288. Instructive clinical aspects of lung cancer

P2803

Usefulness of serum procalcitonin in lung cancer patients with elevated serum C-reactive protein level

Hee Jung Ban, Seung Gyu Ji, Su Young Chi, Eun Young Kim, Yoon Hee Kim, Kyu Sik Kim, In Jae Oh, Young Chul Kim, Yong Soo Kwon, Yu-Il Kim, Sung Chul Lim. *Department of Internal Medicine, Chonnam National University Hospital, Jaebongro, Dongku, Gwangj, Korea*

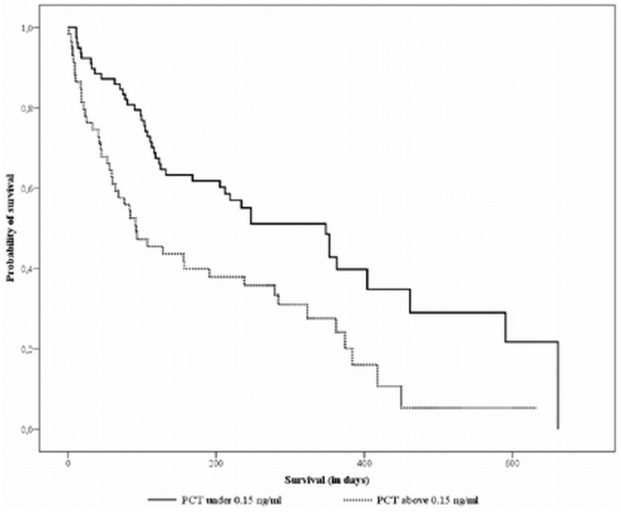
Background: It is not easy to distinguish between infections and other causes with C-reactive protein (CRP) level or white blood cell (WBC) count in febrile lung cancer patients. We investigated the usefulness of serum procalcitonin (PCT) and CRP for the differential diagnosis of fever in lung cancer patients.
Methods: We measured serum PCT level and WBC count in lung cancer patients with serum CRP >0.3mg/dL. The subjects were categorized as either infection or non-infection group. Infection was verified by respiratory culture, blood culture and radiologic finding. Those who developed febrile neutropenia after chemotherapy and improved after antibiotic treatment were grouped as infection group (IG). Non-infection group (NG) comprised those who had drug fever or cancer fever.
Results: A total number of measurement was 375 samples from 285 patients. PCT showed 2.28±5.81 μg/L in IG and 0.36±0.43 μg/L in NG (mean±standard deviation p<0.001). CRP showed 17.24±8.87 mg/dL in IG and 11.61±7.93 mg/dL in NG (p<0.001). In febrile patients, there was also significant differences of PCT (1.80±4.01 μg/L in IG, 0.24±0.31 μg/L in NG, p=.003) and CRP (17.88±8.62 mg/dL in IG, 13.11±7.96 mg/dL in NG, p=.004) levels. Area under curve of PCT was significantly larger (0.775, 95%CI 0.690-0.861) than CRP (0.646, 95%CI 0.540-0.753, p=.026). Sensitivity and specificity of PCT using cut off level of 0.21 μg/L was 73.8% and 59.1%.
Conclusion: Serum PCT could be more helpful for differentiation of infectious from non-infectious causes of fever in lung cancer patients.

P2804

Procalitonin: A prognosis factor in lung cancer and a marker for small-cell lung cancer

Maxime Patout[1], Valery Brunel[2], Mathieu Salaun[1], Suzanna Bota[1], Luc Thiberville[1]. *[1]Clinique Pneumologique, Rouen University Hospital, Rouen, France; [2]Biochimie Médicale, Rouen University Hospital, Rouen, France*

