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406. Epidemiology of various respiratory diseases

P3976**Surveillance of antibiotic resistance in *Streptococcus pneumoniae* from 2000 to 2011 and serogroup distribution in Tunisia**

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Worldwide spread of antibiotic resistance in *Streptococcus pneumoniae* is a major problem and has reached very high levels in certain countries.

In this study, we report, the level of resistance of *Streptococcus pneumoniae* over a 12-year period and the serogroup's distribution in Tunisia.

From January 2000 to december 2011, 1953 strains were collected, in Abderrahmane Mami Hospital of pneumology. This strains was isolated from respiratory specimen (90,5%) and blood, pus and cerebral spinal fluid (9,5%). In vitro susceptibility to antimicrobial agents was determined by the agar dilution method according the CA-SFM guidelines. The MICs of penicillin G, amoxicillin and cefotaxim were studied by the E-test method (AB Biodisk). The strains were serogrouped by latex agglutination using pneumotest-latex kits (Statens Serum Institute, Copenhagen Denmark).

The rate of penicillin G non susceptible pneumococci (PNSP) was 40,4% including 8,2% of high resistance level. The strains showed reduced susceptibility to amoxicillin and cefotaxim in 17,4% and 12,7% of cases respectively. An increase of resistance is showed from 2000 to 2011 to B-lactamin. In addition, high levels of resistance to other antibiotics were noted. Thus 60,7%, 40,9% and 14,2% of strains were resistant to erythromycin, tetracycline and chloramphenicol respectively.

The most common serogroups were 19, 6, 9, 14, 3 and 23 and were associated to penicillin G non susceptible pneumococci. Serogroup 1 was also found in severe pneumococcal infection.

In conclusion, the high rate of PNSP and the multidrug resistance of *S.pneumoniae* underlight the need of rational use of antibiotics.

P3977**Clinical, spirometric and radiological characteristics of Brazilian rheumatoid arthritis patients**

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Rheumatoid Arthritis (RA) is a common inflammatory disease, and pulmonary in-

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involvement is usual. An algorithm has been proposed for evaluation and management of RA patients with suspected interstitial lung disease, based on chest radiograph, physical examination and symptoms (Kim, E.J. *et al.* Chest 2009;136:1397-1405). **Objective:** To describe clinical, spirometric and radiological characteristics of Brazilian RA patients using low-cost evaluation.

Methods: Patients with RA, irrespective of having pulmonary involvement, were evaluated, and data regarding pulse oximetry, spirometric measures and digital chest radiograph were obtained.

Results: 248 RA patients were analyzed. 85% were female, mean age was 56±10 years, median disease onset time was 16 years (IQR 7,75-24). The most common exposition was mold (22%). 50% had no smoking history, 17% were current smokers and 33% were former smokers. Pulse oximetry was normal (above 94%) in 87%. MRC dyspnea index 1 or 2 were observed in 50% and 32%, respectively. Most commonly used drugs were Methotrexate (92%), Prednisone (80%) and Chloroquine (78%). Spirometry was classified as normal (70%), obstructive (11%), restrictive (11%), mixed (5%) and unspecified (3%) patterns. At the moment, data for chest radiograph is available for 71 patients (29%), parenchymal abnormalities were observed in 56%, mainly linear (38%) and reticular opacities (18%).

Conclusion: This is the first study in Brazilian RA patients to analyze digital chest radiographs and to evaluate lung abnormalities. Spirometric alterations are common in RA patients. Abnormalities in digital chest radiographs were more frequent than previously described in conventional radiographs.

P3978

Risk factors that determine time to first RSV hospitalization in CARESS: The Canadian registry of palivizumab (2005-2011)

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Objective: Evaluate risk factors that determine time to first RSV hospitalization in children at high-risk of RSV infection who received prophylaxis.

Design/Methods: A prospective, observational, registry of infants who received 1 dose of palivizumab during the 2005-2011 RSV seasons across 30 sites. Neonatal and demographic data were collected from the parent/caregiver at enrollment. Data related to respiratory infection events were collected monthly.

