272. New aspects in prevention and treatment of community-acquired pneumonia and lower respiratory tract infections

P2496
Late-breaking abstract: Clinical and radiological characteristics of cytomegalovirus pneumonia in immunocompromised patients

Siwasak Juthong, Apanya Jirarat. Department of Medicine, Faculty of Medicine, Prince of Songkla University, HatYai, Songkhla, Thailand

Cytomegalovirus (CMV) has long been recognized as a cause of pneumonia in the immunocompromised host. There are few studies reported the correlation of clinical, and pulmonary infiltration with histopathological evidence of CMV pneumonia.

Objective: To define the clinical, radiological features CMV pneumonia diagnosed by bronchoscopy with transbronchial lung biopsy.

Materials and methods: The medical records of CMV pneumonia patients in Songklanagarind hospital between 1 January 2000 and 31 December 2009 were reviewed. CMV pneumonia was confirmed by the identification of cytomegalic inclusion bodies and surrounding tissue inflammation without other pathogen in lung tissue biopsy specimens.

Results: Thirty-one CMV pneumonia patients were identified. Twenty –two patients had HIV-positive with a mean CD4 cell count of 18 cells/mL (1-49 cells/mL) and 8 patients had a history of corticosteroid use. All patients of CMV pneumonia had dyspnea, 90% had fever and 71% had cough. The onset of symptoms varied from acute onset in 38%, subacute onset in 25% to chronic onset in 35%. The most chest radiographic finding was bilateral symmetrical infiltration (53%), including patchy and linear infiltration. Focal lesions were detected in 47% of patients exclusively in middle and lower lobe. The hospital mortality rate was 45%.

Conclusion: Most of patient with CMV pneumonia had dyspnea, fever and cough. Bilateral symmetrical infiltration is the most chest radiographic finding. CMV pneumonia was seen in severely immunosuppressed HIV-positive patients and had a high mortality rate.

P2497
Late-breaking abstract: Relationship of asthma to outcome in influenza A/H1N1 2009 infection: FLU-CIN cohort study


1Women’s and Children’s Health, University of Liverpool, Liverpool, United Kingdom; 2Respiratory Medicine, Nottingham University Hospital, Nottingham, United Kingdom; 3Infectious Diseases, Royal Free Hampstead NHS Trust, London, United Kingdom; 4Centre for Respiratory Infection - National Heart and Lung Institute, Imperial College London, London, United Kingdom; 5Infection and Immunity, University of Sheffield, Sheffield, United Kingdom; 6Intensive Care Medicine, Portsmouth Hospitals NHS Trust, Portsmouth, United Kingdom; 7Public Health Medicine, Health Protection Scotland, Glasgow, United Kingdom

Introduction: Asthma was the commonest co-morbid illness in patients admitted to hospital with influenza A/H1N1. Yet patients with asthma were half as likely to die or require admission to level 2 (high dependency) or level 3 (intensive) care.

Hypothesis: Asthma, rather than associated co-morbidities or treatments such as the use of steroids, is an independent factor for improved outcomes in influenza A/H1N1.

Methods: Between April 2009 and January 2010, FLU-CIN collected clinical, epidemiological and outcome data on patients with confirmed influenza A/H1N1 admitted to 75 UK hospitals. We studied 1520 patients, of whom 480 (31.6%) were 16yrs. Asthma was the commonest co-morbid illness affecting 385 (25.3%) patients.

Findings: Patients with asthma had higher rates of dyspnoea, need for supplemental oxygen and severe respiratory distress than patients who did not have asthma but were significantly less likely to die or require level 2 or 3 care (11.2% vs. 16.6%, OR 0.63, 95% CI 0.42 to 0.94). Asthma had a similar effect (OR 0.63, 95% CI 0.42 to 0.95).

Conclusion: In multivariate analysis, the combination of prior inhaled steroid use and prompt admission to hospital (<4 days) explained the association of asthma with less severe outcome.
P2498 Experimental rhinovirus infection in moderate asthma
David Jackson, Maria-Belen Trujillo-Toralbo, Jerico Del Rosario, Julia Ouisenko, Sebastian Johnson. National Heart and Lung Institute, Imperial College London, London, United Kingdom

Background: Rhinovirus (RV) is the most common cause for asthma exacerbations. Underlying mechanisms are poorly understood. A human model of experimental infection with RV has been introduced however studies have thus far only recruited mild asthmatics. In order to be more representative of those who experience virus-induced exacerbations there is a need to establish the safety of this model in moderate asthma.

