

was remarkable increased in girls with asthma compared to healthy controls ($0.49 \pm 0.06\%$ vs. $0.33 \pm 0.05\%$; $\chi^2=3.21$; $g=1$; $p = 0.07$). In children with moderate and severe asthma the functionally compromised genotypes AA+AG were identified significantly more frequent comparing to the homozygous normal genotype (GG): 76.9% vs. 23.1% ($t=2.3$; $p < 0.05$) and 63.6% vs. 36.4% ($t=1.9$; $p = 0.07$), accordingly. The frequency of A allele was significantly increased in severe asthma cases compared with mild ones (0.54 ± 0.1 vs. 0.30 ± 0.06 ; $g=1$; $\chi^2=3.5$; $p = 0.054$).

Conclusions The study showed an association of the CC16 A38G polymorphism with more complex and severe forms of asthma. The studied gene was selected because of its important role in regulating inflammatory processes, but it is necessary to conduct further studies of extended range of genes in this ethnic group.

PO-1008 CLINICAL FEATURES OF INCOMPLETE KAWASAKI DISEASE WITH CERVICAL LYMPHADENOPATHY AND FEVER AS INITIAL MANIFESTATIONS

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Objective This study sought to evaluate the clinical features of the incomplete Kawasaki disease (KD) with cervical lymphadenopathy and fever as initial manifestations.

Methods We conducted a retrospective analysis of the clinical records of consecutive KD patients admitted to our hospital. Children presenting with cervical lymphadenopathy and fever as the initial manifestations, with none or only one another clinical feature of KD were defined as incomplete KD (IKD) group.

Results A total of 1420 patients were included. Thirty-one (2.2%) were classified as IKD. There were no differences in age and gender ratio between two groups. The duration of fever in IKD group (10.3 ± 5.7 d) was longer than that in KD group (6.9 ± 3.8 d, $p < 0.05$). Ten (32.3%) children in IKD group presented with bilateral conjunctival congestion. WBC and alanine transaminase (ALT) in IKD group were lower in KD group. No differences were identified in other laboratory study results between two groups. The rate of non-responders of IVIG in IKD group is lower than KD group (3.3% vs 18.3%). Coronary artery lesions in IKD include coronary dilatation in 22(71%), aneurysm in 5 (16.1%) and giant aneurysm in 3 (9.7%), which is higher than KD group (27.7%, 5.2% and 1.1%).

Conclusions Children with incomplete KD and cervical lymphadenopathy and fever as initial manifestations presented with longer period of fever and higher incidence of coronary artery aneurysm. Thus awareness of IKD should be kept in mind in this special group of children.

PO-1009 WITHDRAWN

PO-1010 ACUTE OTITIS MEDIA – A RELIABLE WARNING SIGN FOR PRIMARY IMMUNODEFICIENCIES? - A CRITICAL APPRAISAL

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Background and aims Acute otitis media (AOM) is the most common infection in childhood, resulting from both anatomic and immunologic specificities of this age group. Recurrent AOM has been defined as one of the warning signs for primary immunodeficiencies (PID). In this study we evaluated the strength of recurrent AOM as clinical predictor of PID.

Methods Retrospective study (August 2010–December 2013) which included all patients referred to PID appointment because of recurrent AOM (≥ 8 AOM episodes/year). Syndromic patients or those presenting with another warning sign for PID were excluded. Clinical, demographic and laboratory results were analysed and statistical analysis was made using SPSS 20.

Results Seventy-five patients were included (median age 37,8 months; 62,7% male gender), corresponding to 15% of all first appointments. Other comorbidities were present in 20% of the patients and 17% had ORL surgery prior to PID referral. In most patients, the immunologic screening consisted on the evaluation of humoral function, but in selected cases other studies were performed (namely complement and lymphocyte immunophenotyping).

A PID was identified in 12 children (16,0%) and the majority of these patients had other distinctive feature (personal or familiar antecedent of infection or auto-immunity, 66,7%, $p < 0,05$). Nine children (12,0%) underwent prophylactic cotrimoxazole. The average length of follow-up was 11,2 months.

Conclusion Despite being a very frequent cause of immunologic screening, in this study recurrent AOM was not found to be a good predictor of underlying PID, unless the patients presents other significant personal or family history.

PO-1011 HIGH RATE OF SCHOOL ABSENTEEISM AND DROP-OUT IN CHILDREN WITH JUVENILE IDIOPATHIC ARTHRITIS FROM A DEVELOPING COUNTRY

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Background and aims Juvenile idiopathic arthritis (JIA) causes significant physical and functional disability. Children miss school due to illness, multiple hospital visits or admissions. Frequent absence from school is consistently reported to adversely affect academic performance. Our aim was to assess the rate of school absenteeism and drop out among Indian patients of JIA.

Methods The study was carried out on 69 children, 32 female, 37 male. The children and their parents were interviewed for details of school attendance, number of days and frequency of absence from school. Medical records were examined for hospital admissions and follow-up visits to supplement the information obtained from families.

Results The median number of school days missed/year were 41 (4–300; IQR- 20,120), representing 21.5% of school days.