Results: 10,452 infants were enrolled; average age 5.5±6.0 months. Infants were typically male (56.4%), Caucasian (71.3%), average gestational age (GA) 32.3±5.6 completed weeks. 7006 (67%) infants received palivizumab for prematurity (35 weeks GA) only, 836 (8%) had chronic lung disease, 1048 (10%) had congenital heart disease and 1562 (15%) had underlying medical disorders (e.g. CNS disorders, airway anomalies and cystic fibrosis). Hospitalization rates for respiratory and RSV-related illness were 6.4% and 1.6%, respectively. Risk factors that predicted RSV hospitalization included: having siblings (HR=2.16, df=1, p=0.001), >5 people in household (HR=2.02, df=1, p<0.0005) and smoking exposure (HR=1.80, df=1, p=0.002). Risk of shorter time to first hospitalization increased with the number of risk factors from 1 (HR=3.42) to 3 risk factors (HR=10.40).

Conclusions: Time to first RSV hospitalization after the first palivizumab dose are similar to those reported in the literature, with a natural history of RSV. The effect of multiple risk factors pose a cumulative increased risk for RSV hospitalization, similar to the Canadian and European risk scoring models for 33-35 weeks' GA infants.

P3979

Genetic epidemiology of hereditary hemorrhagic telangiectasia associated with pulmonary arteriovenous malformation

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Background: Hereditary hemorrhagic telangiectasia (HHT) is an autosomal dominant disorder characterized by aberrant vascular development such as pulmonary arteriovenous malformation (PAVM). We report here a genetic epidemiologic study in PAVM associated with HHT in Japan.

Method and subjects: A total of 137 pedigree members were traced of which 81 were alive and 42 were affected by HHT in a county, A (population 1.1 million) located in northern Japan.

Results: Linkage analysis in two large families complicated with PAVM revealed a linkage to the HHT1 locus (encoding endoglin; ENG). Three novel mutations were found in four families, all of which led to a frame shift: a G to C transversion at the splicing donor site of intron 3 (Inv3+1 G>C), one base pair insertion (A) at nucleotide 828 (exon 7) of the endoglin cDNA (a828-29 ins A), and a four base pair deletion (AAAG) beginning with nucleotide 1120 (exon 8) of the endoglin cDNA (c.1120-1123 delAAAG). The insertion of A in exon11 (c.1470-1471 insA) mutation was found in one family. PAVMs were associated in 18 out of 42 HHT patients (42.8%). HHT was proven in 50 out of 202 PAVMs (24.7%) in the mass survey in Japan.

Summary and conclusion: The population prevalence of HHT in the county was estimated to be 1:8,000-1:5,000, roughly comparable with those reported in European and U.S. populations, which is contradictory to the traditional view that HHT is rare among Asians. We recommend that families with HHT be screened for gene mutations in order that high-risk individuals complicated with PAVM receive early diagnosis and treatment initiation that will substantially alter their clinical course and prognosis.

P3980

NAT2 gene polymorphism in lung cancer: A study from north India

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Purpose: This study was conducted to examine: 1) whether the NAT2 genotypes are risk factors for Lung cancer, 2) to study possible association of tobacco smoking with NAT2 genotype of these patients.

Materials and methods: This case control study was undertaken over a period of 19 months and included 100 Lung cancer patients and 145 controls. The NAT2 genotypes were identified by PCR-RFLP method in peripheral blood DNA samples. Genotypes frequencies and the association of the genotypes among patients and controls group were assessed by χ^2 test and Binary Logistic regression.

Results: The NAT2 fast acetylator genotype frequency of slow or fast acetylator genotypes was not significant in lung cancer patients alone (OR = 1.18, 95% CI: 0.69 - 2.03, p value = 0.583). in non-smoker (OR = 1.06, 95% CI: 0.43 - 2.64, p value = 0.899) and smoker (OR = 1.32, 95% CI: 0.59 - 2.93, p value = 0.494) when compared with controls.

Conclusion: These data demonstrate that the NAT2 fast or slow acetylators genotype did not associated with the risk of developing lung cancer in North Indian population when compared with controls.

P3981

Serotypes distribution and clinical features of IPD in immunocompromised vs. immunocompetent adults in Spain

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Background: Immunocompromise is a main risk factor for Invasive Pneumococcal Disease (IPD).

