

Part IV

R E S U L T S

Prevalence of Giardia infection:

To study the prevalence of Giardia lamblia infection a random sample of 200 children aged 1-12 years attending the inpatient clinics of Banha university hospital for various diseases were chosen for the present study.

Out of these 200 cases ,55 cases (27.5 %) had their stool samples positive for Giardia cysts or trophozoites. Of these 55 positive cases, 35 were males (26.92%) and 20 cases were females (28.57%).

According to age group, 130 cases were belonging to the preschool age (1-5 y.) of them 41 cases were found positive (31.53%). Similarly 70 cases were belonging to the school age (6-12 y.) and out of them 14 cases (20%) were positive. (Table 1 & Fig 3). The youngest patient was a male 3 months old and the eldest was a female aged 12 years.

The presenting symptoms of giardiasis:

Out of 55 children infected with Giardia 12 (21.82%) were asymptomatic and the infection was discovered only during routine stool examination.

Some patients were apparently asymptomatic, but with careful history they were found to have symptoms related to giardiasis e.g anorexia, foul stool. The symptoms were

very mild and intermittent . Mothers were accustomed to such symptoms and did not seek medical advice.

Symptoms ascribed to *Giardia lamblia* infection met with in the present work are shown in table (3) From the results obtained in table ( 3 ) it is apparent that the commonest symptoms encountered in a descending order were :

1- Foul stools:

It was the most frequent presenting symptom met with in this work. Out of 55 cases ,43 (78.18%) were having foul stools. According to age group this complaint was the most frequent symptom in the preschool children (80.48%) and the school children (71.42%) tables ( 4 & 3 ).

2- Anorexia:

Anorexia was encountered in (61.81%) of the total examined cases. It was met with in 60.97% of the preschool children & in 64.28% of the school children (table 4 & 5). It was ranging from mild anorexia to complete abstinence of taking food especially in young children.

3- Abdominal pain:

It was the presenting symptom in 45.45% of the total 55 cases. It accounts for 48.78% in the preschool children and 35.71% in the school children.

In the present work young children complained usually of pain spreading all over the abdomen in the form of dull aching or vague pain, older children could localize the pain to the transverse colon, epigastrium and colonic flexures especially the hepatic one. It was commonly in the form of repeated attacks of colic but sometimes dull aching.

#### 4- Diarrhea:

Out of 55 cases, 25 cases (45.45%) were having diarrhea. Diarrhea was the presenting symptom in 21 cases in the preschool age (51.12%) and in 4 cases (28.57%) in the school age (tables 4 & 5).

During the period of diarrhea stools were mostly loose offensive, containing, undigested food and some mucus. Blood and pus were found in 3 cases (12%) out of 25 cases and their stool examination showed only *Giardia lamblia*. The diarrheal stools were either yellowish brown or yellowish green which might be attributed to the nutritional elements received by the children.

Watery diarrhea was present in 4 cases (16%) of the total (table 6). The frequency of motions was ranging from 1 to 7 times per day. The period of diarrhea lasted from 1 to 15 days with an average of 3 days and was sometimes self-limited. Usually the children were presented with mild enteritis. At times diarrhea was so severe, especially in very young children, that fluid and electrolyte

therapy were indicated.

Stools in periods other than diarrhea were offensive, formed, containing mucus, some undigested food especially greasy substances. Sometimes mixed with some pus but no blood.

5- Flatulence:

this complaint was met with in 23 cases out of 55 cases (41.81%). It was usually described as a sense of fullness and distension especially after eating and caused the child oftenly to pass flatus.

This symptom was markedly obvious in the preschool children affecting 22 out of 41 (53.65%) while it was noticed in only one case out of 16 cases in the school children (7.14%).

6- Tenesmus:

It was encountered in 14 case out of 55 (25.45%). Also it was more obvious in the preschool than the school children.

7- Weight loss:

It was observed in 12 cases (21.81%) out of total 55 cases. It was evident in both the preschool children being noted in 9 cases (21.95%) and in the school children being found in 3 cases (21.42%) tables (4 , 5 , 7).

8- Diarrhea alternating with constipation:

This complaint was frequently reported as a past history for many patients. Unfortunately most of them did not have stool examination at such times, so one can not tell whether it was due to Giardia or other parasites.

In the present work this symptom was accidentally met with in 9 cases (21.95%) of the preschool age and in one case (7.14%) in the school age group.

9- Vomiting:

It comprised 12.72% of the symptoms. It was usually mild and easily controlled. Severe vomiting and abdominal distension were the presenting symptoms of a male baby 6 months old-surgical conditions were carefully excluded. The baby received fluid therapy and treatment of giardiasis and his condition improved by time.

10- Constipation:

Out of 55 case, 5 cases (9.09% ) were complaining of constipation.

Eosinophilia:

According to Forfar and Arneil (1978) eosinophilia can be considered if the eosinophilic count is above 2-3% in age group 6 m-6 years and if above 1-6% later on.

In the present work out of 47 patients infected with only Giardia 14 cases (30.9%) were found to have eosinophilia. Mixedly infected cases were excluded (table 2).

#### Anemia:

According to Vaughan et al. , (1979) the normal hemoglobin between 6 months-6 years is 10.5-14 gm% with an average of 12 gm% and from 11-16 gm% with an average of 13 gm% , in the age group from 7-12 years. Below this levels anemia may be considered. Anemia was the only presenting feature in a girl 10 years old. The different causes of anemia were thoroughly excluded. Stool examination was done repeatedly with different techniques and Giardia lamblia cysts and trophozoites were the only detected parasite. This patient received blood transfusion and anti-Giardia chemotherapy and improved within months.

#### Treatment of Giardiasis:

Flagyl was the most available drug in the inpatient clinic and hence it was given to all cases included in the present work. It was given in a dose of 20 mg/kg/day for a period ranging from 7-10 days.

The second stool examination was performed after