Introduction: Serum procalcitonin (PCT) is used for the early diagnosis of bacterial infections. PCT is also a prognostic factor in thyroid carcinomas and PCT level is also usually increased in small cell lung cancer.
Aim: To evaluate the serum PCT level as a diagnostic and prognostic marker of lung cancer
Methods: Sera sampled between December 2008 and November 2010 for neuron-specific enolase
(NSE) dosage at the Rouen University Hospital were retrieved. A PCT dosage was performed on samples from untreated patients with histologically proven lung cancer.
Results: From the 147 blood samples selected, 66 came from adenocarcinoma patients, 58 from neuroendocrine lung cancers (NELC) including 51 small cell lung cancers, 6 large cell lung cancers and one atypical carcinoid, 21 from squamous cell carcinomas and 2 sarcomas.
Median serum PCT level was higher in NELC (0.35 ng/ml, [0.11-1.23]) as compared to adecarcinoma (0.08; [0.05-0.14]), or squamous cell carcinoma (0.1; [0.06-0.19])
In univariate analysis, patients with a PCT >0.15 ng/ml had a lower median survival than patients with a PCT <0.15ng/ml: 92 vs. 348 days (p=0.0001, log-rank test).



Conclusion: Serum PCT should not be used for the early diagnosis of bacterial infection in patients with a NELC. Elevated PCT appears to be a marker of poor prognosis in lung cancer patients.

P2805

Serum levels of interleukin 8 and plasma levels of osteopontin in patients with non-small cell lung cancer during chemotherapy

Ewa Rogala, Adriana Rozy, Barbara Roszkowska-Sliz, Joanna Chorostowska-Wynimko, Kazimierz Roszkowska-Sliz. *Department of Lung Diseases, National Institute of Tuberculosis and Lung Diseases, Warsaw, Poland Laboratory of Molecular Diagnostic and Immunology, National Institute of Tuberculosis and Lung Diseases, Warsaw, Poland*

Interleukin 8 (IL-8) and osteopontin (OPN) are multifunctional cytokines associated among other with tumor progression and metastasis. The aim of the study was to evaluate serum levels of IL-8 and plasma levels of OPN in patients with NSCLC undergoing chemotherapy. Peripheral blood samples were taken before and after four cycles of chemotherapy (DDP+VP) and in the case of progression of disease. The study included 29 patients diagnosed histologically with lung cancer (stage IIIB 12 patients, stage IV 17 patients). IL-8 and OPN levels were determined by ELISA (R&D). Mean levels of IL-8 and OPN significantly increased with progression of the malignancy: serum IL-8 levels in stage IIIB and IV were 19,82pg/ml and 46,88pg/ml, respectively, (p<0,001), plasma OPN levels in stage IIIB and IV were 50,34ng/ml and 73,02ng/ml, respectively, (p<0,02). Cytoreduction treatment had no influence on the mean levels of IL-8 and OPN in comparsion with their mean levels before treatment (in both stages). The progression of disease resulted in significant increase of mean serum level of IL-8 (34,31±3,38 pg/ml) when compared to mean initial (before treatment) serum level of IL-8 (23,78±2,71pg/ml) (p<0,05). Mean plasma level of OPN were elevated but without statistical significance. In conclusion, chemotherapy had no influence on the serum IL-8 levels and plasma OPN levels. The increased IL-8 and OPN levels possibly relate to the activity of lung cancer.

P2806

Role of C reactive protein in non small cell lung cancer staging

Juan Antonio Torrecilla[1], Sergio Scrimini[7], Jaume Sauleda[2], Francisco de Borja García-Cosío[2], Aina Noguera[3], Amanda Iglesias[4], Angel Ríos[5], Rocío Córdova[4], Alvar Agustí[6]. *[1]Thoracic Surgery, H. Universitari Son Espases, Palma Mallorca, Spain; [2]Pneumology, H. Universitari Son Espases, Palma Mallorca, Spain; [3]Clinical Analysis, H. Universitari Son Espases, Palma Mallorca, Spain; [4]Research Unit, H. Universitari Son Espases, Palma Mallorca, Spain; [5]Pneumology, Fundació Caubet-Cimera, Bunyola, Spain; [6]Institut del Tórax, H. Clínic i Provincial, Barcelona, Spain; [7]CIBER de Enfermedades Respiratorias, Instituto Carlos III, Madrid, Spain*