Objectives: To analyse clinical presentations, comorbidities, and outcome of IPD by immunological status and serotypes (Sts) distribution to determine PCV13 coverage.

Methods: Prospective surveillance of culture-confirmed IPDs in adults (≥ 18 years) performed in 7 Spanish hospitals (August 2010-June 2011). Immunocompromise included presence of immunosuppression, HIV infection/AIDS, other immunodeficiencies, cancer or chronic renal disease.

Table 1

	Immunocompromised	Immunocompetents
n (%)	84 (44)	107 (56)
Age (X±SD)	60.94±17.14	63.14±18.31
Males (%)	66.7	51.4*
Patients with comorbidities [n (%)]	84 (100)	94 (87.9)
Previous pneumonia	39.3	9.6*
Chronic liver disease	27.4	17
COPD/Asthma	23.9	29.8
Diabetes mellitus	11.9	23.4
Clinical presentation (%)		
Pneumonia	63	77.5
Meningitis	7.1	12.1
Primary bacteremia	14.3	1.9*
Sepsis	8.3	1.9
Peritonitis	3.6	4.7
Health care-associated IPD (%)	17.9	5.6*
Mortality (%)	19	9.3
PPV23 vaccination	25	19.6
PCV13 Sts (%)	38.1	64.4
6C (%)	6	5.6
PPV23nonPCV13 Sts (%)	26.1	12.1
Other Sts (%)	35.7	23.3

*p<0.05.

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Results: 191 cases were included (age 62.2 ± 17.8 years, 58.1% males). Table 1 shows by immunological status, patient characteristics and vaccines coverage.

Conclusions: Previous pneumonia is significantly more frequent among immunocompromised patients. PCV13 coverage depends on immunological status, with the highest coverage for immunocompetent patients (64.4%). Facing limitations of the 23-valent polysaccharide (25% of immunocompromised patients had been vaccinated) vaccination with conjugate vaccines could be a better strategy for both immunocompetent and immunocompromised patients.

P3982

Prescription of antitussives in asthma: A cross-sectional study in primary care in France and in Italy

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Background: In medical practice, asthma is often poorly controlled and guidelines inadequately followed. Prescriptions of antitussives to asthma patients by general practitioners in primary care and the characteristics of those receiving this drug category remain poorly investigated.

Aims: To identify, in French and Italian asthma patients treated in primary care in 2008, the frequency of prescription of antitussives, and the factors associated with this prescription.

Methods: A cross-sectional study was conducted, based on general practitioners' electronic medical records (Cegedim-Strategic-Data). Asthma patients aged 13-40, with ≥ 4 units of prescribed respiratory drugs or ≥ 4 visits for asthma in 2007 and in 2008 were selected. Those under tiotropium were excluded. The prescription of antitussives in 2008 was described in both countries, and corresponding correlates of receiving antitussives were identified according to patient characteristics and asthma prescription patterns.

Preliminary results: A total of 3,093 French patients (mean age 28, 50% women) and 3,872 Italian patients (mean age 29, 49% women) were included. In French asthma patients, 15% received antitussives in 2008 (3% in Italy). In France, being prescribed antitussives was mainly associated with receiving nasal therapy, oral corticosteroids, and visiting at least monthly physician ($p < 0.0001$ for all). Patients' age and gender had a more limited influence on receiving antitussives. Similar analyses will be conducted in Italy.

Conclusions: Unlike Italy, prescription of antitussives is common in asthma management in France, and is associated with rhinitis treatment and potential markers of asthma exacerbation.

P3983

Global burden of non-cystic fibrosis bronchiectasis: A simple epidemiological analysis

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Introduction: Non-cystic fibrosis bronchiectasis (NCFB) is a relatively rare condition in which potential respiratory pathogens frequently colonize the lungs, often leading to exacerbations. Although classified as an orphan disease in the US, limited data are available to quantify the burden of NCFB worldwide.

Methods: A systematic search was performed in MEDLINE and PubMed for original articles containing epidemiological information on: the rate of NCFB in the general population; the age and sex distribution of the patients; the proportion of those with culture-positive sputum; and the frequency of exacerbations. The search yielded 97 publications: 33 gave meaningful data for this study. Information was aggregated using a weighted average across multiple published studies to derive factors that were applied to all countries in the analysis.