Abstract PO-1011 Table 1 School absenteeism - JIA subtypes

	School days lost/year	
JIA subtype	Mean ± SD	*p
Oligoarticular	61.87 ± 97.34	
Polyarticular RF-ve	46.35 ± 56.28	
Polyarticular RF+ve	75.57 ± 83.39	
SoJIA	112.21 ± 75.12	
	51.84 ± 40.27*Kruskal Wallis test	
ERA		0.018

Among subtypes, school days missed are depicted in Table 1. Nearly 12% of children dropped out, 6/25 SoJIA, 1/9 Oligoarticular and 1/14 Enthesitis related arthritis (ERA). Using multivariate linear regression, school absenteeism was found to be significantly affected by physical disability measured by Childhood health assessment questionnaire (CHAQ) ($p < 0.01$). There was no difference between males and females.

Conclusions Most children missed significant number of school days, highest in SoJIA and least in Polyarticular rheumatoid factor (RF) -ve JIA. Dropout rate was high and related to the JIA subtype. Physical disability significantly affected absenteeism.

PO-1012 EVALUATION OF ASTHMA BIOMARKERS AND PULMONARY FUNCTION TESTS IN CHILDREN WITH ASTHMA

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Asthma is a chronic inflammatory disease of respiratory tract. Many different invasive and noninvasive tests are performed to diagnose asthma. Yet no definite criteria for diagnosing asthma are determined.

Background and aim In our study we aimed to show the relation between blood parameters and pulmonary function tests (PFT) with the asthma severity in patients with a diagnosis of asthma, and post-treatment changes in these parameters.

Method Children aged 0–14 years with asthma seen in our outpatient polyclinic were prospectively evaluated. Complete blood count, ECP, specific IgE, Total IgE levels of the patients are recorded at the beginning of the study. Children >6 years performed spirometry. All patients filled a study registration form that includes major and minor risk factors. We classified the severity of the disease according to GINA (Global Initiative for Asthma) and we followed the treatment protocol. The severity of the disease did not show any significant correlations with the gender, atopic history and family history.

Results A statistically significant difference was found between the ECP, Total IgE levels and severity of asthma. We observed a decrease in the asthma severity during 2nd visit.

Conclusion Our results showed that serum ECP levels are significantly correlated with the severity of asthma and may be useful in the assessment of asthma control. Hence the PFT is quite difficult to perform in children, noninvasive parameters are becoming more important for the follow up of the treatment.

PO-1013 CLINICAL AND LABORATORY FEATURES OF CHILDHOOD ATOPIC DERMATITIS

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Background and aims The aim of the study was to determine the level of ceruloplasmin, oxyproline and cryoglobulinemia of children with atopic dermatitis.

Methods Besides the well-known studies in comprehensive analysis of atopic dermatitis regularities it was defined level of blood ceruloplasmin by Ravin; intensity of metabolism in the connective tissue was evaluated by content oxyproline.

Results Under supervision there were 35 children with atopic dermatitis. In the age aspect younger age group 3 years presented 10 children, and 5 patients were pre-schoolers and children up to 10 years, in puberty to 13 years it was recorded 9 patients and adolescents 14 to 17 years in the observation group got 10. At the time of admission status of children was assessed as medium to severe in 27 cases and as serious in 8 patients. As a result of children immunoglobulin content with acute exacerbation of AD study it was found that most of the children was observed dysimmunoglobulinemia. The examination stated that the average ceruloplasmin, oxyproline several times higher than normal. Higher values were recorded directly they correlate with the activity and severity of atopic dermatitis.

Conclusion It was also revealed typical atopic dermatitis secondary decrease of cellular immunity. Obviously, reducing the activity of cellular immunity is secondary and depends on the period of the disease and its duration, and levels of ceruloplasmin and oxyproline criteria are allergic inflammatory process.

PO-1014 EFFECT OF LASER ACUPUNCTURE ON THE IMMUNOMODULATORY PARAMETERS IN ASTHMATIC CHILDREN AND ITS RELATION TO ASTHMA IMPROVEMENT

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Background and aims LASER acupuncture has often been recommended as a treatment of asthma. The technique is noninvasive, and suitable for children.

Acupuncture has been shown to have an immediate effect on relieving the symptoms of asthma. Few studies have demonstrated that acupuncture has beneficial clinical and physiologic effects on asthma, including the immunomodulatory effects of inflammatory cells and cytokines. Our aim is to study the effect of low power multichannel laser acupuncture in the improvement of asthmatic children and its relation to changes in their immunomodulatory system (IgE- Interleukin-4).

Methods 20 cases of asthmatic children (7–15years) were subjected to 12 laser acupuncture sessions in acupuncture points selected for asthma according to traditional Chinese medicine 3 times per week. Clinical improvement and medications used were recorded, IL-4, IgE were measured (ELISA technique), Eosinophilic count and pulmonary functions were done before and after sessions.

Results There were a significant improvement in some parameters of pulmonary functions before and after laser acupuncture sessions in comparing to using of conventional medical treatment only (FVC $p < 0.001$, FEV1 $p < 0.001$). Also there were improvements in interleukin4 and IgE levels after laser acupuncture sessions (interleukin 4. $p < 0.001$, IgE $p = 0.002$) and there were a significant correlation between some pulmonary functions parameters with IL4 and IgE improvement.

Conclusion Uses of laser acupuncture in accompanied with conventional medical treatment is more effective in controlling of asthmatic children than using conventional medical treatment only and also accompanied with improvement of all IL-4, IgE and pulmonary functions.