

**МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ  
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ**



**МАТЕРІАЛИ**

**106-ї підсумкової науково-практичної конференції  
з міжнародною участю  
професорсько-викладацького колективу  
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Матеріали підсумкової 106-ї науково-практичної конференції з міжнародною участю професорсько-викладацького колективу Буковинського державного медичного університету (м. Чернівці, 03, 05, 10 лютого 2025 р.) – Чернівці: Медуніверситет, 2025. – 450 с. іл.

У збірнику представлені матеріали 106-ї науково-практичної конференції з міжнародною участю професорсько-викладацького колективу Буковинського державного медичного університету (м. Чернівці, 03, 05, 10 лютого 2025 р.) зі стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

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psychological well-being. In older patients, additional health complications, such as comorbidities and metabolic conditions like hyperuricemia, may complicate treatment and necessitate a more thorough differential diagnosis.

**The aim of the study.** The goal of our study was to assess the role of metabolic syndrome in the progression of PsA and identify the association with hyperuricemia.

**Material and methods.** This study involved 18 patients diagnosed with PsA. The PsA diagnosis was based on the CASPAR Criteria (Classification Criteria for Psoriatic Arthritis, 2006). Clinical examinations of each patient included both general clinical and specialized studies. To evaluate carbohydrate metabolism, laboratory tests were conducted to measure blood glucose and insulin levels. The level of insulin resistance (IR) was calculated using the HOMA-IR formula. Waist circumference was measured using a tape at the navel. Hyperuricemia was defined as a uric acid level exceeding 360  $\mu\text{mol/L}$ . Statistical analysis was conducted using Spearman's correlation to evaluate potentially related factors, and the results were processed using the Statistica 13.0 software.

**Results.** Increased waist circumference (central obesity) was observed in 55.6% of patients, with waist measurements greater than 80 cm in women and greater than 94 cm in men. According to the World Health Organization (WHO) and other global health sources, central obesity affects approximately 20–25% of the adult population worldwide ( $p < 0.05$ ). Elevated serum triglyceride levels ( $\geq 1.7 \text{ mmol/L}$ ) were found in 38.9% of the patients. It is estimated that approximately 25–30% of adults worldwide have elevated serum triglyceride levels ( $p < 0.05$ ). Insulin resistance (IR) was observed in 11.2% of patients with PsA, while type 2 diabetes was present in 3.3%. An increase in fasting blood glucose ( $> 5.6 \text{ mmol/L}$ ) was found in 23.3% of PsA patients ( $p < 0.05$ ). Elevated blood pressure ( $> 130/85 \text{ mm Hg}$ ) and/or the use of antihypertensive therapy was found in 55.6% of patients. Hyperuricemia was strongly associated with obesity, coronary artery disease, and hypertension but showed no correlation with the severity of psoriasis. The odds ratios for coronary artery disease, obesity, and hypertension were as follows: coronary artery disease 5.01 (95% confidence interval: 1.47–16.67), obesity 3.92 (95% confidence interval: 1.00–12.98), and hypertension 2.02 (95% confidence interval: 1.04–3.32).

**Conclusions.** Hyperuricemia is prevalent in PsA patients, particularly those with a longer disease duration and obesity. The presence of hyperuricemia in PsA is more closely associated with metabolic syndrome than with the severity of skin psoriasis. However, further research is needed to better understand the mechanisms behind this relationship. Effective management of comorbidities may improve treatment outcomes and help achieve better control of PsA.

**Palibroda N.M.**

## **EXOCRINE PANCREATIC INSUFFICIENCY: WHAT DO WE NEED TO KNOW**

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**Introduction.** The pancreas plays a critical role in the digestion, absorption, and metabolism of nutrients as a dual function organ that possesses both exocrine and endocrine components. Pancreatic exocrine insufficiency (EPI) is an important cause of maldigestion and malabsorption. EPI is a disorder caused by the failure of the pancreas to deliver a minimum/threshold level of specific pancreatic digestive enzymes to the intestine, leading to the maldigestion of nutrients and macronutrients, resulting in their variable deficiencies.