Results: The prevalence rate of NCFB in the general population was calculated to be 39.9 cases per 100,000. In total, 75.8% of patients have culture-positive sputum and 48% experience ≥ 2 exacerbations per year. Table 1 shows single country data.

Table 1. Estimates on NCFB patients in 2012

	Total number of patients (N)	Culture-positive sputum (N)	≥ 2 exacerbations/year (N)
Global	2443518	1852703	1178806
U.S.	130676	99080	63041
France	26099	19788	12591
Germany	35759	27113	17251
Italy	24664	18701	11898
Spain	18738	14207	9040
UK	25453	19298	12279

Conclusions: This epidemiology calculation demonstrates that there are marked

global numbers of NCFB patients suffering from frequent exacerbations who may need therapies that could potentially reduce exacerbations. More data from individual regions and countries are needed to better estimate global epidemiology of NCFB.

P3984

Prevalence of pulmonary hypertension among outpatients with sarcoidosis: An echocardiographic and pulmonary catheterization study

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Background: Pulmonary hypertension (PH) has negative impact in sarcoidosis prognosis. Prevalence of pulmonary hypertension (PH) among patients with sarcoidosis has not been investigated by screening studies confirmed by hemodynamic evaluation.

Objectives: (1) to determine the prevalence of PH among outpatients with sarcoidosis in a tertiary center and (2) compare the presence of systolic pulmonary artery pressure estimated by echocardiogram (SPAP) ≥ 40 mmHg to the diagnostic gold standard for PH (mean pulmonary artery pressure mPAP ≥ 25 mmHg) measured by pulmonary artery catheterization, in patients with tricuspid reflux velocity (TRV) ≥ 2.5 m/s.

Methods: Seventy-two consecutive patients of 163, from our outpatient sarcoidosis clinic (ATS/ERS criteria), underwent echocardiographic evaluation to assess TRV and to estimate SPAP. Patients with TRV ≥ 2.5 m/s (possible PH) underwent pulmonary artery catheterization. Lung function testing and high-resolution CT (HRCT) also were performed in all patients in all patients.

Results: Nineteen patients had TRV ≥ 2.5 m/s; 18 underwent hemodynamic evaluation (one patient died before the procedure). PH (mPAP ≥ 25 mmHg) was diagnosed in 4 patients and its prevalence was 5.6% (IC95% 0.2-10.8%). Five patients (6.9%), had SPAP ≥ 40 mmHg, estimated by echocardiography, but only two of them had PH (mPAP ≥ 25 mmHg); on the other hand, two patients with SPAP ≤ 40 mmHg, estimated by echocardiography, had PH in hemodynamic study.

Conclusion: PH prevalence in outpatients with sarcoidosis was 5.6%. SPAP > 40 mmHg estimated by echocardiogram was not accurate to diagnose PH (3 false positive and 2 false negative).

P3985

Study of pulmonary embolism prevalence depending on age and sex by autopsy data

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Background: Pulmonary embolism (PE) is the third most frequent cause of death after ischemic heart disease and stroke. Problems concerning statistic data as for PE and the dynamics of its prevalence are insufficient in Ukraine.

Aims and objectives: To study the dynamics of PE prevalence depending on age and sex, to determine factors leading to fatal outcome between 1993 and 2002 years by the results of autopsies.

Methods: To determine the dynamics of prevalence and causes of fatal PE development we undertook a retrospective analysis of 2260 case reports of patients who died during 1993-2002 years.

Results: The results of 2260 autopsies done during the period of 1993-2002 showed that PE in the structure of pathologic diagnosis occurred in 121 cases (5.3%), mean time of development of PE symptoms was 6.3 ± 2.3 days. 65 of them were males (53.7%) and 56 - females (46.3%) with average age 64.1 ± 2.3 years. The dynamics of PE prevalence as a cause of death in patients during the study period tended to increase ranging from 3.3% to 12.2%; the average prevalence rate of pulmonary embolism for ten years of study being 5.3%. Oncologic diseases (53.9%), deep vein thrombosis of lower extremities (23.1%) and ischemic heart disease (19.0%) were the major etiological factors causing the development of fatal symptoms of PE in patients during the last decade.

