

PO-1000 THE CORRELATION BETWEEN PH AND CALCIUM, NATRIUM, KALIUM IN TREATED PATIENS WITH MODERATE ASTHMA EXACERBATION

A Brumar, M Neamtu. *Pediatric Clinic, "Victor Papilian" Faculty of Medicine ULBS, Sibiu, Romania*

10.1136/archdischild-2014-307384.1618

Background Salbutamol induces stimulation of beta2-receptors resulting in hypokalemia. Corticosteroids also induce plasma electrolytes variations.

Aims 1. To identify the relation between pH-Calcium (Ca), pH-Natrium (Na) and pH-Kalium (K) following low dose inhaled short-acting beta2-agonists. 2. To evaluate if concomitant inhaled corticosteroids treatment can modify the relation.

Methods We analysed all children admitted for moderate asthma exacerbation during 6 months period. Inclusion criteria: children between 5–18 years of age; PEF >50–75% of predicted value; serum electrolytes normal ranges. Exclusion criteria: previously treated patients with Salbutamol; Salbutamol hypersensitivity; others asthma exacerbation severity levels. The patients were divided into 2 groups: 1st group comprised those treated with beta2-agonists and 2nd group is represented by paediatric patients concomitantly treated with beta2-agonists and corticosteroids. Both groups were homogenous regarding age and sex ratio. During hospitalisation, patients received standard low dose of Salbutamol by metered dose inhaler (MDI) and inhaled Fluticasone propionate using spacer device with mouthpiece. Included patients were assessed for electrolytes serum levels and pH before treatment and 72 h after therapy. Data was analysed statistically using the Pearson correlation.

Results Among 269 admitted patients, 164 children fulfilled inclusion criteria. Both groups structure: 85 children in 1st group, 79 in 2nd group. Authors found for both groups a significant relation between serum pH and kalium (p value 0,010) and no signification between pH-Na or pH-Ca (p value >0.05).

Conclusions The study demonstrated a single correlation between pH-K, mainly due to the important kalium variability during Salbutamol treatment.

PO-1001 RELATIONSHIP BETWEEN THE ELECTROLYTES IN TREATED PATIENS WITH MODERATE ASTHMA EXACERBATION

A Brumar, M Neamtu. *Pediatric Clinic, "Victor Papilian" Faculty of Medicine ULBS, Sibiu, Romania*

10.1136/archdischild-2014-307384.1619

Background Salbutamol induces stimulation of beta2-receptors resulting in hypokalemia. Corticosteroids also induce plasma electrolytes variations.

Aims 1. To identify the relation kalium, calcium and natrium following low dose inhaled short-acting beta2-agonists. 2. To evaluate if concomitant inhaled corticosteroids treatment can modify the relation.

Methods We analysed all children admitted for moderate asthma exacerbation during 6 months period. Inclusion criteria: children between 5–18 years of age; PEF > 50–75% of predicted value; serum electrolytes normal ranges. Exclusion criteria: previously treated patients with Salbutamol; Salbutamol hypersensitivity; others asthma exacerbation severity levels. The patients were divided into 2 groups: 1st group comprised those treated with beta2-agonists and 2nd group is represented by paediatric

patients concomitantly treated with beta2-agonists and corticosteroids. Both groups were homogenous regarding age and sex ratio. During hospitalisation, patients received standard low dose of Salbutamol by metered dose inhaler (MDI) and inhaled Fluticasone propionate using spacer device with mouthpiece. Included patients were assessed for electrolytes serum levels and pH before treatment and 72 h after therapy. Data was analysed statistically using the Pearson correlation.

Results Among 269 admitted patients, 164 children fulfilled inclusion criteria. Both groups structure: 85 children in 1st group, 79 in 2nd group. Authors found for both groups a significant relation between serum kalium, serum calcium and natrium. (pvalue 0,010). The study didn't confirm a significant variation of serum electrolytes in 2nd group as compare to 1st group.

Conclusions Study confirmed significant relationship between the serum electrolytes (kalium-calcium, kalium-natrium) after 72 h inhaled treatment with beta2-agonists.

PO-1002 THE SIGNIFICANCE SOLUBLE MARKERS OF ACTIVATION AND APOPTOSIS OF IMMUNE CELLS IN CHILDREN WITH ATOPIC BRONCHIAL ASTHMA

¹V. Bulgakova, ²I. Balabolkin. ¹Department of Scientific Research, Scientific Centre of Children Health, Moscow, Russia; ²Department of Pulmonology and Allergology, Scientific Centre of Children Health, Moscow, Russia

10.1136/archdischild-2014-307384.1620

Background In the pathogenesis of allergic diseases it is assumed the role of apoptotic mechanism of allergic inflammation and immunosuppression.

Objective To define clinical value of apoptosis markers of immunocompetent cells at children with atopic bronchial asthma (BA).

Materials and methods In blood serum of the 96 children in the age from 5 till 16 years (15 healthy and 81 with BA) by enzyme-immunoassay analysis of the use of commercial sets certain level of soluble membrane molecules, which are markers of modulation processes activation and apoptosis of immunocompetent cells: sCD30, sCD40, sCD95 (sApo-1/FAS), soluble FAS ligand (sFASL), ligand TRAIL (Apo2L), enzyme Caspase-1/ICE and protein Annexin V.

Results Authentic differences of concentration of the investigated indicators at children with BA from their referential levels (p).

Conclusion The level estimation soluble markers of activation and apoptosis immune cells can be used as additional diagnostic and prognostic criterion of weight and expressiveness of an atopic bronchial asthma at children.

PO-1003 CHARACTERISTICS OF THE IMMUNE RESPONSE TO INFLUENZA VACCINE IN CHILDREN WITH ALLERGIC DISEASES

¹V. Bulgakova, ²I. Balabolkin. ¹Department of Scientific Research, Scientific Centre of Children Health, Moscow, Russia; ²Department of Pulmonology and Allergology, Scientific Centre of Children Health, Moscow, Russia

10.1136/archdischild-2014-307384.1621

Background Patients with chronic diseases, including atopic bronchial asthma (BA), should be vaccinated annually against influenza. Purpose. To determine the impact of vaccination