Aim: To assess the safety of the RV challenge model in subjects with moderate asthma treated with inhaled corticosteroids.

Methods: Six subjects with moderately severe atopic asthma requiring maintenance inhaled corticosteroids were infected with RV6. Nasal lavage (NL) and clinic spirometry were performed on days 0, 2, 4, 5, 7, 10. Symptom scores were recorded daily throughout the study. Clinical infection was confirmed using a combination of symptom scores, demonstration of RV6 RNA by RT-PCR in nasal lavage and at least a 4-fold increase in RV6-specific antibody titres on day 42.

Results: All 6 subjects developed symptoms of a common cold 24-48 hours prior to an increase in lower respiratory symptoms. This was accompanied by a drop in morning FEV1 (mean fall of 25.6%). Whilst all subjects increased their use of bronchodilator, no subjects required oral corticosteroid therapy. RV6 was demonstrated in NL in all subjects.

Conclusions: In this pilot study infection with RV6 in moderate asthma was well-tolerated resulting in a mild exacerbation. No unexpected adverse events or requirement for oral steroids occurred. The use of RV challenge in moderate asthma therefore appears safe. Results of future studies using this group of patients will better reflect those individuals with the greatest burden of disease.

P2499 Serum microRNA signatures identified in a genome-wide profiling predict the mortality of patients with sepsis
Lim Xe1, Huijuan Wang2,3, Respiratory Medicine, Chinese PLA General Hospital, Beijing, China; 2Medical College, Nankai University, Tianjin, China

Purpose: Serum miRNAs are present and stable, reproducible, and consistent among individuals in the serum and plasma of humans and other animals. And they can be fingerprints of different diseases. We used genome-wide serum miRNA expression profiling analysis to investigate the role of serum miRNA in predicting prognosis of sepsis.

Patients and methods: According to the 28-days mortality, Sepsis sequencing followed by individual quantitative reverse transcriptase polymerase chain reaction (qRT-PCR) assays was used to test the difference in levels of serum miRNAs between survivors and nonsurvivors. The serum was from 92 sepsis patients matched by age, sex, and stage for the early detection. The detected serum miRNAs then were validated in 92 sepsis patients (39 survivors and 53 nonsurvivors) and 24 healthy controls.

Results: Twelve serum miRNAs were found to be altered more than two-fold by Sepsis sequencing between survivors and nonsurvival group, qRT-PCR was performed in 6 miRNAs (miR-206, miR-378, miR-223, miR-15b, miR-15a and miR-16) according to the previous studies. miR-223 (p=0.002<0.01), miR-15b (p=0.008<0.01) and miR-16 (p=0.009>0.01) were significantly different between those two groups. Then APERCHICscore, SOFA score, CRP, PCT of those patients combined with the three miRNAs extend asymptotically to logistic regression. Multiple logistic regression analysis showed that miR-223, APERCHICscore and SOFA score were significantly associated with the mortality of sepsis patients. Conclusion: miR-223, miR-15b and miR-16 from the serum may serve as a noninvasive predictor of the morbidity of sepsis patients.

P2500 Reduction of oxidative stress in successfully treated patients with community acquired pneumonia (CAP), as measured by redox status of coenzyme Q10
Kojiro Honda1, Hiroo Wada1, Masaki Tamura1, Satoru Takaoka1, Takashi Koide1, Masuo Nakamura1, Haruyuki Ishii 1, Daisuke Kura1, Takeshi Saraya1, Jun Rupp1, Daniel Droemann1, Klaus Dalhoff1, Medical Clinic III, University of Luebeck, Luebeck, Germany; 2Research Center Borstel, Clinical and Experimental Pathology, Borstel, Germany; 3University of Luebeck, Institute for Medical Microbiology and Hygiene, Luebeck, Germany

The role of the inflammasome in pulmonary inflammation due to respiratory infections is still not well understood. As the inflammasome is a heterogeneous group of proteins, we focused on one obligatory component, caspase-1. We investigated if inhibition leads to a decrease of IL-1β after infection with NTHi and if it induces other proinflammatory cytokines like tumor necrosis factor-alpha (TNF-α) and CXCL2.