Hypothesis: Advanced stage in lung cancer is associated to increased CRP levels in serum.
Objective: To compare blood levels of different inflammatory markers (TNFα, IL-8, C Reactive Protein [CRP] in patients with different stages of lung cancer.
Method: 56 patients diagnosed of lung cancer were included (53 males, 64,59±9,73 years, X±SD). All of them underwent studies for disease staging, including fiberbronchoscopy and computed tomography, and positron emission to-

mography (PET) if indicated. Serum CRP levels were determined by nephelometry and TNFa and IL-8 by ELISA.
Results: A significant correlation between staging and serum CRP ($r=0.44, p<0.01$) was observed. Patients in which CRP levels were higher than 40 mg/L were more likely to have metastatic disease (stage IV) with a specificity of 100%, sensitivity of 44,44%, positive predictive value of 100% and negative predictive value of 76,74%. TNFα and IL-8 were not associated with lung cancer staging.
Conclusions: Serum CRP levels higher than 40 mg/L are associated to metastatic disease in non small cell lung cancer.

P2807
The prognostic value of anemia, thrombocytosis and leukocytosis at time of diagnosis in patients with non-small cell lung cancer
Martin Sandelin[1], Georg Holgersson[2], Christer Janson[1], Simon Ekman[2], Michael Bergqvist[2]. *[1]Department of Medical Sciences, Respiratory Medicine, Uppsala University, Uppsala, Sweden; [2]Department of Oncology, Uppsala University, Uppsala, Sweden*

Aim: To study the prognostic potential of haemoglobine (Hgb)-, platelet (Plt)- and white blood cell (WBC) levels at time of diagnosis in non-small cell lung cancer (NSCLC) patients.
Background: The search for prognostic and predictive biomarkers in NSCLC is intense. With an increasing number of targeted agents available the present focus is on the genetics of the tumour. However, a majority of all patients lack genetic markers that favour targeted therapies. Thus the need for basic prognostic factors to optimise the treatment for each individual patient is essential
Methods: 833 NSCLC patients, stage I-IV were included in the study. WBC, Plt, Hgb, gender, age at diagnosis, stage, surgery and first-line chemotherapy were studied in relation to overall survival.
Results: For patients with Hgb <110g/L and Hgb >110g/L the median survival was 11.2 and 14.5 months respectively ($p=0.0032$). For WBC $>9.0\times10^9$/L and $<9.0\times10^9$/L the median survival was 11.6 and 15.4 months respectively ($p<0.0001$). For Plt $>350\times10^9$/L and $<350\times10^9$/L the median survival was 11.2 and 14.9 months respectively ($p<0.0001$). For patients with no pathology in the studied markers compared to those with pathological results in all three markers the median survival were 16.0 and 8.0 months respectively ($p<0.0001$).
Conclusions: The level of the three studied biomarkers corresponds significantly to outcome. A trend for worsened prognosis is shown when combinations of two pathological markers are present. With all three biomarkers pathological the median survival is halved compared to the group with normal levels. The results are important for the decisions regarding treatment choice and intensity.

P2808
Analysis of the clinical feature of 383 patients with lung cancer
Yanbin Zhou, Yinhuan Li, Wanling Huang, Xingdong Cai, Qingli Zeng, Lixia Huang. *Department of Respiratory Medicine, First Affiliated Hospital of Sun Yat-Sen University, Guangzhou, Guangdong, China*

Objective: To investigate the clinical feature of lung cancer.
Methods: We retrospectively analyzed the clinical data of inpatients diagnosed with primary bronchogenic carcinoma who registered in our hospital between 2007 and 2008.
Results: The age of onset of lung cancer was 59 years old. 50.1% of the patients had a history of smoking, 93.8% of whom were males. Coughing, expectoration, emaciation, hemoptysis, chest pain, dyspnea and pyrexia were the most common symptoms. The levels of NSE and CYFRA21-1 in males were higher than those in females, and the levels of serum CYFRA21-1 in senile were higher than those in non-senile. The levels of serum NSE and CYFRA21-1 in smokers were higher than those in non-smokers, while they were higher in patients with central type lung cancer than those in patients with peripheral type lung cancer. The levels of serum NSE in small cell lung cancer patients were higher than those in non-small cell lung cancer patients. The levels of CEA in patients with adenocarcinoma were higher than those in patients with squamous cell carcinoma, while the levels of serum CYFRA21-1 were higher in the latter. The more advanced the disease was, the higher the levels of serum CEA, NSE and CYFRA21-1 were. Carcinoma was most commonly seen in the upper lobes of both sides of the lungs. 68.6% of lung cancer belonged to peripheral type. Adenocarcinoma and squamous cell carcinoma were the most common pathological type. 66.0% of lung cancer patients were in advanced stage when diagnosed, and 55.2% had metastasis to mediastinal lymph nodes. Bones were the most common sites of metastasis.
Conclusions: The combined detection of serum CEA, NSE and CYFRA21-1 could do some help to identify of lung cancer.

