in distribution patterns of positive stool samples between sex and age were determined. The prevalence of infections was reported in proportions. Chi-square test (χ^2) was used to compare relative frequencies between groups (sex and age). Data analysis was conducted using SPSS version 11.5 (SPSS Inc, Chicago, Illinois).

RESULTS

Compilation of diagnostic records of hospital attendants suffering from diarrhea in the years 2011,2012 and 2013 the Chinese Friendship hospital showed that the number of attendants was 354,75 were diagnosed as *Entamoeba histoletica* ,50 were diagnosed as *Giardia lambilia* and 67 were suffering from bacteria and other causes. *Entamoeba histoletica* was common in males over 26 years and *Giardia lambilia* was more in males of 16-25. 2012 data showed 1761 cases in records *Entamoeba histoletica* was 139,d 134 case of 323 *Giardia lambilia* and 134 cases were *Ancylostoma duodenale* and 717 were diarrhea of other causes. Gender and age distribution showed that *Giardia lambilia* and *Entamoeba histoletica* were both common in males above 16 years *Ancylostoma duodenale* was reported in all age groups but it was more in males above 26 years.2013 showed more less attendants in record 540, 9 positive for *Entamoeba histoletica* and 21 from *Giardia lambilia* the rest suffered from other cause.

Parasite diagnosis records at Ibnseina hospital,340 attendants were referred to the laboratory in 2011,4case were registered for *Entamoeba histoletica* and 21 for *Giardia lambilia*. 2012 ,224 cases were referred to the lab.7, 9 and 42 were consecutively positive for *Entamoeba histoletica*, *Giardia lambilia* and Schistosomes. In 2013, 204 attendants were referred for diagnosis,33 case where *Entamoeba histoletica* and 14 positive for *Giardia lambilia*. *Entamoeba histoletica* and Schistosomes species were not specified .

Table 1a. Parasite diagnosis records at Chinese Friend Hospital (2011)

Costive Month	<i>Entamoeba histoletica</i>	<i>Giardia lambilia</i>	<i>Schistosoma</i>	<i>Teania Spp</i>	Others	Bacteria	Total positive	Total
January	7	2	-	-	-	11	20	30
February	5	12	-	-	-	2	19	27
March	2	7	-	-	-	-	9	19
April	5	4	-	-	17	-	26	45
May	12	1	-	-	8	-	21	40
June	3	8	-	-	8	-	19	33
July	9	4	-	-	5	-	18	40
Augustus	11	2	-	-	3	3	19	39
September	4	9	-	-	2	1	16	21
October	10	-	-	-	5	-	11	24
November	1	1	-	-	1	-	3	15
December	10	-	-	-	1	-	11	21
Total positive	75	50	-	-	50	17	192	354

Table 1b. Parasite diagnosis records at Chinese Friend Hospital (2012)

Costive Month	<i>Entamoeba histoletica</i>	<i>Giardia lambilia</i>	<i>Schistosoma</i>	<i>Teania Spp</i>	<i>Ancylostoma duodenale</i>	Others	Bacteria	Total positive	Total
January	5	29	-	-	8	11	55	108	152
February	9	20	-	-	3	2	60	94	106
March	10	27	-	-	5	7	37	86	135
April	9	25	-	-	7	3	80	124	125



May	8	33	-	-	12	2	16	71	174
June	7	19	-	-	9	2	77	114	133
July	7	23	-	-	2	16	81	129	150
Augustus	28	30	-	-	10	5	63	136	167
September	16	34	-	-	25	9	72	156	206
October	20	25	-	-	13	6	44	108	112
November	12	31	-	-	23	9	32	107	185
December	8	27	-	-	17	1	27	80	116
Total positive	139	323	-	-	134	73	644	1313	1761

Table 1c. The distribution of internal parasite diagnosis records with respect to gender and age (Chinese Friend Hospital Specialized Hospital 2011)

Causative	Total number	Gender		Age group			
		Male	Female	(5-15)	(16-25)	(26-45)	(more than 45)
<i>Entamoeba histoletica</i>	75	35	40	2	20	43	10
<i>Giardia lambilia</i>	50	38	12	7	25	13	4
<i>Schistosoma</i>	-	-	-	-	-	-	-
<i>Taenia Spp</i>	-	-	-	-	-	-	-
<i>Encylostoma Duodenale</i>	-	-	-	-	-	-	-
Others	50	25	25	13	20	6	11
Bacteria	17	5	12	3	10	2	5

Table 2a. Internal parasite records at Ibnseina Specialized Hospital (2011)

Costive Month	<i>Entamoeba histoletica</i>	<i>Giardia lambilia</i>	<i>Schistosoma</i>	<i>Teania Spp</i>	<i>Encylostoma Duodenale</i>	Other	Bacteria	Total positive	Total
January	-	5	1	-	-	2	-	8	28
February	-	2	1	-	-	5	-	5	17
March	-	1	1	-	-	7	-	7	16
April	2	-	-	-	-	9	-	9	22
May	-	1	2	-	-	6	-	6	28
June	1	1	-	-	-	4	-	8	31
July	-	5	-	-	-	3	-	14	36
Augustus	-	3	-	-	-	4	-	7	18
September	-	8	-	-	-	6	-	9	30
October	1	7	-	-	-	3	-	8	23
November	-	1	2	-	-	8	-	15	19
December	-	1	-	-	-	4	-	11	22
Total positive	4	35	7	-	-	61	-	107	390

