Severity Scoring of Atopic Dermatitis (SCORAD) index. The data were analysed, the comparable indexes were calculated and the Pearson correlation coefficient (PCC) between indexes established.

Results The age of children ranged from 4 to 18 years with average of 8.4 ± 2.8 years. Of the patients 60% were female. The average score was 12.6 ± 4.5 for DFI, and 28.3 ± 19.8 for SCORAD. The average score for CDLQI in the period of remission of AD is 12.5. In $11.8 \pm 3.5\%$ of cases was detected 'very significant' impact of AD to QoL of children, in $24.5 \pm 6.4\%$ - 'significant', in $51.2 \pm 8.2\%$ 'non significant' and no influence of AD on QL in $10.8 \pm 3.6\%$ of patients. The correlation among the scores CDLQI, DFI, and SCORAD was significant by the PCC ($p < 0.001$). The obtained data showed, that the QoL correlated with severity of illness and with type of the allergen-specific sensitivity. A comparison analysis demonstrated that the index of QoL in $65.6 \pm 6.0\%$ of parents was lower than that of their children.

Conclusion AD affects the QoL of both children and their parents and indicates the importance of including the study of QoL as a complement to clinical evaluation. Children with AD, even in remission is defined by a low overall QoL with a greater degree of suffering psychological sphere, appearing difficulties socialization of the child and maintain the desired lifestyle. Educational and psychological support for patients and their families in addition to medical treatment of AD may improve their long-term physical outcomes.

P19

TO ASSESS WHETHER CHILDREN WITH AUTISTIC SPECTRUM DISORDER ARE INVESTIGATED AND MANAGED ACCORDING TO INTERNATIONAL STANDARDS FOR FOOD ALLERGY IN PAEDIATRIC ALLERGY DEPARTMENT OLCR CRUMLIN. DR KAFIL AHMAD SHADANI. DR AIDEEN BYRNE

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Background Allergic diseases are prevalent in ASD children, with a frequency equivalent to that in the general population.^{1,2} Unfortunately, owing to their impaired expressive language, aberrant behaviours and lower tolerance to diagnostic measures compared with typically developing children

European Academy of Allergy and Clinical Immunology and British Society of Allergy and Clinical immunology.

Methodology Retrospective and prospective data collection from clinical notes from children attending department of Allergy and immunology, Our Lady Children Hospital Crumlin from August 2017 till November 2017.

Results Out of 20 children recruited, 18 were eligible, 15 boys (84%) and 3 girls (16%). Half of them had been diagnosed with Autism and other half with ASD. Main reason of referral was food allergy (88%), Skin Prick Test was indicated in 88% of children but was performed only in 8 (45%) children. In non autistic children in our centre we can perform skin test on almost every child our doing 1300 skin prick test annually. Food challenge was performed only in one child out of 9 indicated, while in non autistic children we perform 240 food challenges per year which represents 99% of cases if food challenge indicated. Allergic

Diagnosis was confirmed in 8(45%) children, refuted in 2 (11%) children, inconclusive in 8(45%) mainly because of lack of information from SPT and blood test (38%) or due to failure to challenge (38%). Home food introduction was advised in 8(45%) children was not successful in 5(62%), while at initial level only in 3(38%) children over period of 6 months to 2 years. Ninety percent of Non autistic children in one of our local audit tolerated baked egg at home introduction successfully. Associated atopic features with food allergy were Eczema (66%), Asthma (33%) and Allergic Rhinitis (11%).

Conclusions Diagnosing Food allergy in children with Autism is difficult because of behavioural issues and their restricted food patterns, because of these reasons they are mostly under diagnosed and not properly managed. More resources will be required to achieve this goal.

Recommendations Regular follow up with detailed feeding history and restricted patterns

Early dietician and psychology input may help.

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P20

RELATIONSHIP OF VEGETATIVE STATUS AND CONTROL OF ASTHMA IN CHILDREN

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Background Violation of vegetative regulation (VR) is a component of the pathogenesis of bronchial asthma (BA) which is confirmed by the abundance of vegetotropic drugs used in the treatment of these patients. Assessment of autonomic function in the management of patients with asthma in routine clinical practice is not provided. However, the state of VR in patients with asthma continues to be of interest to researchers, especially in the aspect of the relationship of VR parameters with the parameters of control of asthma.

Aims Determine the relationship of VR parameters with the parameters of asthma control level in children using methods available in a wide clinical practice.

