



XXXVII. Türk Mikrobiyoloji Kongresi

**INTERNATIONAL SYMPOSIUM ON
PARASITIC ZOOZOSES**

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9. Ulusal Moleküler ve Tanısal Mikrobiyoloji Kongresi
Ankara Mikrobiyoloji Derneği



International Symposium on Parasitic Zoonoses
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ORAL PRESENTATIONS

PSS-01

CYTOKINE GENE POLYMORPHISMS AND GENETIC SUSCEPTIBILITY IN CUTANEOUS LEISHMANIASIS PATIENTS

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Objective: Cutaneous Leishmaniasis (CL) - a global parasitic infectious disease, is one of the most prevalent forms of Leishmaniasis. Preliminary data suggest that the host's genetic susceptibility play an important role in CL. The aim of this study was to determine the association of single nucleotide polymorphisms (SNPs) located in certain cytokine genes and genetic susceptibility to CL.

Methods: A total of 55 CL patients and 110 healthy controls living in Sanliurfa province (the most endemic region for CL in Turkey) were included in this study. Genomic DNA extracted from peripheral blood samples were genotyped by 'Polymerase Chain Reaction-Restriction Fragment Length Polymorphism (PCR-RFLP)' and 'Amplification Refractory Mutational System-PCR (ARMS-PCR)' methods for detection of SNPs at TNF- α promoter -308 G/A, IFN- γ +874 T/A, IL-12B p40 1188 A/C, IL-10 promoter -1082 G/A and IL-4 promoter -590 C/T positions.

Results: A statistically significant difference was noted in the allele (TNF- α : $p < 0.001$, IL-4: $p = 0.004$) and genotype (TNF- α : $p = 0.001$, IL-4: $p = 0.001$) frequencies of the TNF- α promoter -308 G/A and IL-4 promoter -590 C/T SNPs between patients and controls. However, no statistically significant difference was noted in the allele (IFN- γ : $p = 0.414$, IL-12B p40: $p = 0.93$, IL-10: $p = 0.148$) or genotype (IFN- γ : $p = 0.133$, IL-12B p40: $p = 0.86$, IL-10: $p < 0.001$) frequencies of the IFN- γ +874 A/T, IL-12B p40 1188 A/C and IL-10 promoter -1082 G/A SNPs between patients and controls. According to the comparison of allele and genotype frequencies for SNPs at TNF- α promoter -308 G/A loci, the frequency of A allele (24.5%) and AA genotype (7.3%) was higher in patients group while the frequency of G allele (90%) and GG genotype (80%) was higher in control group. For SNPs at IL-4 -590 C/T loci, the frequency of T allele (25.5%) and TT genotype (10.9%) was higher in patients group while the frequency of C allele (87.7%) and CC genotype (75%) was higher in control group.

Conclusion: This study indicates that SNPs at TNF- α -308 G/A and IL-4 -590 C/T are significantly associated with the susceptibility to CL. Additionally, the individuals carrying A allele at TNF- α gene promoter -308 and T allele at IL-4 gene promoter -590 positions may have a higher risk for CL infection. Further investigations with larger populations are recommended as there is no published data in Turkey and a small number of publications from other countries on association of cytokine gene polymorphisms and genetic susceptibility to CL.

Keywords: Cutaneous Leishmaniasis, Cytokine, Polymorphism, Susceptibility

PSS-02

EVALUATION OF CLINICAL CORRELATIONS OF PATIENTS WITH BLASTOCYSTIS HOMINIS AND/OR DIENTAMOEBIA FRAGILIS

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Aim: *Blastocystis hominis* and *Dientamoeba fragilis* are the most common intestinal parasites in humans. The main purpose of this study is to investigate the clinical correlations of these two parasites and their frequency for a year with the epidemiological data.

Method: In this retrospective study, our hospital's parasitology laboratory records from 30th June 2015 to 30th June 2016 were examined. From the 6827 patients' stool samples, *B. hominis* and/or *D. fragilis* positives were evaluated according to their clinical outcome. The presenting complaints were grouped into five groups as (1) only gastrointestinal complaints, (2) only allergic symptoms, (3) immunological disorders, (4) psychiatric disorders and (5) others. For statistical analysis one sample chi square test is used. A 'p' value of $< 0,05$ is taken into account as significant.

Results: From 6827 patients' stool samples, 874 were found to be positive for *B. hominis* and/or *D. fragilis*. Among 801 (11,73%) *B. hominis* positive samples, 93 samples were coinfecting with *D. fragilis*, 26 with *Entamoeba coli* and 11 with *Giardia lamblia*. The groups were consisted of 322 (40,20%), 402 (50,19%), 56 (6,99%), 4 (0,50%) and 17 (2,12%) patients, respectively ($p < 0,001$). *B. hominis* was found to be positive most frequently in the allergic symptoms group (second group) ($p = 0,03$). Gastrointestinal symptoms (first group) were the second most common complaint correlated with *B. hominis* positivity ($p < 0,001$). Among 166 (2,43%) *D. fragilis* positive samples, 93 were coinfecting with *B. hominis*, six with *E. coli*, and two with *G. lamblia*. The groups were consisted of 98 (59,04%), 63 (37,95%), 10 (6,02%), 2 (1,20%) and 2 (1,20%) patients, respectively ($p < 0,001$). There was no significant difference between the number of patients with gastrointestinal and allergic symptoms ($p = 0,43$). The most common symptoms were found to be gastrointestinal and allergic ($p < 0,001$).

Conclusion: In this study, during the year from 30th June 2015 to 30th June 2016 *B. hominis* was found to be the most common parasite detected in our laboratory (11,73%). *D. fragilis* was the second (2,43%). Since these protozoa could be presented as asymptomatic, their pathogenicity is questionable. On the other hand, this study shows that they could present a wide range of symptoms and also they can be affected from the immunological condition of the patient. With the impact of industrialisation, parasitology has entered a phase of change. Helminthes are losing importance, whereas intestinal protozoa such as *B. hominis*, *D. fragilis* and also *E. coli* and *G. lamblia* are gaining significance day by day with their common symptoms and increase in their number of detection. Allergic symptoms which are found to be the most common symptoms due to *B. hominis* positivity are widely affected from industrialisation. Today, modern way of living comes with the increase in immunological disorders which precipitate *B. hominis* and *D. fragilis* positivity and pathogenicity.

Keywords: blastocystis hominis, dientamoeba fragilis, allergic reactions, gastrointestinal complaints

PSS-03

THE PREVALENCE OF BLASTOCYSTIS SPP. IN CHRONIC URTICARIA PATIENTS

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Objective: *Blastocystis* spp. is commonly found in gastrointestinal tract both in humans and animals. It is possibly the most common protozoan in human guts all around the world. Gastrointestinal symptoms are commonly seen in *Blastocystis* spp. infection. As well as, extraintestinal symptoms are generally skin disorder, urticarial and allergic cutaneous lesions. The aim of this study was to detect *Blastocystis* spp. prevalence using three different methods in chronic urticaria patients.

Methods: For this study, samples were collected from patients whom admitted to Dermatology and Clinical Immunology outpatient clinic of