Murine alveolar macrophages (RAW 264.7) and human lung tissue were stimulated in vitro with NTHi 10^6 CFU/ml for 24-48 h. A caspase-1 inhibitor (CI) was added 8 h after infection. Supernatant and cells were collected for ELISA, PCR and Western blot analysis.

Cell and tissue culture experiments showed a significant induction of IL-1β production after NTHi-in vitro inoculation (RAW: Med 24 h and 48 h: 15.6 ± 6.0 pg/ml vs. NTHi 24 h: 408.4 ± 45.5 pg/ml and NTHi 48 h: 1717.7 ± 767.9 pg/ml, both n=6, p<0.01). Caspase-1 was activated 60 min after infection. Inhibition of caspase-1 significantly decreases IL-1β levels after 24 h (NTHi 24 h: 248.1 ± 60.6 pg/ml vs. NTHi+CI 24 h 744.1 ± 12 pg/ml, n=6, p<0.01) and 48 h of NTHi infection (NTHi 48 h: 717.7 ± 727 pg/ml vs. NTHi+CI 48 h: 432.4 ± 49 pg/ml, n=6, p<0.01). PCR data confirmed the inhibitory effect. We did not observe significant changes in TNF-α and CXCL2 release after caspase-1 inhibition what means that these cytokines are not affected by inhibiting caspase-1.

These results indicate that caspase-1-mediated IL-1β upregulation is an important mechanism of NTHi-induced inflammation in pulmonary tissues and might be a central mediator in the pathogenesis of respiratory tract infections.

P2501 Nonyeatable haemophilus influenzae (NTHi) leads to caspase-1-dependent upregulation of interleukin 1-beta (IL-1β) in respiratory cells and human lungs tissue – A role of the “inflammasome” in respiratory tract infections
Johannes Rotta detto Loria1, Kristina Roehmann1, Torsten Goldmann1, Julia Aniscenko, Sebastian Johnston.

Experimental rhinovirus infection in moderate asthma

Conclusion: To prevent pneumonia in recruits, it is a good practice to use, together with pneumococcal vaccine, antiviral medications (such as arbidol) in first days following call-up.

Aims: To study the efficacy of combined use of pneumococcal vaccine and supplementary agents for prevention pneumonia.

Methods: Five groups of military servicemen numbering 120 to 240 persons received, in addition to pneumococcal vaccination, one of preventive means. Persons of the 1st group received influenza virus vaccine, the 2nd group received imdun, the 3rd group bronchomun, the 4th group cytovir-3, the 5th group arbidol during 4-10 days. Comparative groups were in the same conditions as experimentation groups and received pneumococcal vaccine only.

Results: In 1 and 3 months after the onset of agents’ administration in all the groups in which supplementary preventive agents were administered together with pneumococcal vaccine, an incidence of pneumonia and acute respiratory infections was from 1.6 to 3.5 times lower than in the comparative groups. Thus, one and three months after imdun administration, its efficacy index against pneumonia was 3.5 and 2.2 respectively. The efficacy of supplementary agents was most marked during the first month following administration onset.

Conclusion: To prevent pneumonia in recruits, it is a good practice to use, together with pneumococcal vaccine, influenza virus vaccine, vaccinal immunomodulating agents (such as imdun, bronchomun), immunocorrecting agents (such as cytovir-3), antiviral medications (such as arbidol) in first days following call-up.
Thematic Poster Session

P2503
The use of influenzal (IV) and pneumococcal (PV) vaccine in patients, staff and visitors at a university hospital in two periods
Pablo Fescina, Vanina Martin, Fernanda Rumundao, Gustavo Longeoro, Ileana Palma, Carlos M. Luna. Pulmonary Diseases Division, Hospital de Clinicas, Universidad de Buenos Aires, Buenos Aires, Argentina

Aims: To determine the trend of IV and PV coverage for the at risk population comparing the years 2001 and 2010.
Methods: 1191 adults (507 in 2001 and 684 in 2010), including patients, relatives, health care workers, medical students and hospital employees, were interviewed at the hospital. They were asked about age, medical history, their knowledge about IV and PV and vaccination history. At risk population was considered according to the current national guidelines.

