AB 87. Clinical and microbiological characteristics of patients with tuberculosis

Katerina Manika1, Maria Papaioannou1, Maria Kipourou1, Marina Antoniou1, Thomas Georgiadis2, Konstantinos Zarogoulidis1, Athanassios Galatas2, Ioannis Kioumis1

1Respiratory Infections Unit, Pulmonary Department, Aristotle University of Thessaloniki, “G. Papanikolaou” General Hospital, Thessaloniki, Greece; 2Reference Center of M. tuberculosis of Northern Greece, “G. Papanikolaou” General Hospital, Thessaloniki, Greece

Background: The aim of the present study was to evaluate the demographic, clinical and microbiological data of the patients who are followed up by the tuberculosis outpatient clinic, Pulmonary Department of Aristotle University of Thessaloniki.

Patients and methods: Since July 2011, 45 patients (33 men, 12 women, with mean age 47.66±17.82 years) have been monitored. Twenty two are economic migrants, coming mostly from Eastern Europe. Forty patients suffer from tuberculosis, and 5 from infection caused by non-tuberculous mycobacteria (3 by M. intracellular complex and 2 by M. kansasii). Tuberculosis is located in the lung in 34 patients. In 2 patients the lesions are located at the lung as well as the pleura, in 1 at the lung and the bone marrow, in 1 on the pleura and the wrist joint, in 1 on the skin and in 1 at the lung, esophagus and cheek. 90% of patients demonstrate compliance regarding the scheduled meetings of monitoring and their treatment. Ten patients have already successfully completed treatment. Concerning the sensitivity of M. tuberculosis to anti-tuberculosis drugs, drug susceptibility testing (DST) is available for 35 patients. For the remaining 5 patients with unavailable DST results either the treatment had started before a mycobacterium strain was identified or they were referred to the clinic from other hospitals where DST was not possible.

Results: Three patients suffer from MDR tuberculosis and 27 patients from tuberculosis due to strains that are resistant to at least one drug. More specifically M. tuberculosis was resistant to isoniazide at 6 cases (17.14%), to rifampicin at 3 (8.57%), to ethambutol at 4 (11.43%), to pyrazinamide at 17 (48.57%), to streptomycin at 11 (31.43%), and to the low dose of rifampicin at 6 (17.14%). Treatment according to DST is successful in 91% of patients.

Conclusions: In conclusion, resistance to at least one drug was detected in a significant part of the patients (77.14%). It is noteworthy that resistance to pyrazinamide was observed in 48.57% of the strains. It is known that drug susceptibility testing for pyrazinamide is particularly difficult. When the therapeutic regimen is based on DST response to therapy is successful even in resistant cases.

AB 88. BALF changes of CD4+, CD8+ cells in lung cancer patients with different chemotherapeutic regimens

Vasilis Mihailidis1, Georgia Karpathiou1, Georgios Kouliatsis1, Stavros Anevlavis1, Athanasia Patak1, Ioannis Sotiriou1, Ioannis Kotsianidis1, Paschalis Steiropoulos1, Demosthenes Bouros1, Marios Froudarakis1

1Pulmonary Department, Medical School of Alexandroupolis, Democritus University of Thrace, Alexandroupolis, Greece; 2Hematology Department, Medical School of Alexandroupolis, Democritus University of Thrace, Alexandroupolis, Greece; 3Radiation Oncology, Medical School of Alexandroupolis, Democritus University of Thrace, Greece

Background: Reports point out acute lung toxicity of chemotherapeutic agents in cancer patients. The aim of our study was to assess BALF and lung function findings of the 3 most applied platinum-based regimens for the treatment of metastatic lung cancer.

Methods: Within one year period 20 patients (ECOG 0.1) agreed to participate the study, but 15 were evaluable (5 patients died from disease progression, before reassessment). Patients underwent lung function tests and BAL, of the opposite to the tumor lung, during diagnostic bronchoscopy before and after 6 chemotherapy courses. Platinum-based regimens were combination of vinorelbine (VN) 6 patients, gemcitabine (GEM) 4 patients and etoposide (EP) 5 patients.

Results: All patients, but one was males and smokers (93%). Median patients’ age was 56 years (42-75) and median pack-years 80 (40-120). No significant difference was noted in the patients’ age between the 3 treated groups. No significant changes in CD4+ and CD8+ cells were noted between the 3 groups of treatment. However, changes were noted within each group only for CD4+ cells: VN before vs. after P=0.05; GEM before vs. after P=0.03; EP before vs. after P=0.3. For CD8+ no significant changes were noted. Also no changes were noted in lung function tests (FEV1, FVC) between or within the groups.

