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ePoster Viewing

Parasitic disease epidemiology

Molecular identification of *Giardia duodenalis*; is there any correlation between diarrhea and genotyping in Turkish population?

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Background: Giardiasis is a major diarrheal disease found throughout the world. *Giardia duodenalis* (*G. duodenalis*) highly prevalent intestinal parasite in Turkey. However, molecular characterization of *G. duodenalis* in Turkey is relatively scarce. To date, eight main assemblages of *G. duodenalis* have been described, but only genotype A and B the main causes of human infections. The aim of this study is to investigate the molecular identification of *G. duodenalis* in patients with diarrhea.

Material/methods: Sixty five microscopically positive *G. duodenalis* samples were collected from Kocaeli University Hospital over a 12 month period (2014). To the microscopically positive samples, PCR was used to generate a 384 bp fragment for β -*giardin*. The PCR products were sequenced and the sequences were subjected to phylogenetic analysis by using PHYLIP.

Results: Based on the phylogenetic analysis of the sequences, assemblage A, B and mixed (AB) were determined. Of 65 isolates, 41 were identified to be assemblage A (63%), 22 were assemblage B (34%) and 2 were assemblage AB (3%). No association between epidemiological-clinical data and assemblages was detected.

Conclusions: Our findings are important in understanding of distribution of assemblages and their phylogenetic relationships in the Kocaeli region of Turkey. We suggest that using sensitive techniques and larger sample for detection of *G. duodenalis* genotypes and their subtypes would be necessary for investigation the immune system respond and correlation with diarrhea in the future studies in Turkey.