Conclusions: Individuals suffering from deep vein thrombosis, ischemic heart disease with atrial fibrillation and those undergoing operations for oncologic diseases are at great risk of PE development. If sudden dyspnea, chest pain and decrease of blood pressure appear in the patients of risk group additional methods of examination should be used to exclude PE.

P3986

Role of eczema as a risk factor for allergic rhinitis in adolescents

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Introduction: Allergic rhinitis (AR) is one of the most important chronic diseases affecting adolescents. AR often occurs together with eczema.

Aim: To investigate prevalence of eczema and/or positive family history of eczema in adolescents with AR and without AR.

Material and methods: A cross-sectional study conducted on a convenient sam-

ple of 300 adolescents with AR (180 boys and 120 girls), aged 14-17, and equal number of adolescents without AR matched by sex and age selected from three different provinces in Greece. Retrospective analysis of AR and eczema was based on anamnesis and data from medical archives.

Results: Eczema is presented in 34% of adolescents with AR (35% of the boys and 33% of the girls). The prevalence of eczema was significantly higher in adolescents with AR compared to adolescents without AR (34% vs 6%, $p < 0.01$). Positive family history of eczema had 31% of adolescents with AR (33% of the boys and 29% of the girls) and its prevalence was significantly higher compared to adolescents without AR (31% vs 5%, $p < 0.01$).

Conclusion: Results confirm the role of eczema (personal or family history) as a risk factor for AR in adolescents.

P3987

Effect of hospital volume on patient outcomes in pleural infection

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Background: We aimed to investigate the hospital volume-outcome relationship (HVOR) in patients with pleural infection, which is important because outcomes may be improved by volume-based selective referral if an inverse HVOR is present.

Methods: We analyzed 24,876 patients with pleural infection in 2,188 hospital-years from Taiwan's National Health Insurance Research Database between 1997-2008. Primary outcome was hospital mortality. Secondary outcomes were hospital length of stay and charges. Hospital volume was measured both as a categorical and a continuous variable (per one case increase per hospital-year); and the effect of which was assessed using multivariable logistic regression models with generalized estimating equations accounting for hospital clustering effect. Adjusted covariates included patient and hospital characteristics (model 1), pleural surgery (model 2) and life-supporting measures (model 3).

Results: HOVR was significant only when volume was measured as a categorical variable. Patients treated in the highest volume quartile (≥ 14 cases per hospital-year) had a 27% lower risk of hospital mortality than those in the lowest volume quartile (1 case per hospital-year) after adjusting for patient and hospital characteristics (model 1: adjusted OR 0.73, 95% CI 0.55-0.96). However, after adjusting for treatment covariates (model 2 and 3), the volume effect on hospital mortality disappeared. Hospital volume only explained a small proportion of variation in hospital mortality ($-2 \log \text{likelihood} = 0.26\%$).

Conclusions: In patients with pleural infection, the effect of hospital volume on patient outcomes is small, depends on volume measures and can be explained by differences in treatment across hospitals.

P3988

Ethnic peculiarities of chlamydia in bronchial asthma

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Aim: To study ethnic peculiarities of chlamydia prevalence in bronchial asthma (BA) patients of Krasnoyarsk and Kyzyl.

Materials and methods: We have examined 239 subjects (from 17 to 78 years): the Europoids ($n=159$), the Mongoloids ($n=80$). Among them: BA ($n=187$), control ($n=52$). We have determined Chlamydia pneumoniae et psittaci (C.pneumoniae et psittaci), Chlamydia trachomatis (C.trachomatis) by direct immune fluorescence technique (DIF) for smears of oropharynx, their antibodies from blood serum by immune enzyme analysis (IEA).

Results: The frequency of C.pneumoniae et psittaci in BA: in the Europoids by DIF – 14.5%, IEA IgM – 3.9%, IgG – 41.9%; in the Mongoloids – 25.9%, 10.3%, 17.2%, correspondingly. In control groups C.pneumoniae et psittaci had been revealed in the Europoids by DIF – 6.7%, IEA IgM – 0.0%, IgG – 23.3%; in the Mongoloids – 27.3%, 4.5%, 18.2%, correspondingly.