P2809
TTF-1 in advanced SCLC – Diagnostic and prognostic relevance
Daniel Misch[1], Jens Kollmeier[1], Sergej Griff[2], Christian Boch[1], Kaja Zimmermann[1], Torsten Blum[1], Wolfram Grüning[1], Thomas Mairinger[2], Torsten Bauer[1]. *[1]Department of Respiratory Medicine, Helios Klinikum Emil von Behring, Chest Hospital Heckeshorn, Berlin, Germany; [2]Department of Pathology, Helios Klinikum Emil von Behring, Berlin, Germany*

Background: The thyroid transcription factor-1 (TTF1) has an important role in differentiating primary lung from other adenocarcinoma. Furthermore, data indicate its possible prognostic implication on overall survival (OS) in adenocarcinoma patients. Beside the number of TTF1-negative SCLC, the diagnostic value in SCLC is limited as extrapulmonary small cell cancers (SCC) can show TTF1-expression due to their neuroendocrine differentiation. It is unknown if TTF1-expression is a prognostic factor in patients with SCLC.
Aim: To compare the OS of patients with SCLC stage III/IV according to their TTF1-expression.
Methods: We retrospectively analyzed 297 patients (f, n=111; m, n=186) with SCLC stage III/IV (UICC-6; stage IIIA, n=31; IIIB, n=87; IV, n=179) diagnosed between 01/05 and 12/08. TTF1-expression was prospectively evaluated and the OS of patients was compared between the group of TTF1-positive and TTF1-negative SCLC.
Results: TTF1 was available in 221 (74,4%) patients. Of these, 184 (83,3%) had TTF1-positive and 37 (16,7%) TTF1-negative SCLC. The percentage of TTF1-negative SCLC did not differ between the different stages (III, n=13 [15,3%]; IV, n=24 [17,6%]). Median survival was 533 (358-708) days for patients with stage IIIA, 447 (349-545) days for stage IIIB and 289 (238-340) days for stage IV patients. There was no significant difference in OS according to TTF1-expression in the entire patient population as well as in all three stages (entire population, TTF1-neg. 300 [241-359] days, TTF1-pos. 367 [294-440] days; p=0,30).
Conclusion: TTF1-expression has no diagnostic or prognostic relevance in SCLC patients. Therefore, the determination of TTF1-expression in SCLC is dispensable for clinical decision making.

P2810
Pulmonary primary adenocarcinoma: Diagnosis, treatment and outcome
Fatma Chermiti Ben Abdallah[1], Dalel Achour[1], Sadok Boudaya[2], Amel Chtourou[1], Sofia Taktak[1], Ridha Mahouachi[1], Ali Ben Kheder[1]. *[1]Pneumology IV, Abderrahman Mami Hospital, Ariana, Tunisia; [2]Cardio-Thoracic Surgery, Abderraman Mami Hospital, Ariana, Tunisia*

Introduction: Adenocarcinoma (ADC) was individualized within primary lung cancers from part their epidemiological, clinical and evolutionary particularities.
Objective: To describe diagnosis, managment and outcome of primary lung adenocarcinoma.
Methods: Retrospective study including 79 patients in whom diagnosis of primary lung ADC was made in our department between January 2002 and December 2010.
Results: All patients were males with mean age of 60 years. 94,9% of them were smokers. Functional signs were dominated by chest pain (41 patients) and sputum (36 patients). The chest radiograph showed proximal opacity in 47 patients. The histological diagnosis was allowed by bronchial biopsy in 44% of cases, transthoracic biopsy in 19% of cases, surgical biopsy in 25% of cases, pleural biopsy in 4% of cases and biopsy of remote metastasis in 8% of cases. Tumoral cells expressed CK7 in 32% of cases, TTF1 in 9% of cases, CK20 in 1,2% of the cases, EMA in 2,5% of the cases, CK5/6 in 2,5% of cases, Napsine in 4% of the cases, Kl1 in 4% of cases and PanCK in 1,2% of cases. 60% of the patients had cancer at stage IV. Surgery was performed in 20 patients (lobectomy in 19 patients and pneumonectomy in 1 patient). The chemotherapy was administrated in 49% of the patients. Curative radiotherapy was performed in 4 patients and palliative in 19 patients. Symptomatic treatment was decided in 26 patients. Recurrence after surgical treatment was noted in 50% of cases after a mean delay of 229,37 days. Mean survival of all patients was of 355,92 days.
Concusion: Diagnosis of pulmonary ADC is based on histological study. Most of our patients have metastatic disease when diagnosed explaining poorer prognosis.

