P16 THE EMOTIONAL STATE IN BRONCHIAL ASTHMA IN CHILDREN

Olesea Nicu*, Ecaterina Stasii. *Department of Pediatrics, State Medical and Pharmaceutical University 'Nicolae Testemitanu', Chisinau, Moldova, Republic of*

10.1136/archdischild-2019-epa.372

Background Bronchial asthma is a major public health problem, with an estimated 300 million affected individuals, with increasing prevalence, especially in the pediatric population. Most countries continue to experience a suboptimal level of bronchial asthma control, which requires ongoing optimization of therapeutic strategies as well as improving the nonpharmacological approach. Many asthmatic patients reports high levels of stress and depression. It is known that psychological stress decreases therapeutic adherence and affects the quality of life of children with asthma. The psychological evaluation is important in clinical follow-up, as well as psychological interventions are necessary to complement the pharmacological treatment of bronchial asthma.

The scope of the study was to determine the relationship between stress and evolution of bronchial asthma in children.

Methods There were observed 56 patients with bronchial asthma (10–18 years). The evaluation was included in the questionnaire with complete anamnestic data, clinical features and paraclinical data. The Perceived Stress Scale and Asthma Control Test was used to correlated psychoemotional status and clinical symptoms of asthma.

Results According to Perceive Stress Scale, an average and high health concern level was obtained in 39% (22 children), all of them were uncontrolled according to Asthma Control Test. Also there were described other potential triggers for asthma exacerbations (house dust mites, molds, pollen, etc, and viral infections). Sensitization for house dust mites was attests as well in children with controlled asthma and also in children with low health concern levels.

Conclusion Emotions and stress play a significant role in clinical evolution of bronchial asthma in children. This study demonstrated a strong relationship between asthma and stress in pediatric patients. Use of psychological tools and interventions to increase asthma control are needed.

P17 THYROID STATUS IN CHILDREN WITH BRONCHIAL ASTHMA (BA)

¹Tatyana Eliseeva, ¹Elena Tush, ^{1,2}Elena Bolshova, ¹Andrew Prachov, Viktoria Polyakova ¹, ³Ivan Balabolkin, ^{3,4,5}Vilya Bulgakova*. ¹Privolzhsky Research Medical University, Nizhny Novgorod, Russian Federation; ²Children's Hospital, Nizhny Novgorod, Russian Federation; ³National Medical Research Center of Children's Health, Moscow, Russian Federation; ⁴Central Clinical Hospital, Russian Academy of Sciences, Moscow, Russian Federation; ⁵Pirogov Russian National Research Medical University, Moscow, Russian Federation

10.1136/archdischild-2019-epa.373

Background Despite numerous studies, there was no consensus about the effect of thyroid hormones on asthma.

Aims To assess the relationship between the patient's thyroid status and the level of BA control.

Method 51 children with BA were examined, of them 15 girls aged 105.1±35.3 and 36 boys aged 114.2±14.1 months. All children underwent general clinical examination, spirometry, ACQ5 assessment, determination of thyroid-stimulating hormone (THS) levels, free thyroxine (free T4) test,

and levels of antibodies to thyroperoxidase (anti-TPO) by ELISA.

Results Elevated TSH levels occurred in 12 (23%) patients, while all of them had no clinical symptoms characteristic of hypothyroidism, and the maximum TSH rise was 8.45 mIU/L, which made it possible to treat this condition as subclinical hypothyroidism (cGT). None of the patients had an increase in the level of anti-TPO. Another 15 people had a TSH level in the range of 1.16–1.97 mIU/L, the remaining 24 had 2.01–3.74. 18 - had an excess of T4 free, but it was insignificant - a maximum of 23.1 pmol/l at the upper limit of the norm of 22 pmol/l, and was not accompanied by symptoms of thyrotoxicosis. We did not obtain a clear correlation between the level of TSH and free T4, $R=0.49$, $p=0.4852$. A weak negative correlation was found between the TSH level and the ACQ-5 score, $R=-0.29$, $p=0.033$. Most often (in 33% of cases) subclinical hypothyroidism occurred in patients with complete control of BA (28, TSH 3.39 ± 1.96), and was completely absent in patients with uncontrolled disease progression (5, TSH 1.87 ± 0.73). In patients with partial BA control, TSH levels of 2.0 to 4.1 IU/L (18, TSH of 2.93 ± 1.5) prevailed, which may indirectly indicate iodine deficiency. These differences do not reach the level of statistical significance ($F=1.74$, $p=0.1858$). Free T4 levels were comparable in all groups (16.57 ± 1.93 , 16.67 ± 3.04 , 15.82 ± 4.93 , respectively). Despite this, a negative correlation was noted between the level of free T4 and FEV1 (ml/s), $R=-0.42$, $p=0.01$. Normal levels of TSH in the group of patients with poor BA control may not be associated with the best thyroid function in this group of patients, but with an inhibitory effect on the TSH synthesis of corticoid hormones (both exogenous glucocorticoids and endogenous - produced by the body on stress - exacerbation of BA).

Conclusion Patients with achieved BA control have a rather high incidence of subclinical hypothyroidism (23%).

P18 THE IMPACT OF ATOPIC DERMATITIS ON QUALITY OF LIFE IN PAEDIATRIC PATIENTS

¹Ecaterina Stasii*, ¹Irina Taranets, ²Olesea Nicu, ³Tatiana Gorelco. ¹State Medical and Pharmaceutical University of Moldova, Chisinau, Moldova, Republic of; ²State Medical and Pharmaceutical University of Moldova, Chisinau, Montenegro; ³Mother and Child Institute, Chisinau, Moldova, Republic of

10.1136/archdischild-2019-epa.374

Background Atopic dermatitis (AD) is a chronic inflammatory skin disorder that affects children and may lead to significant disruption in quality of life. In population studies report an overall prevalence of AD of 2–18% in adults and about 20% in children. The impact of AD on children's quality of life (QoL) in US and European countries is relatively well known, though never evaluated in the Moldavian population.

The scope of this study was to evaluate the impact of AD on the quality of life of children and their parents and to identify the area of patients' lives most affected by the disease.

Methods The study included 78 patients with AD and their parents. For assessment two questionnaires about the quality of life were applied, the Children's Dermatology Life Quality Index (CDLQI) and the Dermatitis Family Impact (DFI). To evaluate the severity of the disease, the researchers applied the

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

Kafil Ahmad Shadani*, Aideen Byrne. *Our Lady Children Hospital Crumlin, Dublin, Ireland*

10.1136/archdischild-2019-epa.375

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.

REFERENCES

1. Jyonouchi H. Food allergy and ASD is there a link? *Curr. Allergy Asthma Rep.* 9, 194–201 (2009).
2. Jyonouchi H, Geng L, Cushing-Ruby A, Quraishi H. Impact of innate immunity in a subset of children with ASD: a case control study. *J. Neuroinflammation* 5, 52 (2008).

P20

RELATIONSHIP OF VEGETATIVE STATUS AND CONTROL OF ASTHMA IN CHILDREN

¹Elena Tush, ¹Tatyana Eliseeva, ^{2,3,4}Vilya Bulgakova*, ¹Olga Khaletskaya, ¹Andrew Prakhov. ¹Privolzhsky Research Medical University, Nizhny Novgorod, Russian Federation; ²National Medical Research Center of Children's Health, Moscow, Russian Federation; ³Central Clinical Hospital, Russian Academy of Sciences, Moscow, Russian Federation; ⁴Pirogov Russian National Research Medical University, Moscow, Russian Federation

10.1136/archdischild-2019-epa.376

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.