

Giardiasis and serum levels of some vitamins and minerals: sero-epidemiological study

Abstract

Background: One of the common intestinal parasites is *Giardia Lamblia*. Giardiasis is considered as the main diarrheal disease-causing undernutrition and malabsorption of some micronutrients. **The aim of this work:** To detect the serum levels of two minerals; copper and Zinc, and two vitamins; B12 and B9 among patients with microscopic giardiasis and comparing the serum levels of these minerals and vitamins with microscopically negative giardiasis. **Patients and Methods:** 95 patients complaining of diarrhea were subjected to questionnaire taking, stool analysis and serum level detection of zinc, copper, vitamins B12 and B9. Patients were divided into group I including 25 patients (26%) microscopically positive for *Giardia*, and group II including 70 patients (74%) microscopically negative for *Giardia*.

Results: giardiasis was detected in 25 patients (group I) with a mean age of 42.84 ± 12 . Among them, female were more prevalent (72%), from urban areas (52%) and using tap water (76%). Fatigue and abdominal pain were more presented among patients with giardiasis (16%, 12%, respectively). The only residence of patients and water source were statistically significant ($p\text{-value} \leq 0.05$). Serum levels of copper, zinc, vitamins B12 and B9 were diminished in group I (16%, 20%, 16%, 12.9%, respectively) than group II.

Conclusion: Residence and source of water may affect giardiasis infection. Serum levels of copper, zinc, vitamin B12 and B 9 should be monitored in patients with giardiasis for the deficiency.

Keywords: Giardiasis, Copper, Zinc, Vitamin B12, and B9.