

5th International Conference on

PARASITOLOGY & MICROBIOLOGY

July 12-13, 2018 Paris, France

Intestinal parasitic infections among mentally handicapped individuals in Alexandria, Egypt

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This cross-sectional study was carried to determine the prevalence of intestinal parasitic infections among mentally handicapped individuals in Alexandria, Egypt, in the period from December 2012 till November 2013. The study was conducted on 200 institutionalized and non-institutionalized mentally handicapped individuals. Fresh stool samples were subjected to different stains including; trichrome for detecting intestinal protozoa, modified acid fast stain for intestinal Coccidia and quick hot gram chromotrope stain for Microsporidia. Also they were processed by Kato-Katz and Formol ethyl acetate techniques for intestinal Helminths. Additionally, blood samples were collected for measuring hemoglobin levels. Out of 200 mentally handicapped individuals, 87 (43.5%) were infected. The infection rates were 44.6% and 42.6% for non-institutionalized and institutionalized people, respectively. Regarding gender, 46.7% and 38.5% were reported for the males and females respectively. The most common parasites detected were: *Cryptosporidium* sp. (23.5%), *Microsporidia* (15%), *Giardia lamblia* (8.5%), *Dientamoeba fragilis* (8%), *Cyclospora cyatanensis* (7.5%), *Blastocystis hominis* (6.5%), *Entamoeba histolytica* (5.5%) and *Entamoeba coli* (2.5%). Rates for *Isospora belli* and *Enterobius vermicularis* were estimated to be 1.5% for each, while lower rate was reported for *Iodamoeba butschlii* (1.0%). Prevalence of infections among mentally handicapped individuals is indications for several risk factors, including improper sanitary hygiene and illiteracy about personal hygiene. Therefore, frequent investigations, health care and medical intervention are needed.

Prevalence of intestinal parasitic infection and determinant factors among pregnant women in West Gojjam zone, Northwest Ethiopia

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Background: Intestinal parasite infections are the major causes of morbidity and mortality in Sub-Saharan countries. The disease burden and impact of these parasites are significantly high among pregnant women in developing countries like Ethiopia. Poor sanitation and hygiene are believed to be the major contributing factor.

Objectives: The aim of this study was to determine the magnitude of intestinal parasitic infection and identify the associated factors among pregnant women.

Methods: A cross sectional study was conducted from February to June, 2017. A structured questionnaire was used to obtain the socio-demographic. Stool samples were collected and examined using Formol Ether concentration techniques. The magnitude of parasitic infection was calculated using descriptive statistics. Association between intestinal parasitic infection and determinant factors was calculated by logistic regression. The differences were considered to be statistically significant if p-value was less than 0.05.

Results: A total 743 pregnant women enrolled in this study. Overall 277 (37.3%) pregnant women had intestinal parasitosis. The prevalence of hookworm 138 (18.6%) was the leading cause of intestinal parasitosis. Dwelling in rural area (AOR: 2.9 [95% CI: 1.85-4.85]), being farmer (AOR: 1.91 [95 % CI: 1.20-3.03]), eating raw vegetables (AOR: 1.45,95%CI:0.09-0.24), proper utilization of latrine (AOR: 2.89 [95%CI:1.18-7.08]), poor in environmental sanitation (AOR: 0.19, [95%: CI:0.08-0.47]), habit of soil eating (AOR: 0.42 [95% CI: 0.25 - 0.72]), having irrigation practice (AOR: 0.47 [95% CI: 0.29-0.77]) and lack of health education (AOR: 0.32 [95% CI: 0.13-0.77]) were significantly associated with intestinal parasitic infections.

Conclusions: Intestinal parasitic infection was a major public health problem among pregnant women. High parasitic infection was associated with limited hygiene and sanitation in the study area. Therefore, awareness should be created on the prevention of intestinal parasitic infection and determinant factors during pregnancy through health education.