

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



## **МАТЕРІАЛИ**

**105-ї підсумкової науково-практичної конференції  
з міжнародною участю  
професорсько-викладацького персоналу  
БУКОВИНСЬКОГО ДЕРЖАВНОГО МЕДИЧНОГО УНІВЕРСИТЕТУ  
присвяченої 80-річчю БДМУ  
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Матеріали підсумкової 105-ї науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) – Чернівці: Медуніверситет, 2024. – 477 с. іл.

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У збірнику представлені матеріали 105-ї підсумкової науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) із стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

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more than 50% of nephrons are damaged. The latest research is focused on the study of highly specific markers of tubulo-glomerular damage, including cystatin C,  $\alpha$ 1-microglobulin ( $\alpha$ 1-MG),  $\beta$ 2-microglobulin, microalbumin, etc.

**The aim of the study.** To determine the role of urinary  $\alpha$ 1-MG in predicting of renal dysfunction in premature newborns with severe perinatal pathology at 25-36 weeks of gestation.

**Materials and methods.** The fragment of this study included 91 PN, who were treated in the neonatal intensive care unit of the CNPE "City Clinical Maternity Hospital №2" in Chernivtsi during the period 2018-2021. The I group group consisted of 30 PN with a gestational age (GA) of 25- 31 weeks that had severe perinatal pathology, II group - 30 PN with gestational age of 34-36 weeks and severe perinatal pathology. The comparison group was formed by 31 "conditionally" healthy PN with gestational age of 34-36 weeks. Criteria for inclusion in the study: birth weight >500 g, but <2500 g, presence of informed consent signed by the child's parents? gestational age >25 weeks, but less than 37 weeks (36/6 days). The level of  $\alpha$ 1-MG was determined using an ACCENT-200 automatic analyzer and Cormay reagents (Poland). Quantitative indicators in the samples were evaluated using the Student's test, MedCalc software with the calculation of the 95% confidence interval (95% CI) and the level of significance (p-value). Statistically significant differences between groups were considered at a value of  $p < 0.05$ .

**Results.**  $\alpha$ 1-microglobulin is a low-molecular-weight protein whose metabolic pathway ends in the kidneys, where it is normally completely reabsorbed by the proximal renal tubules. If tubules are intact, only trace concentrations of this protein can be determined. The results of the study showed statistically significantly higher values of this indicator in the I group (95% CI 36.06-34.99,  $p < 0.0001$ ) and the II group (95% CI 25.09-24.04,  $p < 0.0001$ ) compared to the control, when comparing the groups among themselves according to GA (I and II group, 95% 11.71-10.20,  $p < 0.0001$ ). An inverse correlation was found to GA, which can be explained as the immaturity of renal structures with violations of reabsorption and secretion mechanisms, but also possible hypoxic damage against the background of severe perinatal pathology.

Table

Indicator	I group (n=30)	II group (n=30)	III group (n=31)
$\alpha$ 1-microglobulin, mg/l	40,49 ( $\pm$ 1,48)*	29,53 ( $\pm$ 1,43)**	4,96 ( $\pm$ 0,25)

\*- statistically significant differences compared to the comparison group,  $p < 0.05$

\*\*-statistically significant differences when comparing between groups,  $p < 0.05$

**Conclusions.** The results demonstrated that determining the level of urinary  $\alpha$ 1-microglobulin can be used to predict kidney dysfunction in premature newborns, with the aim of forming risk groups at the preclinical stage and improving treatment and diagnostic approaches. The variability of current scientific data determines the need for in-depth study of this area, including multicenter studies and unification of early diagnosis strategies.