The frequency of C.trachomatis in BA: in the Europoids by DIF – 10.8%, IEA IgA – 3.9%, IgM – 3.1%, IgG – 25.6%; in the Mongoloids – 19.0%, 3.4%, 1.7%, 19.0%, correspondingly. In control groups C.trachomatis in the Europoids by DIF – 30.0%, IEA IgA – 0.0%, IgM – 0.0%, IgG – 6.7%; in the Mongoloids – 13.6%, 0.0%, 9.1%, 40.9%, correspondingly.

Conclusion: Were found ethnic peculiarities: in the Mongoloids more frequent than in the Europoids – IgM to C.pneumoniae in BA; IgM to C.pneumoniae, IgM to C.trachomatis in control groups.

P3989

Clinical characteristics and outcomes of community acquired pneumonia (CAP) in adults ≥ 18 years of age in a well defined area of Badalona, Spain

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Background: It is known that CAP often requires hospital admission. However,

the prevalence between hospitalizations and outpatient visits for CAP is not well established.

Objective: To analyse differences between adults with CAP treated as inpatients or as outpatients in a well-defined health care area.

Methods: Retrospective review of medical records of patients ≥ 18 years old diagnosed with CAP from January 1st 2008 to December 31st 2009 belonging to Badalona (population ≥ 18 years: 90315) and attended by 6 primary care centres and 2 hospitals.

Results: 581 patients were included in the study (incidence rate: 6/1000 adults). 71.5% were diagnosed at hospital settings. Hospitalised patients (41.5%) were older (mean age: 66.6 years vs. outpatients: 51 years; $p < 0.001$) and had more comorbidities. Inpatient admission was associated with liver disease (OR=5.9), stroke (OR=3.6), dementia (OR=3.5), COPD (OR=2.9), diabetes mellitus (OR=1.9) and age (OR= 1.1); $p < 0.002$. Among cases with microbiological tests done (61.9%; 100% of inpatients vs. 35% of outpatients), 48.3% had negative result (52.7% in inpatients vs. 39.5% in outpatients). *Streptococcus pneumoniae* was the most prevalent pathogen identified (57.5%: 71.9% in inpatients vs. 34.7% in outpatients). For inpatients, readmission rate was 19.1% and mortality rate 2.5%. Length of hospital stay was 4.4 days.

Conclusions: Despite current therapeutic measures, CAP continues to be a major health issue with almost 1 out of 2 CAP patients requiring hospitalization. The increase in the future of elderly people and thus of comorbidities stress the need to implement better strategies for CAP prevention.

P3990

Hospitalizations from pandemic influenza (pH1N1) infections among patients with asthma in Spain

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Objectives: We describe and analyze the clinical characteristics and outcomes for all persons suffering asthma who were hospitalized with laboratory confirmed pH1N1 infection in Spain in 2009.

Methods: This is an observational retrospective study using hospitalization data collected by the Spanish National Hospital Discharge Database. We selected all admissions with diagnosis ICD-9-CM code 488.1 (pH1N1). Discharges were grouped, according to the presence or not of asthma.

Results: The total number of persons hospitalized with pH1N1 was 11,499. Of those, 8.98% suffered asthma. The most common underlying medical condition among asthmatic subjects was obesity (10.97%). The IHM was much lower among asthmatic patients than among those without this disease (0.85% vs. 2.76%, $p < 0.05$). Also, the mean LOS and the mean costs per patient were lower for asthmatic patients (5.38 days and 2,566 €), when compared to hospitalized patients without asthma (7.08 days and 3,186 €). After multivariate analysis, suffering asthma was a factor independently associated with a higher probability of surviving during the hospitalization with pH1N1, (OR=0.42; 95% CI 0.11-0.71). For asthma sufferers, those that died during the hospitalization with influenza pH1N1 were significantly older, suffered more concomitant chronic diseases and had a longer LOS and higher costs.

