VI. F. 1.b.2°

WAC 2015

14–17 October 2015
Seoul, Korea

CERTIFICATE OF ATTENDANCE

This is to certify that

Finny Fitry Yani

attended the XXIV World Allergy Congress (WAC) 2015, held in Seoul, Korea
14-17 October 2015

Lanny J. Rosenwasser
President, WAO
Congress President

Hae-Ran Lee
President, KAAACI

WAC2015

XXIV World Allergy Congress

14–17 October 2015

Seoul, Korea

[illegible] Organization Journal 2016, Volume 9 Suppl 1
[illegible] s40413-016-0096-1

World Allergy
Organization Journal

[illegible]ETING ABSTRACTS

Open Access

[illegible]XIV World Allergy Congress 2015

[illegible] 14-17 October 2015

[illegible] 2016

[illegible]

[illegible] TGF-b1-induced extracellular matrix [illegible] nasal polyp-derived fibroblasts

[illegible] Park[2], Jae-Min Shin[3]
[illegible] of Medicine, Guro Hospital; [2]College of [illegible]; [3]Korea University Guro Hospital, South Korea
[illegible] Shin – Korea University Guro Hospital, South [illegible]

[illegible] Journal 2016, **9(Suppl 1):**A1

[illegible] has been shown to have anti-fibrotic and anti-[illegible] in the lungs. The purpose of this study was to [illegible] effects of pirfenidone on transforming growth [illegible] myofibroblast differentiation and extracellu-[illegible]on. We also determined the molecular mecha-[illegible] in nasal polyp-derived fibroblasts (NPDFs).
[illegible] were isolated from nasal polyps from eight patients [illegible] rhinosinusitis with nasal polyp. Pirfenidone was [illegible] TGF-β1-induced NPDFs. Cytotoxicity was evaluated [illegible]thiazol-2yl)-2,5-diphenyl-tetrazolium bromide [illegible] migration was evaluated with scratch assays. Ex-[illegible] of α-smooth muscle actin (SMA), fibronectin, and [illegible] Smad2/3 were determined by western blot and/or [illegible]-polymerase chain reaction and immunofluor-[illegible] Total collagen production was analyzed with the [illegible] and contractile activity was measured by a col-[illegible] assay.
[illegible] (0 - 2 mg/ml) has no significant cytotoxic ef-[illegible]-induced NPDFs. Migration of NPDFs was signifi-[illegible] pirfenidone treatment. The expression levels of [illegible] were significantly reduced in pirfenidone-[illegible] Collagen contraction and production were also sig-[illegible] by pirfenidone treatment. Finally, pirfenidone [illegible] phosphorylation of Smad2/3 pathway in TGF-[illegible]
[illegible] has an inhibitory effect on TGF-β1-induced [illegible] differentiation (α-SMA), extracellular matrix [illegible] collagen contraction by blocking the phosphoryl-[illegible] pathways in NPDFs. Thus, pirfenidone may inhibit [illegible] matrix by regulating Smad2/3.

[illegible]

[illegible] course of oral steroid in the treatment of [illegible] urticaria refractory to antihistamines

[illegible] Park
[illegible] Boramae Hospital, Seoul, South Korea
[illegible] Yoon – Seoul National University Boramae [illegible]

[illegible] 2016, **9(Suppl 1):**A2

[illegible] are the mainstay in the treatment of [illegible] urticaria (CSU), some CSU patients have not [illegible] Many clinicians have accepted the ef-[illegible] treatment of CSU. There is, however, little [illegible] use in antihistamine-resistant CSU. The purpose of this study was to demonstrate the efficacy of, and suggest a regimen for, oral steroid in the treatment of CSU patients who were refractory to a high dosage of antihistamines. We conducted a retrospective chart review of all patients diagnosed with urticaria between Feburary 1, 2012, and December 31, 2014. A total of 98 patients with CSU were included. Of these, 16 patients (16.3%) were antihistamine-resistant and prescribed a 2-week course of steroid. Thirteen patients (81.2%) were successfully controlled with antihistamines only after stopping the first course. Second course of steroid induced remission additionally in two patients (12.5%). No adverse events and complications associated with oral steroid were observed over the study period. This study demonstrated the excellence of a 2-week course of oral corticosteroid in antihistamine-resistant CSU and propose standardized corticosteroid treatment regimen.