Results: Among the people with indications for IV, it was received by 50.1% in 2001 and 63.1% in 2010 (p < 0.001) and PV by 11.8% in 2001 and 20.7% in 2010 (p = 0.003).

National Guidelines in Argentina for IV and PV

<table>
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</tr>
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<tr>
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<tr>
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</tr>
<tr>
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The trend of vaccination rate improved significantly for few indications; for IV in health care workers (21.2% vs. 77.7%, p<0.001) and in people with hepatic comorbidity (9.4% vs. 46.1%, p=0.017) and for PV only for those with pulmonary comorbidity (17.7% in 2001 vs 51.0% in 2010, p=0.004).

Analyzing 2001 and 2010 together, IV rate was higher in retired people >65 years old included in a social security program (PAMI) consisting in intensive advertising, free delivery and administration; than in those not included in such program (62.1% vs. 46.4%, p<0.001).

Conclusion: Vaccination coverage remains low, particularly for IV. Improve-ment of IV and PV require better awareness, changes in clinical practice, deliver-mance and surveillance to assess the progress.

P2504
Procalcitonin in pleural fluid: A new tool for the diagnosis of empyema and parapneumonic pleural effusions?
Estelle Hoguet1, Claire Andrejak1, Anne Marie Bourgeois 2, Charles Dayen 3, Pablo Fescina, Vanina Martin, Fernanda Rumundao, Gustavo Longeoro, Ileana Palma, Carlos M. Luna. Pulmonary Diseases Division, Hospital de Clinicas, Universidad de Buenos Aires, Buenos Aires, Argentina

Background: Few data are available about the usefulness of procalcitonin (PCT) measurement in pleural effusions. Results are controversial with 3 studies with negative results and 2 with promising results in parapneumonic pleural effusions.

Methods: We conducted a study to assess the reliability and the reproducibility of PCT measurements in pleural fluid and to determine its performance for the diagnosis of parapneumonic pleural effusions through ROC curves.

Results: We measured PCT in the pleural liquid of 35 patients (550 measures) with pleural effusion (3 transudates in acute heart failure, 13 metastatic pleural effusion, 17 empyema and parapneumonic effusion and 2 exudates due to an other cause). PCT values were low in 16 cases (< 0.18 mg/ml), medium in 10 cases (between 0.18 and 1 ng/ml) and high in 9 cases (> 1 ng/ml). Reliability: thirty consecutive measurements of the same sample showed a low variation coefficient (< 4%) for medium and high PCT values. A similar variation coefficient was found when PCT was tested in blood. Reproducibility: samples were also kept at 4°C and were tested every day during 5 days with a variation coefficient less than 5% for medium and high PCT values, and less than 4% for the first 3 days. For the diagnosis of empyema or parapneumonic pleural effusions, the ROC curve determined a 0.183 ng/ml PCT cut-off, with a 80% specificity and sensitivity.

Conclusion: PCT could be considered as a useful tool in diagnosis of empyema and parapneumonic pleural effusion with a 80% sensitivity and specificity for a 0.183 ng/ml cut-off. Further studies are required to confirm these data.

P2505
Hyaluronic acid levels are increased in parapneumonic pleural effusions Theodora Zaga, Demosthenes Makris, Irene Tsilioni, Smaragda Oikonomidi, Theodoros Kyroupolos, Anastasios Damiantos, Konstantinos Georgoulas. Department of Respiratory Medicine, University of Thessaly, School of Medicine, University Hospital of Larissa, Larissa, Greece Department of Respiratory Medicine, General Hospital “Amalia Fleming”, Athens, Greece

Background: Hyaluronic acid (HA) is a component of extracellular matrix and may play a role in the pleural inflammation which is implicated in parapneumonic effusions.

