

A Comparison Study of Different Methods Used in the Detection of Giardia lamblia on Fecal Specimen of Children

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Abstract : Objective: The purpose of this study was to compare results obtained using a single fecal specimen for O&P examination, direct immunofluorescence assay (DFA), and two conventional staining methods. Design: Hundred and fifty children fecal specimens were collected and examined by each method. The O&P and the DFA were used as the reference method. Setting: The study was performed at the laboratory in the Basic Medical Science Institute JPMC Karachi. Patients or Other Participants: The fecal specimens were collected from children with a suspected Giardia lamblia infection. Main Outcome Measures: The amount of agreement and disagreement between methods. 1) Presence of giardiasis in our population. 2) The sensitivity and specificity of each method. Results: There was 45(30%) positive 105 (70%) negative on DFA, 41 (27.4%) positive 109 (72.6%) negative on iodine and 34 (22.6%) positive 116(77.4%) on saline method. The sensitivity and specificity of DFA in comparison to iodine were 92.2%, 92.7% respectively. The sensitivity and specificity of DFA in comparison to saline method were 91.2%, 87.9% respectively. The sensitivity of iodine method and saline method in comparison to DFA were 82.2%, 68.8% respectively. There is mark difference in sensitivity of DFA to conventional method. Conclusion: The study supported findings of other investigators who concluded that DFA method have the greater sensitivity. The immunologic methods were more efficient and quicker than the conventional O&P method.

Keywords : direct immunofluorescence assay (DFA), ova and parasite (O&P), Giardia lamblia, children, medical science

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