A3

The altered distribution of follicular t helper cells may predict a more pronounced clinical course of primary sjögren's syndrome

Margit Zeher
Division of Clinical Immunology, Faculty of Medicine, University of Debrecen, Hungary, Debrecen, Hungary

World Allergy Organization Journal 2016, **9(Suppl 1):**A3

Recent studies emphasized the important role of follicular T helper (T_{FH}) cells, which contribute to B-cell differentiation, as well as antibody production. The aim of our study was to investigate the possible role of T_{FH} cells in the pathogenesis of primary Sjögren's syndrome (pSS). In the first part of the study, we focused on the periphery by analyzing immune-competent cells and serological markers. We enrolled 50 pSS patients and 16 healthy controls in the study. Patients had elevated ratio of peripheral T_{FH} cells, however, when dividing patients into two groups defined by the presence of extraglandular manifestations (EGMs), only patients with EGMs differed from controls significantly. Moreover, T_{FH} cell percentages correlated positively with both activated T cell and Tr1 cell values, but T_{FH} cell percentages showed negative correlation with both IgM and IgG memory B cell proportions. Elevated T_{FH} percentages were observed in the anti-SSA/SSB positive patients. In the second part, we concentrated on the site of the inflammation, and determined the composition of lymphocyte infiltration in labial salivary gland (LSG) biopsies with special emphasis on T_{FH} cells. We selected tissue blocks obtained from 10 patients at the time of disease onset. LSGs were graded based on the organizational level of periductal lymphocytic infiltrates. T_{FH} cell markers occurred predominantly in more organized structures with higher focus scores. The co-expression of CD3 and Bcl-6 markers identified T_{FH} cells close to Bcl-6$^+$B cells with the typical formation of germinal centers. Systemic features were developed later in the disease course only in patients with more structured infiltrates.
Our results indicate that the presence of T_{FH} cells in LSGs at the disease onset may predict a more pronounced clinical course of pSS. We expect that the further understanding of the regulation of T_{FH} cells will provide new potential therapeutic targets in the treatment of pSS patients with EGMs.

with corticosteroid for 4weeks. **Results:** The sensitivity of methacholine and adenosine bronchial provocation test in diagnosis of bronchial asthma are 65% and 60%, respectively. Both PC20 methacholine and PC20 adenosine are improved after corticosteroid treatment. Devided into two groups according to severity, in mild group, improvement in PC20 methacholine (p<0.05) after corticosteroid treatment was found but not in PC20 adenosine. In moderate group, improvement in PC20 adenosine (p<0.05) after corticosteroid treatment was found but not in PC20 methacholine. Pre-treatment (pre-) MMP-9 was correlated with PC20 methacholine and PC20 AMP (p<0.05; p<0.05). Strong correlations between pre- IL-8 and pre-MMP-9 (Rho=0.655, p<0.05) and between pre- IL-8 and pre- TIMP-1 (Rho=0.815, p<0.001) was observed. We found that changes in PC20 methacholine and PC20 adenosine after treatment with inhaled corticosteroid are correlated with eosinophil percentage in blood and pre- TIMP-1 in sputum, respectively (Rho=0.488, p<0.05; Rho=0.464, <0.05). All inflammatory markers such as IL-5, IL-8, MMP-9, TIMP-1 and ECP decreased after treatment but no significance was found. **Conclusions:** Our findings show that PC20 adenosine and PC20 methacholine are useful markers to assess the efficacy of antiinflammatory therapy. In moderate persistent asthma, PC20 adenosine may be more valuable to evaluate the efficacy of treatment than PC20 methacholine.

A661

S100 Calcium Binding Protein A9 in Sputum of Patients with Steroid Naive Asthma: Relation with Airway Obstruction and Nneutrophilc Inflammation

Myung Shin Kim[1], Jong-Sook Park[2], An-Soo Jang[2], Choon-Sik Park[3]
[1]Soonchunhyang University Gumi Hospital, South Korea;
[2]Soonchunhyang University Bucheon Hospital; [3]Soonchunhyang University Hospital
Correspondence: Myung Shin Kim - Soonchunhyang University Gumi Hospital, South Korea
World Allergy Organization Journal 2016, **9(Suppl 1):**A661

Background: We previously reported elevation of S100 calcium binding-protein A9 (S100A9) protein in sputum of neutrophilic severe uncontrolled asthmatics in spite of high dose inhaled corticosteroid treatment compared with stable asthmatics. The aim of this study was to evaluate the relation of S100A9 protein with neutrophilic inflammation in the steroid naive - mild to severe asthmatics and lung function. ***Materials and Methods:*** Sputum were obtained from 132 never-smoking or ex-smoking asthmatics (<10 pack-years). S100A9 proteins were measured in inhaled or systemic corticosteroid naive asthmatic (SNBA, n=103), inhaled and systemic steroid treated asthmatic (STBA, n=29) and normal controls (NC, n=35) using an enzyme-linked immunosorbent assay. Correlations between S100A9 levels and inflammatory cells, FEV1, and annual rate of exacerbation were analyzed. ***Results:*** The S100A9 levels were significantly higher in sputum of both SNBA and STNA than that of normal controls (P=0.008, and 0.001 respectively) and were comparable between SNBA and STNA (P=0.734). In bronchial asthma (BA), S100A9 levels were significantly correlated with the percentages of neutrophils (r=0.267, p=0.002) and those of eosinophils (r= -0.195, p=0.025) in sputum. The correlations were persistently observed in SNBA. When BA was divided into 4 groups: Neutrophil dominant (70% or more), eosinophil dominant (3% or more), co-dominant and pauci-granulocytic group. The S100A9 levels was the highest in the neutrophilic group (13.51 pg/ug) compared to the eosinophilic (9.06 pg/ug), co-dominant (5.96 pg/ug) and pauci-granulocytic (7.87 pg/ug) groups. S100A9 levels was significantly increased in the subject experiencing exacerbation compared to those not experiencing exacerbation. ***Conclusion:*** Our data suggest that S100A9 protein was elevated in sputum of asthma compared to normal control. The levels were correlated with percentage of neutrophil in sputum and were regardless of steroid treatment.

