

most common nosological forms of rheumatic disease (70-80%), makes a major cause of disability and disability population and tends to increase, given the global trend towards an aging population. The leading role in the pathogenesis of OA belongs cell activation by inflammation that leads to increased destruction of cartilage matrix synthesis and reduction. Growth factors and cytokines affect chondrocytes through signaling pathways that regulate the synthesis of matrix metalloproteinase, whose activity is genetically conditioned and dependent on the expression of genes coding and genetic polymorphisms.

Often the background in favor of OA disease of obesity (OB) – a component of the metabolic syndrome, which causes the severity of many diseases that determine the duration and quality of life, mortality and disability population.

The aim of the study was to determine the diagnostic and prognostic value of gene polymorphism farnesyltransferase (FDPS) in primary OA in young adults with overweight or obesity.

**Materials and methods.** The study involved 57 patients with OA, which in 32 cases proceeded against the background of obesity 1 (11) or 2nd (21) degree. The age of patients ranged from 27 to 43 years, dominated by men (59.4%). Duration history of OA averaged  $6,3 \pm 2,4$  years. A comparison group – 25 people with isolated OA course - was identical for these indicators study group. 50 healthy individuals were included in the control group. We studied the genetic structure gene polymorphism FDPS. Determining the structure of this gene allows us to estimate the activity of osteoclasts that destroy bone tissue during rearrangements reduce the rate of bone metabolism and affects the mineralization of bone. The paper used diagnostic test kits «SNP-Express ACE Alu Ins/Del (NPF" Lyteh ")».

**Results and discussion.** Our study showed that one of the possible prerequisites of OA in patients with obesity gene polymorphism is a change FDPS, which is characterized by the presence of allele C. Thus, in the control group a number of phenotypic FDPS gene was as follows: genotype A/A was exposed to 34 patients (68%), genotype A/S – 12 patients (24%) and abnormal genotype C/C – 4 people (8%). In patients with isolated OA distribution of genotypes was 11 (44%) 9 (36%) and 5 (20%) – respectively. At the same time in the study group patients phenotypic correlation FDPS gene characterized by the following changes: genotype A/A were 8 patients (25%), genotype A/C – 14 patients (43,7%) and abnormal genotype C/C – 10 people (31,3%). That is, patients with OA and in combination with its more than OB control defined pathological genotype C/C gene FDPS (2,5 and 3.9 times, respectively), while more expressed changes found in patients with more severe disease course and lesions more than 2-3 joints. Hence, these results allow predicting the formation of this disease and the severity of its course.

**Conclusions.** Patients with OA combined with how often and OB are carriers of abnormal genotype C/C and A/C polymorphism of the gene is associated with the severity and multiplicity of involvement in the pathological process of joints in young people. Defining these indicators allows to predict the course of OA in young patients with overweight and OB, which further helps identify factors unfavorable course of the aforementioned diseases and develop preventive methods monitoring of patients.

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**MECHANISMS FOR THE DEVELOPMENT OF OSTEOPENIA IN ELDERLY PATIENTS WITH PRIMARY GOUT**

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Aim - to study osteopenic mechanisms in elderly patients with primary gout.

**Materials and Methods.** For the gout diagnosis we have used gout criteria S.L.Wallace et al. Evaluation of degree and mechanisms of osteopenia were carried out by investigation of mineral metabolism (serum total calcium and phosphorus) and structural-functional state of bone (SFSB) (by ultrasound densitometry - apparatus Achilles express; investigated parameters: IS - bone strength index, T- and Z-score).

**Results.** The study has been included 41 patients 60-72 years (26 men and 15 women) with primary gout, 7 patients with tophi. We divided patients into 2 groups: I group (17 patients) with hyperuricemia greater than 620 mmol/l; II group (24 persons) with uricemia 360-620 mmol/l. Patients from both groups have had normal level of serum calcium and elevated levels of serum phosphorus. Serum calcium in the I group has been  $2,54 \pm 0,03$  mmol/l, in II group  $2,59 \pm 0,03$  (normal value is  $2,62 \pm 0,03$ ). Serum phosphorus has been substantially higher in I group of patients ( $1,89 \pm 0,06$ ), than II group of patients ( $1,64 \pm 0,05$ ) in contrast to values of patients from the control group ( $1,44 \pm 0,07$  mmol/l). SFSB examination of all patients has been revealed osteopenia II-III degree (average T-score -  $1,89 \pm 0,08$ ). The values (IS and T-score) have been significantly smaller in the first group of patients. IS in the first group patients has been lower by 31.2%, while in II group of patients (25.1%) in comparison with a group of healthy patients. We have identified an inverse correlation ( $r = -0,32$ ) between serum uric acid levels and IS of bone.

**Conclusions.** Mineral homeostasis and SFSB in elderly patients with primary gout undergoes changes, the severity of which depends on the degree of hyperuricemia. More significant changes in the homeostasis have been observed in patients with hyperuricemia exceeding values 620 mmol/l.

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## **ВПЛИВ РЕСПІРАТОРНИХ ПОРУШЕНЬ НА ЯКІСТЬ ЖИТТЯ У ХВОРИХ ІЗ ДІАБЕТИЧНОЮ НЕФРОПАТІЄЮ**

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Однією з причин зниження якості життя хворих при цукровому діабеті (ЦД) є наявність у цих пацієнтів ускладнень, що розвиваються у мікросудинному руслі. Альвеолярно-капілярна сітка легенів є найбільшим судинним органом в організмі людини тому ангіопатія при цукровому діабеті становить системний процес, при якому неможливо виключити наявність патологічних змін у бронхолегеневій системі хворих на ЦД з діабетичною нефропатією (ДН). Донозологічні зміни в респіраторній системі хворих на ДН можуть з'являтися у вигляді порушень функції зовнішнього дихання (ФЗД). Натепер характер впливу цих змін на якість життя та їхній ступінь недостатньо з'ясовані.

**Мета і задачі дослідження:** вивчити вплив на якість життя хворих із ЦД з ДН наявності респіраторних порушень за допомогою опитувальника SF-36.

**Матеріали і методи дослідження:** Досліджено 66 хворих на ЦД, що знаходилися на лікуванні в ендокринологічному відділенні КЗОЗ «ОКЛ ЦМЕД та МК», з них 29 жінок та 37 чоловіків. Вік хворих коливався від 18 до 71 років (середній вік  $46 \pm 3,6$  років). Контрольна група - 10 здорових осіб.

Аналізуючи вплив виявлених якісних обструктивних змін ФЗД, що були виявлені у 40% пацієнтів із ДН, встановлено, що показники шкал фізичного функціонування, соціального функціонування, рольового емоційного функціонування та психічного здоров'я у групі хворих із обструктивними змінами і у групі з нормальною ФЗД достовірно відрізняються від цих показників у контрольній групі. Наведені дані