Conclusions: Among individuals hospitalized in 2009 with pH1N1 infection in Spain the prevalence of asthma was 8.98%. The most common underlying medical condition among asthma subjects was obesity. Suffering asthma was independently associated with lower risk of dying during the hospitalization with pH1N1.

P3991

Hospitalizations from pandemic influenza (pH1N1) infections among patients with COPD in Spain

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Objectives: We describe and analyze the clinical characteristics and outcomes for all persons suffering COPD who were hospitalized with laboratory confirmed pH1N1 infection in Spain in 2009.

Methods: This is an observational retrospective study using hospitalization data collected by the Spanish National Hospital Discharge Database. We selected all admissions with diagnosis ICD-9-CM code 488.1 (pH1N1). Discharges were grouped, according to the presence or not of COPD. The outcome variables analyzed were in-hospital mortality (IHM), length of hospital stay (LOS), and costs.

Results: The total number of persons hospitalized with pH1N1 was 11,499. Of those, 9.44% suffered COPD. The most common underlying medical conditions among COPD patients included diabetes (18.60%) and obesity (9.94%). COPD was associated to a significantly higher IHM (3.04% vs. 2.40%, $p < 0.05$), LOS (7.45 vs. 6.75, $p < 0.05$) and cost per patient (4,040 vs. 2,991 €, $p < 0.05$) that among non-sufferers. The results of the multivariate analysis showed that suffering COPD increased the risk of IHM in subjects admitted in Spanish hospitals due to pH1N1 in 2009 (OR=3.43; 95% CI 1.96-6.01). For COPD sufferers, those that died

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during the hospitalization with influenza pH1N1 were significantly older, suffered more concomitant chronic diseases and had a longer LOS and higher costs.

Conclusions: Among individuals hospitalized in 2009 with pH1N1 infection in Spain the prevalence of COPD was 9.44%. The most common underlying medical conditions among COPD patients included diabetes and obesity. Suffering COPD increased the risk of IHM in subjects admitted to Spanish hospitals due to pH1N1 in 2009, after adjusting for other covariates.

P3992**Etiologic and prognostic profile of the hemoptysis (About 290 cases)**

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The hemoptysis, warning sign, is a frequent cause of consultation in the domain of the pneumology. The purpose of this study is to present the etiologic and prognostic profile of the hemoptysis through a retrospective study of 290 patients hospitalized at the department of Respiratory Diseases UHC Ibn Rochd between January 2008 and January 2010 because they suffer from a hemoptysis, let 15% of all the hospitalizations during the same period. Most patients are male (89%). The average age was 46.4 years old (age brackets: 18 to 84 years). Smoking was noticed in 68% of cases and the case history of tuberculosis in 28%. The hemoptysis is of low abundance in 69%, of middling abundance in 21% and great abundance in 10%. The main causes of hemoptysis in our study are: the bronchogenic carcinoma in 152 cases (52%), the bacterial infections in 40 cases (14%), the pulmonary tuberculosis in 27 cases (9%), the sequelae of tuberculosis in 21 cases (7%), the cyst in 16 cases (6%), the dilatation of the bronchi in 14 cases (5%), the pulmonary aspergilloma in 11 cases (4%), the cardiac disease in 3 cases (1%), the pulmonary embolism in 2 cases (0.6%), Behçet's disease and pulmonary hemosiderosis in 1 case each (0.3%). No etiology has been determined in two patients (0.6%). We deplore 3 deaths (1%) because of withering hemoptysis. It appears from this study that the main causes of hemoptysis are bronchogenic carcinoma and tuberculosis, hence the importance of prevention by fighting against tobacco and tuberculosis.

P3993**Sensitization to aeroallergens in Abderrahmen Mami Hospital, Tunis**

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Introduction: Respiratory allergy is increasing worldwide. Type and multiplicity of allergens depends on the region.

Aim of the study: Determine the profile of sensitization to common aerollergens in patients consulting for respiratory allergies at Abderrahmen Mami hospital in Tunis.

Patients and method: retrospective study including 400 patients consulting in our hospital between January 2009 and mars 2011 for respiratory allergy and having positive skin prick tests. Skin prick tests were performed with a battery of 12 common aerollergens.