P2811
Early complications after lung resections at patients treated for lung cancer with and without neoadjuvant hemiotheraphy
Goran Kondov[1], Zoran Spirovski[1], Trajanka Trajkovska[2], Sasko Jovev[1], Irena Topuzovska Kondova[3], Natasa Tolevska[1], Borislav Kondov[1]. *[1]Thoracic Surgery, University Clinic for Thoracic Surgery, Skopje, Macedonia, The Former Yugoslav Republic of; [2]Anestesiology, University Clinic for Anestesiology and Intensive Care, Skopje, Macedonia, The Former Yugoslav Republic of; [3]Departament for Respiratory Disease, University Clinic for Infectiove Disease, Skopje, Macedonia, The Former Yugoslav Republic of*

Anatomical lung resection offers the best chance of cure for patients with localized lung cancer. Very often late diagnosis, advanced stage of the disease limit radical anatomical surgical resection. Use of neoadjuvant therapy made some of the cases operable, and later they were surgically treated.
Aim: To evaluate early (surgical) complications at patients with neoadjuvanmt therapy.
Material and methods: We compare 36 patients surgically treated with lung resection, before treated with neoadjuvant therapy (3 to 6 cycles with cisplatin and gemcitabin or ciclofosfamid or taxol) with 42 patients surgicaly treated withithougt neoadjuvant hemiotheraphy, in the same period, in the 2009 and 2010.
Results: At the grop with neoadjuvant theraphy we registred more intraoperative and early postoperative complications as: bleeding 10 vs 7, p=0,63, changes in lung vesels 3 vs 0, p=0,8, prolonged air leak 9 vs 6, p=0,63, stump fistula (at pneumectomy patients) 2 vs 0, p=0,76, pneumonia 9 vs 3, p=0,86, wound infection 2vs 0, p=073, atelectasis 8 vs 2, p=0,88, prolonged pleural drainage 10 vs 4, p=0,87. There, also, were no diference in 30 days mortality rate between grops.

Conclusions: Neoadjuvant therapy increased the perioperative complications in this group of patients compared with a similar group undergoing anatomical lung resection in the same institution. The most common complication in patients receiving induction chemotherapy was detected at the group with neoadjuvant theraphy. Strategies to prevent these complications will be important, especially if chemotherapy before resection becomes the standard for all patients with non–small cell lung cancer.

P2812

Patterns of recurrence after resection surgery of lung cancer: Clinical correlations and survival

María Gabriela Cortez Montero[1], Raquel Dacal Quintas[1], Jose Abal Arca[1], Maria Jesus García García[2], Maria Teresa Alves Perez[2], Pedro Marcos Velazquez[1].
[1]Pulmonology, Complexo Hospitalario Ourense, Orense, Galicia, Spain; [2]Investigation, Complexo Hospitalario Ourense, Orense, Galicia, Spain