Aim: The aim of the current study was to investigate HA levels in serum and pleura in patients with parapneumonic effusions.

Methods: We prospectively studied pleural and serum levels of HA in 58 pa-tients with pleural effusions due to infection (complicated and uncomplicated parapneumonic effusions), carcinomatous effusions and transudative effusions due to congestive heart failure. In addition to HA, TNF-a and IL-1b levels were determined in pleural fluid and serum by ELISA.

Results: The median±SD HA levels (ng/ml) in pleural fluid of patients with complicated effusions (39.058±11.208) were significantly increased (>0.005), compared to observed those with uncomplicated parapneumonic effusions (11.230±1.969), carcinomatous effusions (10.837±4.803) or congestive heart fail-ure (5.392±3.133). There was no correlation between pleural fluid and serum HA values. Pleural fluid TNF-a levels (14.6±1.127) and IL-1b levels (133.4±3.156) were significantly higher in patients with complicated parapneumonic effusions com-pared to patients with other types of effusion (p<0.05). No significant association between HA and TNF-a or IL-1b was found.

Conclusion: HA may play a significant role in the inflammatory process which characterizes exudative infectious pleuritis. Further investigation may reveal whether HA is a useful marker in the management of parapneumonic effusions.

P2506

Background: The CURB-65 score is a simple well validated tool for the assessment of severity in community-acquired pneumonia (CAP). Whether it is used routinely is unknown. The aim of this study was to determine the frequency of use of the score in routine hospital practice and the consequences of no implementation.

Methods: A retrospective analysis of data from 1230 patients with CAP in a Chinese affiliated hospital of a medical college was performed.

Results: None of the patients with CAP had CURB-65 score applied at admission. 716 (58.2%) patients who had a CURB-65 score of 0 were unnecessarily hospitalized. 402 (32.7%) patients who had a CURB-65 score of 1 might be admitted unnecessarily. 14 (1.2%) patients who had a CURB-65 score of 3 or more were not admitted to critical care unit. The unnecessary total annual costs for managing CAP with CURB-65 score of 0 and 1 were estimated at $ 94 512 and $ 66 410.4 in the hospital, respectively.

Conclusions: Non-compliance with the CURB-65 scoring tool in patients with CAP was observed in routine hospital practice. No implementation of the measure-ment of the score incurred appropriate hospitalization and unnecessary costs.

P2507
Viral vs bacterial community-acquired pneumonia: Radiologic features Alejandro Robles1, Anna San Gil2, Vanessa Pascual3, Esther Calbo4, Eugenia Viladot4, Susana Benet5, Buenaventura Barajas6, Eva Milian6, Juan Torres6, Lydia Canals6, Jose Angel De Marcos7, Josefa Perez7, Javier Garaiz7.

Background: Radiologic findings in the viral community-acquired pneumonia (CAP) are poorly characterized.

Aims and objectives: To describe and compare the radiologic findings of patients with bacterial (BP) vs those with viral pneumonia (VP).

Methods: Adults with CAP admitted for at least 24h in a 500-bed acute care hospital from November 2009 to October 2010 were included. Diagnostic methods were blood and sputum cultures, antigen urinary detection, sputum analysis by polymerase chain reaction for 4 respiratory bacteria and 15 respiratory viruses. Initial chest radiographs (CR) were reviewed by a team of radiologists. We defined consolidation as not well-defined opacities with aerial bronchogram, multifocal distribution. 47.2% presented multifocal distribution, 43.4% focal distribution in infiltrates. Consolidation pattern was seen in 90.3%; the rest presented with interstitial affectation. 47.2% presented multifocal distribution, 43.4% focal distribution and 9.4% diffuse distribution. Pleural effusion was seen in 14.1%. No statistical significant differences were found in the comparison of the CR according to the etiology (BP vs VP).

Conclusions: Viral CAP presented frequently with a consolidation pattern and visitors at a university hospital in two periods.

