SUMMARY

Parasitic diseases are still considered a major health problem in Egypt. Of such diseases, amoebic and giardia lamblia infestations were reported to have a high incidence rate especially in children under 5 years of age.

Many authors had reported an intimate relationship between a healthy gastrointestinal tract and its function to absorb nutrients from the diet. Also, pronounced alterations in serum iron, copper and zinc are widely documented as an accompanying biochemical manifestation of most infectious diseases whether bacterial, viral, rickettesial or parasitic. Thus, diarrhea, which is the most common symptom in clinical amoebiasis and giardiasis of young children, probably can result in nutritional impairments in such affected children.

Thus, the aim of this study was to evaluate zinc, copper, magnesium and calcium status in young children affected by a variable degree of amoebic and/or giardia diarrhea..

Thus, fourty young children were chosen to have amoebic and/or giardia diarrhea in addition to ten healthy control children of the same low socio-economic standard as the patient group. The patients were chosen from both Benha,and Tanta university hospitals. They were divided, according to the criteria of selection, into the following groups:

1- Group (A): included ten children with a mild amoebic diarrhea of short duration without history of similar or dysenteric attacks.

2- Group (B): included ten children with moderate amoebic diarrhea on top of a suggestive course of amoebic colitis of a duration of 2-4 months.

3- Group (C): consisted of ten children with moderate giardia diarrhea of 12-25 days but without similar or dysenteric attacks.

4- Group (D): consisted of ten children with a more severe diarrhea due to mixed E. histolytica and G. lamblia infestations. The children had a history of suggestive amoebic colitis for 3-6 months.

5- Control group: included ten healthy children completely free from any disease.

All the children were subjected to:

1- Full clinical examination.

2- Stool and urine investiation.

3- Haemoglobin, total proteins and leucocytic count estimations.

4- Serum zinc, copper, magnesium and calcium estimations using "atomic absorption spectrophotometric technique".

The results were tabulated and had revealed the following:

1- Serum zinc was significantly decreased in all the groups comparable to the control group, with a significant decrease in group (D) comparable to groups (A) and (B).

2- Serum copper was significantly increased in group A when compared with the control group. However, in group (D), it was significantly less than that of the control group. Meanwhile, in group (B) and (C), it did not show any significant difference when compared with the control group. Moreover, serum copper is group (D) was significantly lower comparable to that of groups (A), (B) and (C).

3- Serum magnesium was significantly decreased in groups (B), (C) and (D) comparable to the control, with a significant decrease in group (D).

4- Serum calcium was significantly lower in groups (C) and (D) comparable to the control group, with a significant decrease in group (D) comparable to groups (A), (B) and (C).