Objectives: Analyze the patterns of recurrence and survival in lung cancer patients underwent surgery
Material and methods: Observational, retrospective cohort of lung cancer patients undergoing surgery during years 1999-2006 in CHOU-Spain. We performed a descriptive analysis of data, the continuous variables to be non-Gaussian are shown as median and categorical variables as frequencies and percentages. We determined the clinical factors associated with recurrence and survival by Kaplan-Meier curves and Cox regressions models. We used SPSS 15.0 software
Results: 168 patients underwent surgery, of whom 79.8% were men, and the median age was 67 years [35-82], 74 ex-smokers (44%) and 63 active smokers (37.5%). Most common histological type was epidermoid 88 (52.4%) followed by adenocarcinoma 48 (28.6%). The median tumor size in CM was 3.3 [0-9], and moderate degree of differentiation in 77 (45.8%). The pathological stages were: I 91 (57.6%), II 26 (16.5%), IIIA 30 (19%), IIIB 11 (6.5%). The most frequent surgical resection was lobectomy. Recurrence occurred in 78 (46%) patients, related with tumor size ($p = 0.002$) and pathological stage ($p < 0.001$), no differences in the histological subtype ($p = 0.232$). Coughing and CNS disorders were the most prevalent symptoms of recurrence and extrathoracic involvement was in 42 cases (58.3%). The median survival in those who had recurrence was 9 months, with 95% CI [5.129 to 12.871]. Other risk factors of death were tumor size ($p = 0.002$) and pathological stage ($p < 0.001$)
Conclusions: Most patients do not relapse. Recurrence was more frequent extrathoracic location. The tumor size and advanced stages determine higher risk of recurrence and mortality.

P2813

Radiofrequency ablation in the treatment of malignant lung tumors

Alexey Reshetov[1], Igor Rutkin[2], Sergei Lazarev[1], Eldar Topuzov[1], Valeri Balashov[1]. *[1]Thoracic Surgery and Oncology Department, Saint-Petersburg State Medical Academy named after I.I.Mechnikov, Saint-Petersburg, Russian Federation; [2]Surgical Department, Russian Scientific Center Radiology and Surgery, Saint-Petersburg, Russian Federation*

Objectives: Radiofrequency ablation (RFA) has gained acceptance for thoracic surgery use but few data exist regarding its value in thoracic oncology. The aim of this study is to report our experience RFA for malignant lung tumors.
Methods: From 2010 27 patientes were underwent RFA for peripheral malignant tumors: metastases (n 20), primary lung cancer (n 7). Rrange of theres dimensions were from 7 to 52 mm (mean 27 mm.). Renal cell carcinoma metastases had 4 patientes, metastases of colorectal carcinoma - 10, metastases of lung cancer - 5 and hepatocelular carcinoma - 1. Indications for RFA: inabity undergo thoracotomy (9), us alternative complition pneumonectomy after lung resections (4), necessity to save lung tissue for patients with multiple lung metastases (14). We used transcutaneus RFA in 7 cases. In 14 cases thoracoscopic detection of tumor node before RFA was used. In 6 cases RFA used during thoracotomy. Used needle electrode with test portion 30 mm., maximal power and exposition of 10 min. Mediana follow-up was 19 month (2-32).
Results: No postoperative mortality. Post-operative complications were associated with pulmonury tissue inflammation (6 cases). Average hospital stay of uncomplicated patients was 3-7 days. At present no local recurrences were diagnosed. But 7 patients developed new pulmonury and hepatic metastases from 3 to 18 months after RFA and 9 patientes died from progression of oncological diseases from 6 to 26 month after RFA. Four patients have died from concomitant diseases from 1.5 and to 5 month after RFA. The median survival was 19.5 month (1.5- 30).
Conclusion: RFA is a reasonable option if a lesion is unresectable or necessity tissue sparing for multiple lung resection.

P2814

Second primary lung cancers developed following different system tumors

Cigdem Ozdilekcan[1], Sevim Turanli[2], Necla Songur[3], Huseyin Cakmak[4].
[1]Chest, Ankara Oncology Research and Training Hospital, Ankara, Turkey; [2]Surgery, Ankara Oncology Research and Training Hospital, Ankara, Turkey; [3]Chest, Süleyman Demirel University School of Medicine, Ankara, Turkey; [4]Chest Surgery, Ankara Oncology Research and Training Hospital, Ankara, Turkey

