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Topics

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Moderated Posters
Poster Stage 2

Sunday, October 15, 15:30 - 16:30

Topics: Gut Microbiota, Hepatobiliary, Radiology & Imaging, Nutrition

NAFLD: Risk, prevention and therapy

Ahad Eshraghian (Iran)
Rui Castro (Portugal)

MP091 COMPARATIVE EFFICACY OF PHARMACOLOGIC THERAPIES FOR LIVER STEATOSIS AND FIBROSIS IN PATIENT WITH NONALCOHOLIC FATTY LIVER DISEASE BASED ON MAGNETIC RESONANCE IMAGING BIOMARKERS: SYSTEMATIC REVIEW AND NETWORK META-ANALYSIS
Konstantinos Malandris (Greece)
15:30 – 15:36
6 min (incl. 3 min discussion)

MP092 GLOBAL PREVALENCE OF NON-ALCOHOLIC FATTY LIVER DISEASE IN TYPE 2 DIABETES MELLITUS: A SYSTEMATIC REVIEW AND META-ANALYSIS
James Ho (Singapore)
15:36 – 15:42
6 min (incl. 3 min discussion)

MP094 A MULTICENTER CLINICAL STUDY ON SARS-COV2 PANDEMIC CONFINEMENT: A FORCED *IN VIVO* TEST OF SHORT-TERM LIFESTYLE CHANGES AND THE INFLUENCE ON METABOLIC- (DYSFUNCTION) ASSOCIATED FATTY LIVER DISEASE (MAFLD) EVOLUTION
Mario Romeo (Italy)
15:42 – 15:48
6 min (incl. 3 min discussion)

MP096 IMPACT OF INTERMITTENT FASTING ON LABORATORY, RADIOLOGICAL, AND ANTHROPOMETRIC PARAMETERS IN NAFLD PATIENTS
Ahmed Sakr (Egypt)
15:48 – 15:54
6 min (incl. 3 min discussion)

MP097 INFLUENCE OF PROARA2 POLYMORPHISMS OF THE PPARG2 GENE AND TRP64ARG OF THE ADRB3 GENE ON THE EFFECTIVENESS OF NON-DRUG TREATMENT OF PATIENTS WITH NON-ALCOHOLIC FATTY LIVER DISEASE
Yana Nikiforova (Ukraine)
15:54 – 16:00
6 min (incl. 3 min discussion)

MP098 EFFECTS OF INTERMITTENT FASTING ON METABOLIC DYSFUNCTION-ASSOCIATED FATTY LIVER DISEASE ARE TRANSMISSIBLE THROUGH FECAL TRANSPLANTS
Junhong Su (Netherlands)
16:00 – 16:06
6 min (incl. 3 min discussion)

ueg week MP097

INFLUENCE OF PROARA2 POLYMORPHISMS OF THE PPARG2 GENE AND TRP64ARG OF THE ADRB3 GENE ON THE EFFECTIVENESS OF NON-MEDICAL TREATMENT OF PATIENTS WITH NON-ALCOHOLIC FATTY LIVER DISEASE

Nikiforova Ya.V., Fadieienko G.D., Stepanova O.V.

L.T. Mala National Institute of Therapy of the National Academy of Medical Sciences of Ukraine», Kharkiv, Ukraine

Introduction

The Mediterranean diet is identified as a priority because it contributes to the normalization of key metabolic parameters in patients with non-alcoholic fatty liver disease (NAFLD). However, it is necessary to take into account the possibilities of following such a diet and the nutrigenetic characteristics of patients in different regions of the world.

Purpose:

To study the effect of nutrigenetic parameters of patients with NAFLD on the effectiveness of non-medical treatment

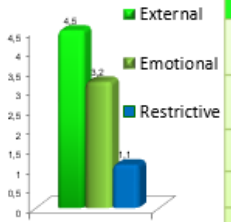
Materials and methods

105 patients (55 men and 50 women) with NAFLD were examined

Eating disorders (ED) features of patients were studied (DEBQ questionnaire) (Diagramme 1)

Nutrigenetic parameters - 5 polymorphisms: *Pro12Ala* of the PPARG2 gene, *Gln27Glu* of the ADRB2 gene and *Arg16Gly* of the ADRB2 gene, *Trp64Arg* of the ADBR3 gene, and *Thr54Ala* of the FABP2 gene associated with the risk of metabolic disorders (Tabl.1, Diagrammes 2,3)

Diagram 1.
The features of ED



Tab.1 Detailing of polymorphisms

Protein Encoded by Amino Acid	Gene	Nucleotide substitution, rs
Receptor that activates peroxisome proliferation, gamma-2	*PPARG2*	*Pro12Ala 34C>G, rs1801282*
Beta-2 adrenoceptor	*ADRB2*	*Gln27Glu 531 C>G, rs1042714*
Beta-2 adrenoceptor	*ADRB2*	*Arg16Gly 46 A>G, rs1042713*
Beta-3 adrenoceptor	*ADRB3*	*Trp64Arg 190T>C, rs4994*
Fatty acid binding protein	*FABP2*	*Thr54Ala 163G>A, rs1799883*