**The aim of the study.** Doctors are well aware of EPI in cystic fibrosis and chronic pancreatitis. At the same time, there are a number of diseases that lead to the development of secondary pancreatic exocrine dysfunction insufficiency, which often remains unrecognized. Once EPI is diagnosed, treatment with pancreatic enzyme replacement therapy (PERT) is required. If EPI is left untreated, it will result in complications related to fat malabsorption and malnutrition, having a negative impact on quality of life (AGA, 2023). The study aimed to investigate the incidence of pancreatic insufficiency in other diseases of internal organs in order to increase physicians' awareness of this problem.

**Material and methods.** Relevant literature about conditions that have a less direct association with EPI and about the role of pancreatic enzyme replacement therapy was found by searching databases. Searches of MEDLINE, BIOSIS Previews, Derwent Drug File, International Pharmaceutical Abstracts were performed to identify eligible literature.

**Results.** Clinical features of EPI include steatorrhea with or without diarrhea, weight loss, bloating, excessive flatulence, fat-soluble vitamin deficiencies, and protein-calorie malnutrition (American Gastroenterological Association (AGA), 2023). The coefficient of fat absorption is the gold standard for diagnosing fat maldigestion; however, it is not well accepted by patients and laboratory personnel. The measurement of the fecal elastase is considered as the gold standard for EPI diagnosis (Lindkvist B., 2018). Cross-sectional imaging (computed tomography scan, magnetic resonance imaging, and endoscopic ultrasound) cannot identify EPI, although they play an important role in the diagnosis of benign and malignant pancreatic disease (AGA, 2023). In case of inoperable pancreatic cancer EPI develops in 66%-92% of patients. EPI occurs in patients with type 1 (26%-57%) and type 2 diabetes (20%-36%) and is usually mild to moderate in severity; by definition, all patients with type 3c (pancreatogenic) diabetes have EPI. In a large-scale study, correlations between exocrine insufficiency and early onset/longer duration of diabetes, insulin use, and lower body mass index (BMI) have been demonstrated (Hardt PD et al., 2013). In untreated celiac disease, EPI occurs in 4%-80% patients, but usually occurs on a gluten-free diet. Pancreatic function tests should be considered if there is persistent diarrhea or steatorrhea despite a gluten-free diet or if there are signs of overt malnutrition. The pathophysiological mechanisms of EPI in celiac disease may include a defective postprandial response to food by an atrophic upper intestinal mucosa. Patients on a gluten-free diet with low fecal elastase levels should receive PERT (Nousia-Arvanitakis S et al., 2006). Patients with inflammatory bowel disease are at an increased risk for developing EPI, particularly if they have  $\geq 3$  daily bowel movements, loose stools, and a history of surgery. Autopsy studies have found pancreatic lesions in 38% of patients with Crohn's disease and 53% of patients with ulcerative colitis without prior evidence of pancreatitis. Pancreatic autoantibodies, duodenal reflux, and reduced secretory hormone secretion are possible mechanisms for the development of EPI in Crohn's disease (Vikesh K Singh, 2017).

**Conclusions.** EPI is often misdiagnosed, and, as a result, patients are not properly treated. There is an urgent need to increase awareness of secondary pancreatic exocrine insufficiency and the importance of its adequate treatment. There is an urgent need for clinical studies to understand the validity and nature of associations between EPI and medical conditions beyond those in which mechanisms have been proven and to explore the potential role of PERT.

**Palichuk Yu.I.**

## **THE ROLE OF INDEPENDENT CLASSES IN PHYSICAL EDUCATION IN STRENGTHENING THE HEALTH OF HIGH SCHOOL STUDENTS**

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**Introduction.** The analysis of the scientific and methodical literature revealed a tendency towards a constant deterioration of the state of health of school-age children, which is due to a lack of physical activity during the period of study at school. This problem is of particular importance for high school students due to the need to prepare them for future educational activities. Therefore, there is a problem of finding effective technologies, organizing and conducting independent physical education classes for high school students.

**The aim of the study.** To introduce the technology of strengthening the health of high school students in the process of independent classes in physical education.

**Material and methods.** The research was facilitated by the following methods: theoretical (literature analysis); empirical (pedagogical observation, questionnaires, analysis of results, conversations); pedagogical experiment.

**Results.** Determining the motivations of older teenagers for independent physical education shows that the most important motive for both boys (27.8%) and girls (40.0%) is to improve their