

МІНІСТЕРСТВО ОСВІТИ ТА НАУКИ УКРАЇНИ  
СУМСЬКИЙ ДЕРЖАВНИЙ УНІВЕРСИТЕТ  
МЕДИЧНИЙ ІНСТИТУТ



**АКТУАЛЬНІ ПИТАННЯ**  
**ТЕОРЕТИЧНОЇ ТА КЛІНІЧНОЇ МЕДИЦИНИ**  
**Topical Issues of Theoretical and Clinical Medicine**

**ЗБІРНИК ТЕЗ ДОПОВІДЕЙ**  
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Work performed at the Medical Institute of Sumy State of University at the Department of Pediatrics. Under the supervision there were 234 children with acute poisoning, from 0 to 18 years, treated in Sumy City Children's Hospital for the period from 2013 to 2016. Improvement of patients during the day was noted in 117 (76%) patients, and medium hard or hard condition persisted for more than 2 days occurred in 36 (24%) children.

**Conclusion.** The frequency of acute poisoning affects age: often suffer in preschool and high school age, belonging to a male, autumn seasons. During the period from 2013 to 2016 years revealed a tendency to increase the number of acute poisoning. More common poisoning medicines. Dynamics of the patients in the vast majority was improving during the day, which depended on timely hospitalization. Feature of acute poisoning in young children is the difficulty of diagnosis and some latent poisoning. Lack informative paraclinical diagnostic methods reduces the effectiveness of early detection of etiological factors and appropriate and timely treatment.

### **RISK FACTORS OF MECONIUM ASPIRATION SYNDROME (MAS) IN NEWBORNS**

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**Relevance.** MAS - a serious disease of the neonatal period is associated with aspiration of amniotic fluid (AF) contaminated meconium. Aspiration AF on average occurs in 10% of births in cephalic presentation of the fetus; it occurs in approximately 1% of neonates born vaginally and usually requires serious treatment.

**Goal.** The study of ante - and intrapartum risk factors for the development MAS.

**Materials and methods.** 56 stationary cards newborn with MAS, treated in the intensive care unit and departments neonatal pathology, was studied.

**Results and discussion.** In the group of studies of full-term newborns - 55%, post-term 25% and prematurity (gestational age 34-37 weeks) - 20%. The pregnancy was complicated: microcirculatory dystonia - 36%, anemia in pregnant women - 23%, preeclampsia - 60 %, colpitis - 67%, pyelonephritis - 47 %. The pregnancy proceeded with the threat of miscarriage in 25%, preeclampsia – 5%. Childbirth proceeded on the background of long-term anhydrous period - 30% of women. Tight entanglement of umbilical cord around the baby's neck at birth was noted in 16% of cases. Fetal distress was noted in 63% of cases, of which only 8% of cases of premature. Average appraisal values Apgar score 3-4.

The primary "ABC resuscitation" was conducted to all newborns, of which 34% were needed of "step C". "ABC resuscitation" in its entirety was carried out in 75% of cases of post-term children, and all (100%) who had undergone fetal distress. In the ICU were treated 87% of children; from them in HF ventilation needed 70%.

**Conclusion.** Complications of pregnancy (gestosis, acute and chronic infectious processes), post-term, fetal distress are significant risk factors for the development of the newborn. The status of children with MAS severe and very severe and in most cases requires resuscitation.

### **GENE POLYMORPHISM IN Patients WITH Type 1 Diabetes Mellitus**

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**Relevance.** Type 1 diabetes mellitus (T1DM) is a common medical and social problem, which frequency increased during last decade. Annual incidence varies from 0.61 cases per 100,000 population in China to 41.4 cases per 100,000 population in Finland. A general amount ill child in Ukraine in 2016 is approximately 8,500. T1DM is a disease with heterogeneous etiology, influenced by environmental factors and prevalent autoimmune susceptibility. Predisposition of the autoimmune pancreatic  $\beta$ -cell destruction has been associated with genetic variations on different chromosomes.

**Aim of investigation.** Review literature and create analysis of main genes, which disturbance and polymorphism can provoke formation of T1DM.

**Materials and methods.** Literature review include publications of last 5 years, referred in Medline, PubMed, Hindawi, NIH clinical trials etc. by key words “type 1 diabetes mellitus”, “gene polymorphism”, “risk prediction”.

**Results.** Based on genotyping, HLA-DRB1\*0301 is an independent genetic marker for T1DM susceptibility, however, HLA-DQB1\*0601 is an independent genetic marker against T1DM occurrence. Also in some ethnic groups HLA-DQA1\*0501 and HLA-DQB1\*0201 had been reported as a risk markers for T1DM.

Among other genes involved in disease outbreak protein tyrosine phosphatase nonreceptor type 22 (PTPN22) have been identified. PTPN22 C1858T polymorphism was observed more frequently in patients with T1DM compared to healthy individuals.

Also present association of the polymorphic marker -23HphI of the insulin gene (11p15) and cytotoxic T-lymphocyte-associated antigen-4 (CTLA-4) gene 49A/G polymorphism with manifestation of T1DM.

Angiotensinogen (AGT), angiotensin converting enzyme (ACE) and angiotensin II type 1 receptor (AT1R) gene polymorphisms may influence on onset of nephropathy in patients with T1DM. AGT M235T polymorphism and insertion-deletion (I/D) ACE gene polymorphism (278-bp insertion (allele I) or deletion (allele D) variant in intron16) can cause risk for diabetic nephropathy. The AT1R polymorphism located at the position 1166 (A/C) was not associated with kidney injury.

**Conclusion.** Investigation of gene polymorphism may give additional informational for practitioners about various aspects of T1DM including disease onset, complete  $\beta$ -cell destruction and complication of the disease.

## EVALUATION OF RISK FACTORS OF BRONCHIAL ASTHMA IN CHILDREN IN TERNOPIL REGION

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**Introduction:** Bronchial asthma is a very common chronic respiratory disease that affects children of different age groups, it is thought to be a result of combination of genetic and environmental factors. Bronchial asthma has a long term consequences with physical, psychological and economical impact on society, parents and children, that's why too many studies were done to evaluate the environmental and non -environmental risk factors of bronchial asthma in children (Cindy T. McEvoy, Eliot R. spindle. 2017). Addressing the risk factors by pediatricians is necessary for prevention of the disease.

**Objective:** To evaluate the most common risk factors of bronchial asthma in children of Ternopil region.

**Study design:** A study of 18 pediatric patients, from regional pediatric hospital in Ternopil, from 1<sup>st</sup>– 15<sup>th</sup> of february, 2017. A questionnaire was answered by parents, which included many risk factors related to living environment, socioeconomic status, genetic anamnesis, maternal anamnesis (multiparty, gestosis, maternal smoking, mode of delivery), child's diet, child's gender, obesity, atopy, food allergies, drug allergies, flue vaccine, recurrent and chronic respiratory infections.

**Results:** 100% of children have atopy and chronic rhinosinusitis with recurrent upper and lower respiratory infections, 90% are of male gender ,90% living in village and 90% had flue vaccine, 80% have a family history of bronchial asthma, 60% have domestic pet, food allergies and 40% have drug allergies. 8 mothers were multiparae and 3 had gestosis during pregnancy. 2 children were premature, 2 had artificial feeding and 2 had exclusive breast feeding for >9 months. Other risk factors had 0%.

**Conclusion:** There is an evident association between bronchial asthma and chronic rhinisinusitis, recurrent upper and lower respiratory infection and atopy, as well as living in villages, having domestic pets, positive family history, male gender and flue vaccine. Early recognition of the above risk factors can aid in prevention of bronchial asthma in children.