Study of Dientamoeba Fragilis by Iron Hematoxylin Staining and Nested-PCR Methods in Chalous Healthcare Refers

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Abstract

Bachground and objectives: Dientamoeba fragilis is a habitant protozoa in human colon causing clinical symptoms, such as local stomach pain, weight loss, lack of appetite and flatulence. It is important to diagnose this infection correctly and differentiate it from other Protozoa. In this study PCR and Iron Hematoxylin methods were used to detection of this protozoa in Chalous Medical centers refers in 2010.

Material and Methods: The stool samples (n=302) of this cross-sectional study were selected via cluster random sampling. After wet mount study the samples were preserved in PVA (for staining) and Ethanol (for molecular). The samples were studied both Staining and Molecular methods. Sensitivity and specificity were assessed.

Results: Of 302 samples, six of them are positive via staining method (1.99%) and five by molecular method. All negative results with staining method are also negative with PCR. Contamination with E.coli in 2 samples and with Balstocystis homonis were seen in one sample. Sensitivity and specificity of PCR was 85% and 100% respectively.

Conclusion: The discrepancy between two methods maybe caused by observer errors in staining method and unsynchronized molecular and microscopic studies.

Key words: Dientamoeba, Polymerase Chain Reaction, Hematoxylin, Chalous region