

Comparison of Routine Method with Antibody and Antigen Ones for Diagnosing Giardia-Entamoeba Histolytica in Stool and Blood

Gharavi, MJ. (PhD)

Professor of Medical Parasitology,
Paramedical Faculty, Iran
University of Medical Sciences,
Tehran, Iran

Roozbehani, M. (MSc)

PhD student in Medical
Parasitology, School of Medicine,
Iran University of Medical
Sciences, Tehran, Iran

Bakhshkar, H. (BSc)

BSc of Medical Laboratory
Sciences, Paramedical Faculty,
Iran University of Medical
Sciences, Tehran, Iran

Corresponding Author:

Roozbehani, M.

Email:

mona.roozbehani@yahoo.com

Received: 4 May 2014

Revised: 19 Jun 2014

Accepted: 21 Jun 2014

Abstract

Background and Objectives: Giardia lamblia and Entamoeba histolytica are the most prevalent human intestinal pathogenic protozoa, worldwide. The clinical features of Giardia infection are acute diarrhea, a chronic condition with continuous diarrhea and malabsorption. Entamoeba histolytica invade intestinal tract without any typical clinical indications, and it can involve liver and other organs too. Therefore, we aimed to study these protozoa by serological and parasitological methods.

Material and Methods: In this comparative study, the stool and blood specimens were collected from 1025 patients selected via simple random sampling in three different laboratories located in Tehran and Karaj, Iran (2012). Formalin Detergent test was performed on all samples. Both serum and stool positive samples of this method were analyzed for antigen and antibodies related to Giardia lamblia and Entamoeba histolytica, respectively.

Results: of 1025 stool specimens, 76 (4.7%) were positive for Giardia lamblia and 19 (1.8%) for Entamoeba histolytica using Formalin-detergent method. In ELISA, 81 (7.9%) coproantibodies to Giardia lamblia and 24 (2.3%) coproantibodies to Entamoeba histolytica, 78 (7.6%) coproantigen for Giardia lamblia, and 5 (0.4%) for Entamoeba histolytica were observed. circulatory antibodies to Entamoeba histolytica were detected in 22 cases (2.1%)

Conclusion: Sensitivity of microscopic method compared to serological methods is higher than 90%; therefore, Formalin-detergent method can be the best method for stool examination.

Key words: Giardia Lamblia and Entamoeba Histolytica, Coproantibody, Coproantigen, Blood Antibody