Conclusion: Although our number of patients is small due to
recruitment difficulties in such patient population, changes were noted in BALF CD4+ cells for the 3 most applied regimens.


**AB 89. Lung cancer registry and software solution**

Zoran Potic, Marijela Potic, Branislav Perin

Department of information technology, Institute for pulmonary diseases of Vojvodina, Faculty of medicine Novi Sad, University of Novi Sad, Sremska Kamenica, Serbia

**Background:** The aim of this paper is to present our experience in the development and everyday use of the hospital lung cancer (LC) registry and our information technology (IT) solution.

**Patients and methods:** In 2009, the IASLC Project questionnaire (International Association for the Study of Lung Cancer) was translated and localized into Serbian. In January 2010, after a few months of paper based questionnaire preparation (20 pages) and education of involved doctors from the department of pulmonary oncology, data collection has been started. Simultaneously with data collection using paper forms, a dedicated software for the registry support was created. The total of 1,213 and 1,295 lung cancer patients were registered in the first (2010) and second year (2011) respectively.

**Results:** The applied software has some special features as an automatic calculation: of the N status, M status, Stage and drug doses. After including new modules for therapy delivery and check-up visits, the application, which started as a registry, has evolved into a complete IT solution for LC patients’ survey. The software has predefined individual and epidemiological reports and export capabilities for further statistical analyses. In the beginning, only doctors from the oncology department were involved, and now all doctors are using software.

Problems in everyday work were objective (lack of data 2-10%, ambulatory patients, uncompleted diagnostic due to medical reasons, follow-up data) and subjective (doctors’ lack of knowledge, indifference or poor self-organization at work).

The future tasks in development of the IT solution includes migration to Java platform and creation of integrated hospital information system (combined medical and finance data).

**Conclusions:** It is not easy to start and operate a new registry, especially of lung cancer (questionnaire and software design and development, staff education). The registry maintenance is not simple either, as it requires constant innovations and improvements, auditing, data quality control. But the registry provides valuable information for the doctors’ daily work with patients, epidemiological analysis and scientific research.

**Cite this abstract as:** Potic Z, Potic M, Perin B. Lung cancer registry and software solution. J Thorac Dis 2012;4(S1):AB89. DOI: 10.3978/j.issn.2072-1439.2012.s089

**AB 90. Recording aeroallergens at various heights above the Thessaloniki by using light aircraft and their association with the city of meteorological data**

Evaggelos Kaimakamis1,2, Damialis Athanasios3, Maria Konoglou1,2, Ioannis Akritidis4, Dimitrios Goulekas1,5

11st Pulmonary Department, “G. Papanikolau” General Hospital, Thessaloniki, Greece; 2Society of Occupational and Respiratory Diseases, Thessaloniki, Greece; 3Oncology Department, Biology school, Aristotle University of Thessaloniki, Thessaloniki, Greece; 4Internal Medicine Department, “G. Genimatas” General Hospital, Thessaloniki, Greece; 5Departement of Pulmonary Medicine, “G. Papanikolau” General Hospital, Aristotle University of Thessaloniki, Thessaloniki, Greece

**Background:** Working Purpose: Allergic diseases such as asthma exhibit increased incidence partly due to increased concentration of allergens in the atmosphere. The aeroallergens associated with increased asthma exacerbations and related hospitalizations. Studies show that different weather conditions cause variability in the distribution of allergens in the ground. The purpose of this study was to estimate the concentration of aeroallergens in various altitudes and the investigation of their association with meteorological variables.

**Patients and methods:** Measurable concentrations of 25 different types of allergens were recorded over the northern outskirts of the city of Thessaloniki with the help of car and light aircraft at altitudes from the surface to 2,000 meters. The counting was done at the main part of the period movement of aeroallergens. Studied differences between concentrations at different heights and correlations with the meteorological data of the region.

**Results:** Of the 25 different aeroallergens detected, the most populous in the concentration recorded by the aircraft was pine, oak, grasses, plantain and the olive tree, representing over 80% of all measurements. Drive rate>75% were grasses. The concentrations varied at different heights depending on the type of pollen: at higher altitudes higher concentrations were observed for pine and oak and lower for the grasses. The measurement period showed a direct correlation with concentrations in various heights. The observed correlations of pollen with meteorological data led to the development of a predictive model of concentration in the area of interest.

**Conclusions:** The collection and study, but also to predict the concentration of allergens in different heights in the atmosphere is