A662

Risk Factor Asthma in Pediatric Pneumonia Patients

Diah Asri Wulandari, Cissy Kartasasmita
Hasan Sadikin General Hospital, Indonesia
Correspondence: Diah Asri Wulandari – Hasan Sadikin General Hospital, Indonesia
World Allergy Organization Journal 2016, **9(Suppl 1):**A662

Abstract
Background: [illegible] need of mechanical ventilation and mortality.
Objective: To comprehend asthma risk and the profile of children with pneumonia in Hasan Sadikin General Hospital [illegible].
Method: Retrospective study on pediatric pneumonia with asthma as a comorbidity at Pediatric Ward Department Hasan Sadikin General Hospital from January to December [illegible] patient hospitalized with pneumonia and asthma using ICD 10 (J11-J18 and J 45).
Results: Eight hundred and seventy three children with pneumonia were admitted to the hospital. Seven hundred and thirty six patients (84.3%) had comorbidities, and thirty six patients (4.1%) had asthma. Twenty pneumonia patients with asthma (2.3%), 1 patient (0.1%) with asthma and congenital heart disease, and 15 patients (1.7%) had asthma and other comorbid such as cerebral palsy, anemia, malnutrition, diarrhea, and pulmonary tuberculosis. Median age was [illegible] months (11 to 144 months old), with 22 of them (61.1%) were under five years old, and 22 patients were male (61.1%). Six patients didn't have history of allergy/asthma in their family, and 4 patients had one asthma exacerbation in last 4 weeks. Six patients had previous hospitalization with similar symptoms. One of them received previous controller medication. Laboratories finding revealed white blood cell 5500-24.500/mm^3, only 1 bacteria was found from blood culture which was *Serratia marcescens*, and chest X-ray shows bilateral infiltrate. Eight patients (22.2%) had severe asthma exacerbation. Length of stay was 1 to 8 days. There was no patient admitted to pediatric intensive care unit or perished.
Conclusion: Asthma was still a risk factor for children to developing pneumonia that required hospitalization.

A663

Prevalence and Risk Factors of Childhood Asthma and Allergic Disease at Exposed Area By Emission of Cement Padang Factory

Finny Fitry Yani[1], Rizanda Machmud[2], Dhina Lydia Lestari[1]
[1]Dr. M. Djamil Hospital, Indonesia; [2]Faculty of Medicine Andalas University
Correspondence: Finny Fitry Yani - Dr. M. Djamil Hospital, Indonesia
World Allergy Organization Journal 2016, **9(Suppl 1):**A663

Background. Prevalence of asthma in children is increasing, especially in the industrial city. Padang city has Padang cement factory which is located near from community where people surrounding can inhale the dust pollutant emission from cement production, including children. We want to know the prevalence and risk factor of asthma and allergic disease in this area.
Methods. During May-June 2015, we conduct a cross sectional study to children around the Cement Padang factory, based on distance of house from the factory, <5 km (exposed area) and > 10 km (no exposed area). Children age from 0-15 years were selected. We used ISAAC questionnaire to determine asthma and allergic disease. Data was taken from the parent, with informed consent, including asthma, allergic rhinitis and atopic dermatitis symptoms and some risk factors. Data was analyzed with chi-square test.
Results. This study found 90 children, 43 (47.8%) from exposed area, most of them were female 46 (51.1%). The most age group is 1-5[th](48.8%). More than half (54%) have normal nutritional status, but 33.3% undernourish. Asthma prevalence and atopic dermatitis was found higher in no exposed area than exposed area (19.5% vs 13.9% and 39.1% vs 37.2%), but allergic rhinitis was higher in exposed area (60.4% vs 58.6%), no significance difference. Atopic history of the mother was higher in exposed area (34.8% vs 17.3%). Other inhaled pollutan like pet, cigarretes smoke, kapok mattress, vapor from gasoline were higher in no exposed area, but no significance difference.
Conclusion. In exposed area of Cement Padang factory, the prevalence of rhinitis allergy was higher than asthma and atopic dermatitis, but no significance difference.