**Kh lunovska L. Yu.**

## **MAXILLARY SINGLE CENTRAL INCISOR SYNDROME: A CASE REPORT**

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**Introduction.** Maxillary single central incisor syndrome (MSCI) (OMIM: 147250) is a disorder characterized by multiple congenital malformations involving the midline structures of the head with other midline structures of the body. It is formed as a result of series of unknown events during the 35-38 days of intrauterine development. First described by Scott in 1958 as an isolated find. It is also found in holoprosencephaly, such syndromes as CHARGE, VACTERL, DiGeorge, Velocardiofacial and in chromosomal diseases (del(18p); del(7q); r(18); del(22q); 47,XXX; 47,XXY, etc.). MSCI can be caused by mutations in various genes (SHH, SIX3, TGIF1, GLI2, PTCH1, SALL4, FGF8, etc.). The prevalence of MSCI is 1:50,000 babies; in girls more often than in boys. The diagnosis can be established prenatally and postnatally (during the childhood). A characteristic feature is one central incisor of the upper jaw, located along the middle line. A

smoothed philtrum, curved raised lip, absence of lip frenulum and incisor papilla, sometimes cleft palate are described. In addition, hypotelorism, anosmia, short stature, delayed psycho-linguistic development. Treatment depends on accompanying abnormalities and must be multidisciplinary and individual in nature, according to the specific needs of the patient.

**The aim of the study** was to present a clinical case of early diagnosis of maxillary single central incisor syndrome.

**Material and methods.** Diagnosis was carried out on the basis of phenotypic data of an objective examination of the child, data on the history of life and illness, data on the child's development map, and the results of laboratory and instrumental research methods.

**Results.** We present the clinical observation of a child with MSCI. A mother with a 2-month-old girl came to see a doctor. Complaints about an increase in the size of the tongue, prolonged jaundice and drowsiness. A child was born from a second full-term pregnancy against the background of anemia, threat of miscarriage, toxicosis, polyhydramnios. Until the 18th week of pregnancy, the woman took Duphaston. It was a first childbirth at 37 weeks of gestation by Cesarean section. Body weight of baby at birth - 2500 g, length - 49 cm. Apgar score - 6/8 points. During the first day after birth, the child was on oxygen support. Heredity on the maternal side is burdened with cardiovascular pathology, on the paternal side – gastrointestinal pathology and diabetes. At the age of 2 months, the child was treated in the neurological department (diagnosis: Hypoxic-ischemic damage of the CNS, fragile child syndrome. Early anemia. Patent foramen oval of a large size with an aneurysm of the atrial septum. On examination, macrosomia of the second degree (25% excess weight), macroglossia, umbilical hernia, delayed stato-kinetic development were seen. Differential diagnosis with congenital hypothyroidism and Beckwith-Wiedemann syndrome was carried out. It was recommended a dynamic monitoring by a geneticist and endocrinologist. When the child was 2 years old, the mother came for a repeat examination. Complaints: delayed language and stato-kinetic development of the child. Examination of the oral cavity revealed one central incisor along the midline of the upper jaw, absence of a bial frenulum and incisor papilla, and an oval palate. Central incisor syndrome is suspected. The diagnosis was confirmed by the method of DNA diagnostics - a heterozygous deletion was detected on 11.18.32-11.23. Deletion in this region is associated with chromosome 18 deletion syndrome (OMIM: 146390) and depending on the size and breakpoints of the deletion on the short arm of chromosome 18, the phenotype can vary widely. The *TGIF1* gene, which is part of the deleted region, is associated with autosomal dominant holoprosencephaly 4 (OMIM: 142946), which may explain the patient's phenotype. Recommended: carrying out the array method to confirm the diagnosis; observation by an endocrinologist and CT scan of the brain.

**Conclusion.** The case has the clinical significance of early diagnosis of central single incisor syndrome and the need for multidisciplinary (dentist, pediatrician, speech therapist, psychologist, geneticist) observation in the treatment of such patients.

**Kovtyuk N.I.**

## **PECULIARITIES OF SALT TASTE SENSITIVITIES IN SHOOLAGE CHILDREN**

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**Introduction.** Taste is the type of sensitivities that help human organism to identify and consume nutrients while avoiding indigestible materials. Taste buds, the end-organs for gustation, detect and respond to a variety of macronutrient and aversive compounds to generate taste perception. It means possibilities to recognize and distinguish at least the “basic” tastes: sweet, umami, sour, salty and bitter. Each of these tastes is believed to represent different nutritional or physiological requirements or pose potential dietary hazards. The capacity to perceive taste sensations significantly influences food choice and food preferences which contribute in a cumulative manner to health status and quality of life. Salty taste governs intake of sodium and other salts, essential for maintaining the body's water balance and blood circulation. Overconsumption of sodium, primarily in the form of salt (sodium chloride), is associated with an