Hall 2-25 - 12:50-14:40

MONDAY, SEPTEMBER 26TH 2011

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Infectious and noninfectious pulmonary complications are frequent in allogeneic stem cell transplant recipients (SCT) and associated with a high morbidity and mortality. Metapneumovirus (MPV) has recently been recognised as a cause of lethal infections in immunocompromised patients. Following an index case with fatal outcome we included PCR for Metapneumovirus in the routine work-up of BAL performed in hematological patients with pulmonary symptoms. We analysed the clinical presentation and outcome of 8 allogeneic stem cell transplant recipients with a median follow-up of 45 year observed over a period of 12 months.

Time to pulmonary MPV infection was 473 days after SCT. 6 of 8 patients were under immunosuppressive therapy for GVHD and 4 of them had biopsy proven bronchiolitis obliterans. All patients suffered from cough and 7/8 from fever. CT scan of the chest revealed a groundglass pattern in all but one cases. There were nodules in five cases and alveolar-interstitial infiltrates in also 5 cases. Enlarged lymphnodes were only present in one patient. In one patient there was concomitant nodules in five cases and alveolar-interstitial infiltrates in also 5 cases.

Conclusion: Metapneumovirus pneumonia is not uncommon following allogeneic stem cell transplantation. Typical clinical features include fever, cough and a groundglass pattern on chest CT scan. Most patients recover under treatment with immunoglobulins and ribavirin.

P2511
Clinical stability in patients with community- acquired pneumonia (CAP)
Tatjana Pejic1, Ivana Stankovic, Ivanka Djordjevic, Zorica Ciric, Tatjana Radenovic-Petkovic, Desa Nasastijevic, Milan Radovic. Clinic for Lung Diseases and TBC, Clinical Centre, Nis, Serbia
Clinical stability (CS) defined as normalization of vital sign, is often used to manage patients with CAP. The aim of our study was to identify the time to resolution of abnormalities in vital sign (heart rate - HR, systolic blood pressure - SBP, respiratory rate - RR, oxygen saturation - SATO2 and axillaries temperature - T). Ability to eat (AE), and mental status (MS) in patients with CAP (n=118). The patients divided in 2 groups, from 18-65 years old (n=65 - first group), and older than 65 (n=53 - second group). We compared parameters of CS in groups in the first day, and the time normalization of CS between groups (HR ≤100 beats/min, SBP ≤140 mmHg, RR ≤ 24 breaths/min, SATO2 ≥90%, T ≤37,5°C).

Results: We found in first group, in first day of hospitalization, average values of HR=115 beats/min, SB=120 mmHg, RR=24 breathes/min, SATO2=93% T=37,3°C. In second group HR=106 beats/min, SB=130 mmHg, RR=24 breaths/min, SATO2=92%, T=37,5°C. In 15 patients second group had mental confusion. The median time to stability in first group was 1 day for HR, SP and RR, and 2 days for SATO2, 3 days for T and 5 days for AE. The median time to stability in second group was 1 day for HR, SP, T 2 days for RR and MS, 3 days for SATO2 and 8 days for AE.

Conclusion: The older patients had slowly time to stability for SATO2, RR and MS, and smaller T and HR in first day.

P2512
Cp immunity pneumoniae (Cp)-specific IgE is associated with asthma severity
Dahin Hahn1,2, Katir Patel3, Eduard Dzirk1, Wimley Welbeley1,3, Family Practice, Dean Clinic, Madison, WI, United States; 2Family Medicine, University of Wisconsin School of Medicine and Public Health, Madison, United States; 3Microbiology, University of Massachusetts, Amherst, MA, United States
Background: Multiple Cp biomarkers are associated with asthma severity but potential mechanisms are unclear.

Aims: To investigate bacterial allergy as a potential mechanism for Cp-associated asthma.

Methods: Practice-based prevalence study of serum Cp IgE by immunoblotting and whole blood Cp DNA by PCR, and associations with asthma severity and antibiotic treatment outcomes; nested case-control study of asthma cases and non-asthma controls.

Results: We studied 66 asthma subjects (mean age 40.9 years, range 4.7-84 years old; 57.6% males, 10.6% current smokers, 34.3% never-smokers, 86.6% never-smokers, 13.4% current smokers). Cp IgE was detected in 33 (50%) and Cp DNA in 16 (24%). 82% of Cp DNA pos subjects were Cp IgE pos (P=0.014); 4 (22%) of 18 subjects with intermittent asthma were Cp IgE pos compared to 30 (83%) of 48 with persistent asthma (P=0.005). We also found a significant “dose-response” relationship (Table).