Aims and background: This study aimed to investigate clinical characteristics and prognosis of secondarily developed lung tumors in the cases having different system malignancy and to evaluate the relationship with the primary tumor.
Methods: Thirty patients diagnosed as second primary lung cancer those admitted to have been included in the study.
Results: The patients were grouped; synchronous group (n:7, 16.7%) and metachronous group (n:2, 83.3%). The age of primary malignancy and second primary lung malignancy was median 59.5 (range, 38-82 years), and 63 years (range, 39-83 years) respectively. The rate of quitting smoking among all patients before the diagnosis of lung cancer was 50%, current smoker rate was 30%. Second cancer was detected in 50% of the patients within the first 2.5 years. The most frequent primary localization was larynx (40%). Majority of patients received surgical treatment for primary localized carcinoma, while for secondarily developed carcinoma, the most frequent treatment choice was chemotherapy and/or best supportive care. There was no statistical relationship between the response to treatment of first cancer and the duration of cancer developed secondarily ($p=0.36$). The overall survival of groups was found 24 months (95% confidence interval: 18.30 months) and 12 months (95% confidence interval: 10-14 months) respectively for synchronous and metachronous groups.
Conclusions: Close follow-up on pulmonary system especially within the first 2.5 years after primary disease and encouragement on quitting smoking is important.

P2815

Cellular atypia and lung cancer

Carla António, Filomena Luís, Silvia Correia, Nuno Sousa, Luís Ferreira.
Pneumology, Hospital Sousa Martins, ULS - Guarda, Guarda, Portugal

Introduction: The diagnosis of lung cancer based on imaging and the cytology of sputum, have shown insufficient as for the supervened one. The objective of the work is to describe the clinical profile of patients with atypia the cytology of bronchial aspirated.
Methodology: Two groups of patients according to the presence or not of atypia in bronchial lavage. It was proceeded the mating intergroups by sex and age. Variables: smoking, comorbidity, alterations imagiologic, bacteriology, endoscopic findings and indication for the fiber optic bronchoscopy (BFC).
Results: Each group with 108 patients, media age of 71.6 ± 4.2 years, being 86 males and 22 women. In the group with atypia 61.1% of patients were smokers or ex-smokers, 38.9% in the group without atypia. In the group with atypia 48.1% had Chronic Obstructive Pulmonary Disorder (COPD) and in the group without atypia 28.7%. The neoplasia in another body was present in 29.6%, in the group with atypia and 13.9% in the group without atypia. The test of $\chi 2$ showed dependence between atypia and smoking and these comorbilidades. In situations of atypia 38 patients were new cytology, 13.2% maintained atypia, without evidence of disease neoplastic/infectious.
Conclusions: The atypia is associated with smoking, COPD and presence of neoplasia in another body, which are risk factors for lung cancer. The persistence of atypia isolated in bronchial lavage with computed tomography, in the BFC of white light normal, may justify the use of BFC of autoflurescence and ecobronchoscopy (EBUS), effective techniques for detection of lesions pre-neoplastic. Prospective studies will be necessary to determine the conduct proper, in situations of persistence of atypia without identification of lesion.

P2816

Albumin-bound paclitaxel (nab-P) may play an important role in the treatment of non-small-cell lung cancer (NSCLC) patients

Alexandros Kavvadias[1], Andriani Charpidou[2], Ioannis Gkiozos[2], Georgios Tsoukalas, Konstantinos N. Syrigos. *[1]4th Respiratory Department, General & Chest Diseases Hospital "Sotiria", Athens, Greece; [2]Oncology Unit, Medical School of Athens, General & Chest Diseases Hospital "Sotiria", Athens, Greece*

Background: Taxanes have significantly contributed in the treatment of NSCLC. They are hydrophobic substances, they need premedication and long infusion time.
Aim and objectives: Nab-P is a novel water-soluble formulation of paclitaxel (P) that uses serum albumin as a vehicle into a nanoparticle suspension. We present the latest data on the use of nab-P in the treatment of NSCLC.
Method: Our source was MEDLINE database till the end of 2010 with key words nab-P, NSCLC.
Results: We found three phase I, three phase II trials and one dose-finding non-randomized trial for a phase III trial and the results of a phase III randomized trial presented in the ASCO meeting 2010. The technical advantages over P including shorter infusion time of 30 minutes and no need of premedication. Nab-P has significant single agent activity. When combined with carboplatin (C) or C and bevacizumab, has promising activity in the first line treatment of NSCLC. In the phase III trial with 1038 patients, nab-P combined with C significantly improves response rate (ORR) versus PC. Squamous cell carcinoma patients treated with nab-PC significantly improved ORR versus PC. Toxicity profile presented less high-grade adverse events and minimal risk of hypersensitivity reactions.
Conclusion: Latest data for nab-P suggests a safe and efficient profile. Nab-P may replace the older taxanes in case of hypersensitivity reactions. Patients with squamous histotype may have an advantage if treated with nab-P but further investigation is needed.

