

30-Й ОБ'ЄДНАНИЙ ВІРТУАЛЬНИЙ ЄВРОПЕЙСЬКИЙ ГАСТРОЕНТЕРОЛОГІЧНИЙ ТИЖДЕНЬ 2022 (30-TH UEG Week 2022)



З 8 по 11 жовтня 2022р. у Відні (Австрійська Республіка) проходив 30-й ювілейний Об'єднаний гастроентерологічний тиждень **(30-th UEG Week 2022)**
Організатор конференції - United European Gastroenterology (UEG).

Вперше за два роки у науковців, лікарів та медсестер з'явилася можливість не тільки онлайн, а й офлайн відвідати тиждень UEG 2022.

Понад 10 400 людей зареєструвалися на UEG Week із понад 110 країн і понад 3 800 зареєструвалися на програму післядипломного навчання (PGT), причому приблизно 80% приєдналися особисто у Відні! Конгрес поєднав дослідників з багатьох країн світу (Австрія, США, Іспанія, Германия, Італія, Нідерланди, Велика Британія, Іспанія, Китай, Франція, Японія та інші) та України.

Хочеться висловити велику подяку президії правління Української гастроентерологічної асоціації та керівництву UEG за надані можливості для навчання лікарів та науковців з України – 50 осіб отримали тревел-гранти від UEG та мали змогу очно навчатися за International Scholarship Programme, всі бажаючі лікарі мали змогу безкоштовної реєстрації на он-лайн навчання від UEG.

Усі зареєстровані учасники, які приймали активну участь у UEG Week 2022 після тестування отримали міжнародні сертифікати - **CME Accreditation**.

Хочеться відзначити гарне технічне забезпечення конгресу сучасним обладнанням, що зробило навчання ще зручнішим (заміна паперових постерів на електронні, можливість доступу до паралельних сесій в режимі онлайн, тощо).

Основними питаннями, що розглядалися на пленарних та секційних засіданнях, постерних сесіях та курсі післядипломної освіти від **UEG Week 2022** були сучасні дані щодо методів діагностики та лікування запальних захворювань

кишечника, захворювань гастроуденальної зони, а також вивченню кишкової мікробіоти та особливостям харчування при функціональних та хронічних неінфекційних захворюваннях. Були висвітлені основні сучасні досягнення і перспективи розвитку гастроентерології, ендоскопії та УЗД - діагностики.

Від ДУ «Національний інститут терапії імені Л.Т.Малої НАМНУ» у UEG Week 2022 під керівництвом член-кореспондента НАМН України, д.мед.н., проф. Г.Д. Фадєєнко приймали активну участь співробітники відділу вивчення захворювань органів травлення та їх коморбідності з неінфекційними захворюваннями.

Наукові результати були представлені у вигляді е-постерних доповідей та публікацій:

-INDICATORS OF THE MAIN PHYLOTYPES OF THE INTESTINAL MICROBIOTA AND VISCERAL OBESITY IN PATIENTS WITH NON-ALCOHOLIC FATTY LIVER DISEASE (G.D. Fadiencko, I.E Kushnir, Ya.V. Nikiforova, V.M. Chernova, T.A. Solomenceva, O.G Kurinna, V.Yu. Galchynska, T.M. Bondar)

-INTESTINAL ENDOTOXEMIA IS ONE OF THE FACTORS OF METABOLIC DISORDERS AND PROGRESSION OF NON-ALCOHOLIC FATTY LIVER DISEASE (G.D. Fadiencko, I.E Kushnir, V.M. Chernova, T.A. Solomenceva, Ya.V. Nikiforova, O.G Kurinna)

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INDICATORS OF THE MAIN PHYLOTYPES OF THE INTESTINAL MICROBIOTA AND VISCERAL OBESITY IN PATIENTS WITH NON-ALCOHOLIC FATTY LIVER DISEASE
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BACKGROUND
 There is evidence of a strong association between non-alcoholic fatty liver disease (NAFLD) and obesity and intestinal dysbiosis (ID) in a number of clinical studies. However, there are still many open questions.

OBJECTIVE
 The study of the state of the intestinal microbiota (IM) in patients with NAFLD and the determination of changes in its composition at the level of the main phylotypes, depending on the amount and activity of visceral adipose tissue (VAT).

MATERIALS AND METHODS
 100 patients with NAFLD with metabolic disorders and 50 members of the control group were examined.
 Evaluation of anthropometric parameters included the calculation of body mass index (BMI), the percentage of visceral adipose tissue (VAT).
 To determine the distribution of the IM, we obtained data of several studies (100) by the nearest neighbor.
 Determination of the IM at the level of the main phylotypes was performed by quantifying total bacteria (Chk) and Chk of Bacteroidetes, Firmicutes and Actinobacteria by quantitative polymerase chain reaction (PCR) in real time using universal primers for genes 16S rRNA and 18S rRNA system.

Diagram 1. THE RATES OF THE MAIN PHYLOTYPES OF INTESTINAL MICROBIOTA IN PATIENTS WITH NAFLD AND HEALTHY PEOPLE

Diagram 2. DISTRIBUTION OF THE MAIN PHYLOTYPES IN THE EXAMINED PATIENTS WITH NAFLD IN DEPENDENCE ON THE PRESENCE OF VAT

Diagram 3. RELATIONSHIP BETWEEN THE DISTRIBUTION OF THE MAIN PHYLOTYPES OF IM AND THE ACTIVITY OF VAT

RESULTS
 In patients with NAFLD, a probable increase in the content of Firmicutes bacteria was observed with a simultaneous decrease in the number of Bacteroidetes and a slight increase in the level of Actinobacteria. In addition, significant changes were observed in the content of Firmicutes. Bacteroidetes in patients with NAFLD. This indicator was significantly higher than in the control group (p<0.05) and each of the 100, respectively.