<table>
<thead>
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<th>Cp IgE positivity and asthma severity category</th>
<th>Category</th>
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<th>Moderate persistent</th>
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<td>8</td>
<td>27</td>
<td>15</td>
<td></td>
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<tr>
<td>ARF</td>
<td>14 (52)</td>
<td>12 (80)</td>
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A nested case-control study detected Cp IgE in 10 (53%) of 19 asthma cases and in 15 (75%) of 20 non-asthma controls (P=0.15).

P2520
Non-tuberculous infections in patients with TNF-alpha-antagonist treatment
Introduction: In recent years the use of TNF antagonist drugs for many diseases such as rheumatological diseases has increased. As a complication of these treatment infection tendencies mainy tuberculosis is increasing. The purpose of this study in patients receiving anti-TNF therapy was to assess the frequency of infection other than tuberculosis.

1220 patients receiving anti-TNF therapy have been referred to our clinic from January 2008 to December 2010. A nested case-control study detected Cp IgE in 10 (53%) of 19 asthma cases and 12 (80%) of 15 asthma controls.

Results: We found in first group, in first day of hospitalization, average values of HR=115 beats/min, SB=120 mmHg, RR=24 breathes/min, SATO2=93% T=37,3°C. In second group HR=106 beats/min, SB=130 mmHg, RR=24 breaths/min, SATO2=92%, T=37,5°C. In 15 patients second group had mental confusion. The median time to stability in first group was 1 day for HR, SP and RR, and 2 days for SATO2, 3 days for T and 5 days for AE. The median time to stability in second group was 1 day for HR, SP, T 2 days for RR and MS, 3 days for SATO2 and 8 days for AE.

Conclusion: The older patients had slowly time to stability for SATO2, RR and MS, and smaller T and HR in first day.
Of 31 asthma subjects who elected azithromycin treatment, 26 (84%) reported improvement. Cp IgE was detected in 16 of 26 reporting improvement and in 4 of 5 without improvement (P=.63).

Conclusions: Cp IgE was prevalent (50%) in community asthma patients, and was associated with Cp DNA and asthma severity, but was also common in non-asthma controls and did not predict response to azithromycin. Cp allergy may be one mechanism supporting a causal association of Cp and asthma. However, Cp pathogenesis is likely to be multifactorial.

P2513
Chlamydia pneumoniae infection in patients with mild asthma
Dejan Dokic1, Sabri Aziri, Elena Trajkovska-Dokic2, Dimitar Karkinski1.
1Department of Science, University Clinic of Pulmology and Allergy, Skopje, Macedonia, The Former Yugoslav Republic of; 2Institute of Mycrobiology, Medical Faculty St Cyril and Methodius, Skopje, Macedonia, The Former Yugoslav Republic of

Chronic chlamydia pneumoniae infection has been suggested, as a cause for adult onset of asthma. There are data to suggest that infectious organisms, particular the atypical bacteria. Chlamydia pneumoniae may be involved in asthma pathogenesis. The significance of these organisms is as yet unclear. It is not known whether this organism was allowed to persist after an infection, or was present prior to the development of asthma. The purpose of this study was to determine whether anti-chlamydia treatment with azithromycin will improve asthma symptoms and lung function in asthmatic patients without taking anti-asthmatic drugs.

40 patients (mean age 44.5 years) with mild asthma were treated a median of 6 weeks with azithromycin 1000 mg once weekly. All patients had chlamydia pneumoniae infection detected by Seeplex Multiplex PCR in sputum. Post treatment lung function and symptom score (cough, wheezing, dyspnea) were compared with baseline values.

After 6 weeks of treatment with azithromycin there was significant reduction in symptom score (p<0.01) and significant improvement in lung function FEV1 (p<0.001), Wilcoxon matched Pairs test.

Treatment with azithromycin (which has also immunomodulatory activity) significantly improved asthma symptoms and lung function indicating that Chlamydia pneumoniae may play an important role in enhancing the inflammatory processes in lower airways.