Method 88 patients (54 boys and 34 girls) aged 5 to 17 years with atopic bronchial asthma were examined. Quantitative assessment of bronchial asthma control was carried out using questionnaires Asthma Control Questionnaire-5 (ACQ-5), Childhood Asthma control test (ACT-C) in children under 12 years old, and Asthma control test (ACT) in children and adolescents aged 12 years and older. All children underwent a standard examination with determination of blood pressure, pulse, respiratory rate, with the calculation of Kerdo and Hildebrandt indices, characterizing vegetative regulation. Taking into account the age-dependent changes in heart rate, we used for the first time a relative heart rate index equal to the ratio of the patient's heart rate to the median heart rate for this age group.

Results Correlation with ACQ-5 was obtained for the Hildebrandt index ($r=0.45$, $p=0.0003$), the respiratory rate ($r=-0.27$, $p=0.032$) and the relative pulse index ($r=0.40$, $p=0.0012$). The association of Kerdo index with ACT-C test values ($r=-0.32$, $p=0.045$) was established. In the group of patients with no BA control the Hildebrandt index was statistically significantly higher than in patients with control of the disease. In children with uncontrolled asthma it was 5.23 ± 0.25 units that exceeds normal values and may reflect a mismatch in the work of cardiovascular and respiratory systems.

Conclusion The interrelation of changes of vegetative regulation and the level of control of bronchial asthma in children is established, as well as the mismatch of the functioning of the cardiovascular and respiratory systems in children with uncontrolled asthma.

P21 MODERN TRENDS IN THE HEALTH STATUS OF THE CHILDREN'S POPULATION OF UKRAINE

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Introduction An analysis of the morbidity and prevalence of diseases among the children's population of Ukraine, the level of infant mortality over the past 23 years suggests that they remain significantly higher than the average European indicators.

Objective Our objective was to analyze of the morbidity and prevalence of diseases among the children's population of Ukraine.

Materials and methods We have performed statistical analysis of the morbidity and prevalence of childhood illnesses and its significant differences in the regions of Ukraine.

Results The birth rate in 2017 is 364,000 children and is twice as low as the mortality rate of the entire population. The prevalence of childhood diseases over the past 23 years has increased by 41%. If in 1994 it was 1253.0 per 1000 children, in 2017 it was 1748.0 per 1000 children of the corresponding age. The morbidity of childhood diseases also increased by 36%, from 967.0 to 1292.0 per 1000 children, respectively.

The first place among the diseases were respiratory diseases in children, mainly due to acute respiratory infections and pneumonia. The indexes of dental diseases and pathology of nervous system and eye have increased moderately. The situation is aggravated by the decrease in the number of pediatricians in the country to 7.9 thousand, which reduces the availability of medical care, especially in rural areas.

Conclusions The negative dynamics of the morbidity and prevalence of childhood illnesses and its significant differences in the regions of Ukraine shows that this is primarily due to social, environmental and economic factors. Undoubtedly, the ongoing military conflict in the East of Ukraine is exacerbating the situation, which has led to more than 1.5 million refugees, including more than 200,000

children, who need constant and in-depth medical and social assistance. This indicates the need for constant attention to pediatric health care at the national level, taking into account the positive experience of the countries of the European Union.

P22 THE EFFECTS OF STORAGE METHOD, TEMPERATURE AND EXTRACTION KITS ON THE HUMAN MILK MICROBIOTA

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Human breast milk is the optimum feeding regime for new born infants. In terms of composition, breast milk contains the required nutrients and bioactive compounds (e.g. oligo-saccharides, lactoferrin, secretory antibodies, immune cells, CD14, regulatory cytokines) to support the growth and immunity of the developing infant. Until recently breast milk was considered to be a sterile fluid, however, advances in research has revealed that breast milk provides home to an array of bacterial species, which may provide various health benefits such as promoting gut colonisation, defence against pathogens and maturation of the immune system, an essential aspect of infant health.

Next generation sequencing has enabled detailed insights into the complex microbial ecosystem of breast milk, however authenticity of the microbiome is subject to many factors such as sample collection, suitable storage and extraction method of the biological sample. While cold storage (4°C) immediately after sample collection until DNA extraction is optimal, other storage conditions need to be investigated for their efficacy when this option is not feasible. This study aims to investigate how different storage methods, temperatures additives and extraction techniques influence the human milk microbiome. Overall, 16S compositional sequencing analysis revealed no significant differences from either fresh or frozen samples.

P23 DETERMINANTS OF GAS EXCHANGE IN SMOKING AND NONSMOKING TEENAGERS DURING A STANDARDIZED SUBMAXIMAL TREADMILL TEST

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Introduction Assessment of physical capacity in the pediatric population has always been a major issue in developmental exercise physiology. It may be influenced by a number of factors, e.g. genetic endowment, developmental rate, body composition, and habitual physical activity. The adverse effects of smoking on the parameters and maximal effort during standardized submaximal treadmill test is not well known.