

THE INCIDENCE OF LAMBLIASIS AMONG SCHOOL CHILDREN IN CAIRO

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Lamblia intestinalis, or *Giardia lamblia*, is a flagellate protozoan which inhabits the duodenum and the jejunum. It is generally found in countries with warm to temperate climates, often associated with substandard living conditions, and is transmitted most frequently through direct personal contact as well as by houseflies and contaminated food or water.

Carrier rates vary in different countries. A survey was done among the children of an industrial area in America and 48 per cent were found to be infected. A 20 per cent incidence, or even more, is not uncommonly recorded.¹

The every-day experience of many physicians shows that this flagellate is frequently found in the stools of children with diverse abdominal complaints. Although seldom directly implicated as the source of the complaints, one author (cited by Nelson)² has reported a significant number of children freed of symptoms (manifestations of the celiac syndrome) after elimination of the parasite through treatment. It was felt by him that this was proof that *Giardia lamblia* was the underlying causal agent.

This led us to investigate the causes of intestinal troubles among school children in Cairo.

Children attending the School Medical Unit were examined and their stools were analyzed to find out the reason for their recurrent attacks of diarrhea and their flatulent dyspepsias which led to many general symptoms including weakness, inability to work, and pallor.

It was found also during this study that the incidence of infection with both *Lamblia* and *Endamoeba* differed according to the season of the year, being higher in summer than in winter and for obvious reasons.

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The results of the stool examinations of 1600 students carried out during the summer season of the year 1959 (May 15 - September 15) and the results of 800 stool examinations carried out during the summer season of the year 1960 (May 1 to September 30) are given in table 1.

TABLE 1

INCIDENCE OF LAMBLIA AND ENDAMOEBIA INFECTIONS IN SUMMER

	Number of Children Examined	Lamblia Infections	Endamoeba Infections	Both
Summer 1959	1600	217	272	101
Summer 1960	800	124	132	33
Total	2400	341	404	134
Per Cent		19.8 % *	22.4 % *	5.6 %

* These figures include children infected with both *Lamblia* and *Endamoeba*.

The results of examination of the stools of 1500 students carried out during the winter season of the year 1960 (from November 1 to February 28) are shown in table 2.

TABLE 2

INCIDENCE OF LAMBLIA AND ENDAMOEBIA INFECTIONS IN WINTER

	Number of Children Examined	Lamblia Infections	Endamoeba Infections	Both
Winter 1960	1500	129	254	29
Per Cent		10.53 % *	18.86 % *	1.9 %

* These figures include children infected with both *Lamblia* and *Endamoeba*.

From the above tables one can easily deduce that :

1. *Lamblia* infection among our cases ranged between 19.8 per cent during the summer season and 10.53 per cent during the winter season.

2. Amebic infection among our cases ranged between 22.4 per cent during the summer season and 18.86 per cent during the winter season.

3. The incidence of *Lamblia* infection is almost equal to the incidence of *Endamoeba* infection during the summer season (19.8 per cent and 22.4 per cent respectively). We can now conclude that

diverse abdominal complaints among school children can be caused by infection with *Lamblia* as well as by infection with *Endamoeba*. The treatment of all colonic troubles among school children as if they were due to *Endamoeba* infection is no longer sound and a thorough stool examination will reveal the presence of *Lamblia* infection in almost as large a percentage as *Endamoeba*.

4. Mixed infection with both parasites is common in the summer season and less so during the winter season.

Treatment

The routine treatment used by most of us till now for lambliasis is Atabrine. But it has been observed that this drug often causes yellow discoloration. This yellow discoloration of the skin all over the body of the child causes much anxiety to the child and his parents. Moreover, the treatment did not give a perfect cure rate and some cases proved to be resistant to the drug even when the treatment was repeated.

Other drugs of the choloroquin group, such as Nivaquin, have been tried and are considered to have given good results. This drug has been used also in some cases, in which Atabrine proved to be a failure, with successful results. Nivaquin has also the advantage that it does not cause yellow discoloration of the skin.

Summary

1. *Lamblia* infection among school children in Cairo was studied in two seasons : summer and winter.

2. The incidence of infection was found to be higher in summer than in winter for obvious reasons.

3. The comparative study of the incidence of *Lamblia* and *Endamoeba* infections showed that *Lamblia* infection is almost as prevalent as *Endamoeba* infection during the summer time and has more than half the incidence of *Endamoeba* infection during the winter time.

4. Mixed infection by both parasites is a possibility.

5. The possibility of *Lamblia* sharing with *Endamoeba* in causing intestinal trouble in our children is now to be kept in mind.

6. A trial on a small scale of drugs other than Atabrine was made. Nivaquin was found to be a new and a better weapon to eradicate this infection.

REFERENCES

1. Paterson, D., and Moncrieff, A.: Diseases of Children, ed. 4, William and Wilkens, 1949, p. 510.
2. Nelson, W. E.: Textbook of Pediatrics, ed. 6, W. B. Saunders, Philadelphia, 1954, p. 603.

TURKISH PROVERBS

Yemek mide kadar, bacaklarla da hazmolunur.

Food is digested as much by the legs as by the stomach.

Çok düşünen, az hazmeder.

He who thinks too much digests little.

Yemekten sonra ya kırk adım atmalı, ya sırt üstü yatmalı.

After dinner one must either take forty steps or lie upon one's back.
(A favorite rhyme in Turkish.)

İhtiyarlar için en fena şey usta ahçı ile, genç bir kadındır.

Next to a good cook the worst thing for an old man is a young woman.