Diagram 1 The study of the relative quantitative composition of IM in the study groups revealed significant differences in patients with NAFLD with increased and normal degrees of visceral adiposity with the control group and the group of patients with NAFLD with normal weight. In patients with normal degree of obesity, there was a significant decrease in Bacteroidetes to 16.9 (p<0.05), with moderate obesity and up to 11.2 (p<0.05) in total obesity, with a simultaneous increase in the level of Firmicutes (Bacteroidetes to 37.0 (p<0.05) and 52.2 (p<0.05) respectively). As the weight increases, there are deeper changes in the state of the main phylotypes of IM. In the study, we studied the dependence of the degree of IM on the amount and activity of VAT (Diagram 2).

In patients with NAFLD, on the percentage of VAT increased, there was a substitution of IM content in the direction of increasing Firmicutes compared with the control group and patients with NAFLD with a normal amount of VAT. At the same time, the content of Bacteroidetes decreased in the group of NAFLD with normal obesity, while the percentage of Actinobacteria did not change significantly. A similar relationship was observed between the distribution of the main phylotypes of IM and the activity of VAT (Diagram 3).

In patients with high VAT there was a probable increase in the content of Firmicutes bacteria. In contrast, in these patients the number of Bacteroidetes decreased. In the group of patients with NAFLD with a low level of VAT, high variability in the composition of Firmicutes bacteria was found; in general, the group showed a tendency to increase the content of bacteria in obesity.

SUMMARY
 Changes in the composition of IM indicate the probable participation of bacteria of the genus Firmicutes in the formation of IM, increasing its diversity with the further development and progression of NAFLD.

DECLARATION OF INTEREST
 All authors have declared no conflict of interest.

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INTESTINAL ENDOTOXEMIA IS ONE OF THE FACTORS OF METABOLIC DISORDERS AND PROGRESSION OF NON-ALCOHOLIC FATTY LIVER DISEASE
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BACKGROUND
 The progression of non-alcoholic fatty liver disease (NAFLD) is based on multiple parallel mechanisms that explain the complex metabolic pathogenesis of NAFLD. One of the mechanisms of influence on the development of NAFLD is a violation of the intestinal permeability (IP) and the production of endotoxins (ET) hydrophobicity in the gut wall at the level of the membrane of gastrointestinal microorganisms.

OBJECTIVE
 To study the level of ET and evaluate the relationship between endotoxemia, metabolic parameters and the degree of hepatic steatosis in patients with NAFLD.

MATERIALS AND METHODS
 The 60 patients with NAFLD with various metabolic disorders and 30 individuals in the control group were examined.
 All patients underwent an assessment of anthropometric parameters (body circumference (WC) and hip circumference (HC), the value of BMI, VAI), a study of body composition with the determination of the percentage of visceral adipose tissue (VAT).
 The degree of endotoxemia was calculated by the indirect enzyme immunoassay (ELISA) method.
 Degree of steatosis according to the results of abdominal CT was performed on the scale of the parameter of contrast attenuation (PCA), which corresponded to the regional units of fat activity (Non-Alcoholic Fatty Liver Disease (NAFLD) ET concentration was determined using the LAL Chromogenic Endpoint Assay kit (Sigma, Netherlands).

Diagram 1. THE LEVELS OF FACTORS OF THE EXAMINED PATIENTS WITH NAFLD AND HEALTHY PEOPLE

Diagram 2. THE RELATIONSHIP BETWEEN THE LEVEL OF ENDOTOXEMIA AND THE DEGREE OF STEATOSIS IN PATIENTS WITH NAFLD

Diagram 3. THE RELATIONSHIP BETWEEN THE LEVEL OF ENDOTOXEMIA AND THE DEGREE OF VISCERAL OBESITY IN PATIENTS WITH NAFLD

RESULTS
 The levels of bacterial ET in the peripheral blood of the examined patients were almost three times higher than in the control group and increased to 1.040 (p<0.05) and 0.743 (p<0.05) (ET, respectively) (p<0.05) (Diagram 1).

The relationship between the level of endotoxemia and the degree of steatosis of patients with NAFLD was determined. In patients with overweight (BMI > 30 kg/m²) and obesity (BMI > 35 kg/m²), higher levels of ET were observed: ET in 5.08 (ET, ET and 1.84 (p<0.05) (ET), respectively) compared with NAFLD patients with normal weight: 0.51 (p<0.05) (ET, respectively) (p<0.05) (Diagram 2).

In the examined patients, a direct correlation was observed between ET index and parameters of abdominal obesity, namely, waist circumference (WC) (r = 0.42), the ratio of WC to BMI (r = 0.33) and visceral obesity (VO) (r = 0.43).

In the group of patients with high activity of ET, the relative levels of ET were increased, which statistically significantly differed from those in patients with low and medium VAI (p<0.05).

In patients with steatosis of the 2nd and 3rd degree, the level of endotoxemia was higher, the difference is statistically in the control group and in the group with steatosis of the 1st degree was statistically significant (p<0.05) (Diagram 3).

SUMMARY
 The data obtained suggest the positive relationship of the IM, namely endotoxemia, make a significant contribution to the formation and maintenance of one of the components of the metabolic syndrome, namely, visceral obesity, with subsequent formation of steatosis.

DECLARATION OF INTEREST
 All authors have declared no conflict of interest.

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Наступний UEG Week 2023 відбудеться 14-17 жовтня у Bella Center Copenhagen.