Results: Patients mean age was 20 years with sex ratio of 0.8. Respiratory allergy consisted of asthma in 72% of cases and rhinitis in 58% of cases. In 34% of cases the two diseases were associated. Sensitization profile was as follows: house dust mites (HDM) in 85%, pollen in 17%, cat in 9%, dog in 5%, cockroach in 5%, aspergillus in 1%, alternaria in 0.5% and feathers in 0.5% of cases. In 35% of patients, there was a multisensitization. Asthma and rhinitis were diagnosed in respectively 76.4% and 60% of patients with HDM sensitization. Pollen allergy was associated with rhinitis in 68.3% of cases and asthma in 60.8% of cases. Patients with cat or cockroach sensitization were asthmatic in 70% of cases. Three patients of four having aspergillus sensitization had severe asthma. Statistic analysis found no relation between type of aerollergen and disease severity.

Conclusion: Most frequent aeroallergens responsible of respiratory allergy in our patients were HDM and pollens. Asthma was the principle manifestation and no relationship was found between type of aeroallergen and severity of respiratory allergy.

P3994**The incidence of allergic diseases and respiratory infections in 5-6 years old children**

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Aim: To assess incidence of allergic disorders and respiratory infections in 5-6 years old population of Georgia.

Methods: The cross sectional study using specially developed parent questionnaire was conducted in Georgia. At all 1530 parent of 5-6 years children were interviewed, 1499 questionnaires were analyzed by SPSS program.

Results: From 1499 children 32% were 5 years old and 68% 6 years old. The 54% live in urban, 35% in rural area and 11% in high mountains. The study revealed that 2,3% of children have respiratory viral infections 7-8 times per year,

19,9 – 3-5 times, 53,4% – 1-2 times and 24,2% became ill very rarely. The study show statistically significant difference between the viral infection frequency in rural and urban area (Pearson Chi-Square = 33.895a df = 6Asymp. Sig. (2-sided) = 0,000). There was not significant difference in morbidity according to family income, size and education. Morbidity is statistically significantly higher in boys and in children attending kindergarten and primary school in comparison with non-organized children (Pearson Chi-Square 14,985a Asymp. Sig. (2-sided) = 0,002). The frequency of chronic diseases reported by parents is 4,1%, from those 47% are allergic disorders (asthma, rhinitis, atopic dermatitis). The most parents associate the asthma exacerbation with viral infections. The 42% of children with asthma and rhinitis were vaccinated with seasonal influenza vaccine. Exacerbation of allergy was significantly less in vaccinated children.

Conclusion: Incidence of allergic disorders among children is raising. Viral infections are risk factors for asthma exacerbation. Vaccination against seasonal influenza should be encouraged.

P3995**PrevenTB: Attitudes of decision makers and care providers towards tuberculosis prevention in Germany**

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Background: Prevention of tuberculosis with chemotherapy is highly effective, if targeted at high risk populations. However, acceptance of preventive chemotherapy against tuberculosis is very variable in Europe.

Methods: We developed and validated a standardized questionnaire to evaluate the attitudes related to tuberculosis prevention of decision makers and caretakers of individuals at risk for the future development of tuberculosis.

Results: At a first stage we sent 500 questionnaires to health care professionals and received 130 answered forms back. During the second stage 3000 study invitations were sent for an online survey via email. Among the 510 online survey participants were 250 pulmonologists, 189 health officers, 26 general practitioners and 45 other medical professions.

Out of all online participants 48,8% (n=249) would use QuantiFeron Gold in tube®, 24,7% Tuberculin-skin-Test (n= 126), 23,3% T-Spot.TB® (n= 119) and 3,2% (n=16) other testing devices in the future. 59,1% (n=112) of pulmonologists and 44,3% (n=39) of public health workers suggested no or in less than 20% preventive chemotherapy to healthy people who have been exposed to TB in spite of a positive TST or IGRA. In case of HIV-seropositive patients with a positive test result 62,4% (n=109) of pulmonologist and 72,3% (n=47) of public health workers offered no preventive chemotherapy at all.

Conclusions: Tuberculosis prevention can likely be substantially improved in Germany if positive test results such as the TST or IGRA are consistent with preventive chemotherapy in individuals at high risk for the future development of tuberculosis.