Diagram 2. Amplification

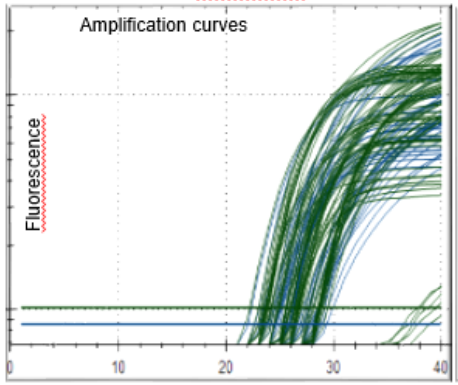
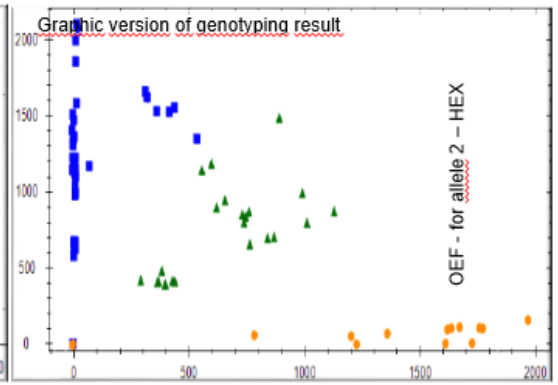


Diagram 3. Allelic discrimination

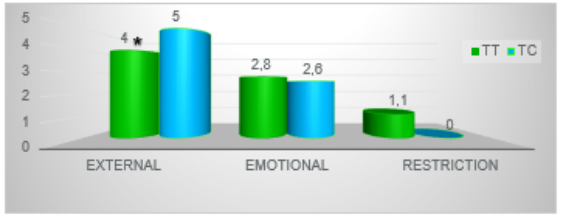


Results

Two polymorphisms associated with disorders of the ED gene (Pro12Ala PPARG2 and Trp64Arg ADRB3) were identified (Diagramme 4,5). Gender differences in the frequency of genotypes of the Pro12Ala polymorphism of the PPARG2 gene were not found (px2 = 0.90). 83.6% of men and 82.0% of women were carriers of the PPARG2 gene polymorphism (OR=1.10, CI=0.24-4.99) of the Pro12Pro genotype (AB=1.10, men and 16.7% of women of the genotype Pro12Ala (OR = 0.91, OR) = 0.20 - 4.13). The distribution of genotypes and allelic variants of the ADRB3 gene polymorphism had significant differences (px2 = 0.05). The Trp64Trp genotype of the ADRB3 gene polymorphism were found in 80.0% of men and 55.0% of women, the Trp64Arg genotype in 20.0% of men and 32.5% of women, the Arg64Arg genotype was found only in women. An analysis of the distribution of 64Trp and 64Arg alleles by gender using a multiplicative model showed that the significance of the association of the minor female 64Arg allele was confirmed by an odds ratio of 3.13 (CI = 1.01–9.70) versus 0.32 (CI = 0.01–9 .70). 10 - 0.99) for the minor allele. A significant association (px2 = 0.02) of the protective minor allele 12Ala with emotionally restrictive types of ED (OR = 0.11, CI = 0.10 - 0.97) was established, while the external type of oblique ED was associated with the carriage of the main allele polymorphism 12Pro of the Pro12Ala PPARG2 gene (OR = 8.71, CI = 1.03-7.66). Analysis of the distribution of 64Trp and 64Arg alleles depending on the type of EP disorder showed a significant association (px2 = 0.006) of the metabolically unfavorable minor 64Arg allele with the external type of ED disorders (OR = 5.53, CI = 1.48-20.68), while emotional and restrictive types were associated with the carrier of the main 64Trp allele (OR = 0.18, CI = 0.05-0.68). In patients with NAFLD, the external type of ED disorder prevails ($p<0.05$).

Diagramme 4. The degree of eating disorders of patients depending on the genotypes PPARG2 gene polymorphism

Diagramme 5. The degree of eating disorders of patients depending on the genotypes ADBR3 gene polymorphism



Conclusions

To increase the effectiveness of non-medical treatment we should take into account nutrigenetic features - the presence of ProARA2 polymorphisms of the PPARG2 gene and Trp64Arg of the ADRB3 gene, which are associated with the peculiarities of nutrient metabolism and malnutrition of patients with NAFLD.

All authors have declared no conflict of interest

Yana Nikiforova, e-mail: dr.jana@email.ua