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GENETIC FEATURES OF GLUTEN-RELATED DISORDERS IN UKRAINIAN PATIENTS

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Introduction: Celiac disease is a disease that develops in genetically predisposed individuals. Despite numerous studies on the prevalence of disease haplotypes in different counties and regions, we found no data on the prevalence of these haplotypes in Ukraine.

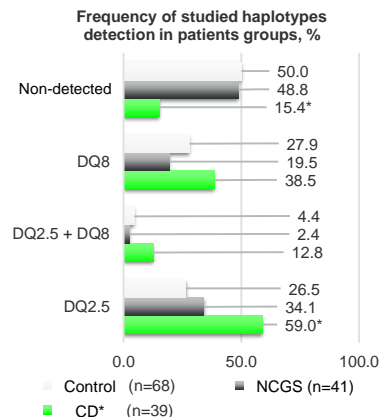
Aims & Methods: To study and compare the prevalence of HLA-DQ2.5 and HLA-DQ8 haplotypes, DQA1*05, DQB1*02, DQA1*03, and DRB1*04 alleles in patients with celiac disease (CD), non-celiac gluten sensitivity (NCGS) and healthy people in Ukraine. We investigated 80 people with previously established diagnoses of CD or NCGS and 68 healthy volunteers for the prevalence of HLA-DQ2.5 and HLA-DQ8 haplotypes. DQA1*05, DQB1*02, DQA1*03, DRB1*04 alleles, or their absence, using the PCR-SSP method.

Results: Haplotype DQ2.5 appeared to be significantly more prevalent in patients with CD than in NCGS patients (OR = 2.77; 95% CI 1.12-6.87, p = 0.022) and in healthy people (OR = 3.99; 95% CI 1.73-9.20, p = 0.0009). Simultaneously the absence of haplotype DQ2.5 was less frequently detected in CD group than in NCGS group (OR = 0.19; 95% CI 0.066 - 0.55, p = 0.0014) and in CD group comparing to the control group (OR = 0.19; 95% CI 0.068 - 0.49, p = 0.0003), without the significant difference between the NCGS and control groups (p > 0.1).

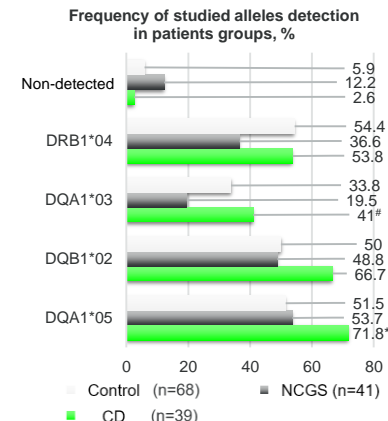
The difference in the prevalence of DQ8 haplotype was statistically insignificant - p=0.052 when comparing the CD and NCGS groups; there was no difference in the frequency of haplotype DQ8 detection between the groups (p > 0.05).

We obtained a higher prevalence of DQA1*05 allele in CD group patients (OR = 2.40, 95% CI 1.03-5.58, p = 0.031) comparing the control group. Simultaneously DQA1*03 allele was detected significantly more often in CD group than in the NCGS group (OR = 2.87; 95% CI 1.05 - 7.81, p = 0.031).

Conclusion: Among the Ukrainian population, patients with CD have a higher detection rate of DQ2.5. Among NCGS and control, the DQ2.5 and DQ8 haplotypes were absent more frequently than in the CD group. The difference in the prevalence of the DQ8 haplotype did not reach the significance level. The DQA1*05 allele is more prevalent in the CD patients than in the control group, and the DQA1*03 allele is more prevalent in the CD than in the NCGS group.



* - p < 0.05 compared to NCGS and control



- p < 0.05 compared to NCGS
 * - p < 0.05 compared to control

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