Table 2b. Parasite diagnosis record at Ibnseina Specialized Hospital (2012)

Costive Month	<i>Entamoeba histoletica</i>	<i>Giardia lambilia</i>	<i>Schistosoma</i>	<i>Teani aSpp</i>	<i>Encylostoma Duodenale</i>	Others	Bacteria	Total positive	Total
January	-	1	2	-	-	6	-	9	12
February	-	1	-	-	-	4	-	5	7
March	-	-	4	-	-	8	-	12	19
April	-	-	8	-	-	9	-	17	22
May	5	2	5	1	-	12	-	25	30
June	-	-	7	-	-	8	-	15	23
July	2	-	7	-	-	4	-	13	17
Augustus	-	1	2	-	-	1	-	19	28



September	-	-	4	-	-	6	-	10	24
October	-	2	3	-	-	6	-	13	15
November	-	1	-	-	-	8	-	10	13
December	-	1	-	-	-	9	-	8	14
Total positive	7	9	42	1	-	97	-	156	224

Table 2c. Parasite diagnosis records at Ibnseina Specialized Hospital (2013)

Costive Month	<i>Entamoeba histoletica</i>	<i>Giardia lambilia</i>	<i>Schistosoma</i>	<i>Teani aSpp</i>	<i>Encylostoma Duodenale</i>	Other	Bacteria	Total positive	Total
January	2	1	-	-	-	15	-	18	20
February	3	-	-	-	-	9	-	12	14
March	-	2	-	-	-	11	-	13	15
April	-	1	-	1	-	5	-	7	9
May	7	-	-	-	-	4	-	11	15
June	6	5	-	-	-	7	-	18	20
July	3	5	-	-	-	24	-	32	36
Augustus	8	-	-	-	-	8	-	16	18
September	1	-	-	2	-	12	-	15	17
October	3	-	-	-	-	16	-	19	21
November	-	-	-	-	-	10	-	10	10
December	-	-	-	-	-	9	-	9	9
Total positive	33	14	-	3	-	130	-	180	204

Table 2d: The distribution of internal parasite diagnosis records with respect to gender and age (Ibnseina Specialized Hospital 2011)

Causative	Total number	Gender		Age group							
		Male	female	(5-15)	(16-25)	(26-45)	(more than 45)				
<i>Entamoeba histoletica</i>	4	1	3	-	-	1	-	2	-	1	-
<i>Giardia lambilia</i>	35	17	18	7	8	5	6	4	2	1	2
<i>Schistosoma</i>	7	5	2	2	1	3	1	-	-	-	-
<i>Taenia Spp</i>											
<i>Encylostoma Duodenale</i>											
Others	61	39	22	15	6	13	6	4	7	9	3
Bacteria											

Table 2e. The distribution of parasite diagnosis records with respect to gender and age (Ibn Seina Specialized Hospital 2012)

Causative	Total number	Gender		Age group							
		Male	Female	(5-15)	(16-25)	(26-45)	(more than 45)				
<i>Entamoeba histoletica</i>	7	5	2	-	-	3	1	2	1	-	-
<i>Giardia lambilia</i>	9	6	3	2	1	3	1	1	1	-	-
<i>Schistosoma</i>	42	37	5	17	1	9	2	11	2	-	-
<i>Taenia Spp</i>	1	1	-	-	-	-	-	-	-	-	-
<i>Encylostoma Duodenale</i>	-	-	-	-	-	-	-	-	-	-	-
Others	97	57	40	24	16	18	14	8	8	7	2
Bacteria											

DISCUSSION AND CONCLUSION

The present work is intended to indicate the importance of compilation daily laboratory diagnosis data and establishment of database in referral hospitals and health centers and information system similar retrospective reviews were done in a district hospital in Ghana and they

found that *Glambilia* was the major cause of childhood diarrhoea, Nkrumah and Nguah (2011). A retrospective work done by Khalifa (2006) in Saudi Arabia it was found that intestinal parasites infection was in decline, more prevalent in none Saudi. They developed a system of pre-



employment medical check they found that the occurrence of intestinal parasites in non Saudis was 55%, Emad and Hytha(2003) the parasites recorded were T.trechura and Hookworms, Blastocystism, Endolimax, Emad and Hytham(2003).

A retrospective search 1995—2004 in Gaza(Palestine) showed changing trends in the frequency of parasite infection but a steady average of 70% E, histolytica, 10% G.lambliia and 14% A. lumercoides. H.nana, E vermacularis, tricurua, Stroglyoides an T.saginata were of less occurrence About et al(2004).A similar work in Tanzania,+at a rural Medical Centre showed 25%

infection with Hook worms,9.6 E histolytica and dispar,6% Gambli Mazico et al (2006).Some workers In the Sudan showed Entameba and Giardia to be the most common in diagnosis records in urban hospitals. In Jordan Fadel (2001) studied prevalence and seasonal incidence of intestinal parasites form 1996—2000 in Khan Younis, the most common ones were E, histolytica G. lamblia and A.lumbercoides. Rajiv Singh *et al* (2013) reported 6.9% and 58% were consecutively E.histolytica and G.lambliia.

These studies indicated a recent awareness of hospital diagnosis record in obtaining endemicity or epidemiological for use in treatment and control strategies

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