P2817

Smoking habits and erlotinib response in non-small-cell lung cancer (NSCLC) treatment

Regina Monteiro, Ana Antunes, Ivone Gonçalves, Cristina Lima, Ana Barroso, Sofia Neves, Sara Conde, Barbara Parente. *Pulmonology Department, CHVNG/E, Vila Nova de Gaia, Portugal*

Background: Erlotinib is a tyrosine kinase inhibitor (TKI) approved for 2nd or 3rd line treatment of advanced NSCLC.
Aim: Evaluate the smoking impact on objective response (OR) and survival of pts treated with erlotinib.
Method: Retrospective analysis of OR, overall and post-erlotinib (PE) survival in pts treated with this TKI from 2006 til December 2010, taking into account the gender, smoking status, histology and epidermal growth factor receptor (EGFR) gene mutational status.
Results: Over the past 5 years, 104 pts (57 males) began treatment with erlotinib: 66 adenocarcinomas (AC), 18 squamous cell carcinomas (SCC) and 20 NSCLC. Smoking status: 48 non-smokers (NS); 31 ex-smokers (ES) and 25 active smokers (AS). Median overall survival of 23 months (m). There was no significant difference in overall survival among pts of different gender, staging or smoking status. Median PE survival of 6m. The PE survival was higher in NS (12 vs 6m in ES and 4m in AS; p=0.077), AC (10 vs 5m in SCC and 3m in NSCLC; p=0.013) and in mutated pts (14 vs 6m in non-mutated; p=0.003). Analyzing by histologic subtypes, in AC survival remains higher in NS (21 vs 10m in ES and 2m in AS; p=0.021). Analyzing by mutational status, smoking habits lose significance. Assessing the OR to erlotinib, 50 pts had disease progression and 48 disease control (DC). DC was more frequent in NS (54.2% vs 45.8%; OR=0.476; 95%CI:0.212-1.070) and mutated pts (67.5% vs 32.5%; OR=1.685; 95%CI:0.603-4.707).
Conclusion: Smoking habits have a major impact on survival of AC pts treated with erlotinib. This impact loses significance when analyzed by mutational status.

P2818

What outcome after the prescription of neoadjuvant chemotherapy in lung cancer?

Hanene Smadhi, Mohamed Sadok Boudaya, Adel Marghli, Fatma Charmiti, Sonia Ouerghi, Jalel Mohamed, Emna Brahem, Belhassen Smati, Taher Mestiri, Tarek Kilani. *Thoracic Surgery, Abderrahmen Mami Hospital, Ariana, Tunisia Thoracic Surgery, Abderrahmen Mami Hospital, Ariana, Tunisia Thoracic Surgery, Abderrahmen Mami Hospital, Ariana, Tunisia Pulmonary 4, Abderrahmen Mami Hospital, Ariana, Tunisia Thoracic Surgery, Abderrahmen Mami Hospital, Ariana, Tunisia Thoracic Surgery, Abderrahmen Mami Hospital, Ariana, Tunisia Pathology and Cytology, Abderrahmen Mami Hospital, Ariana, Tunisia Thoracic Surgery, Abderrahmen Mami Hospital, Ariana, Tunisia Thoracic Surgery, Abderrahmen Mami Hospital, Ariana, Tunisia Thoracic Surgery, Abderrahmen Mami Hospital, Ariana, Tunisia*

Background: The treatment of patients with locally advanced non-small-cell lung cancer is controversial. Surgery remains the gold standard treatment even in this group. Neoadjuvant chemotherapy could allow surgical resection in patients initially judged inoperable.
Methods: From January 2009 to May 2010, neoadjuvant chemotherapy was indicated in 27 patients with NSCLC (25 men, 2 women). The mean age was 65 years. The different stages were: IIB, 5; IIIA, 17 (with 6 of whom in stage IIIAN2); IIIB, 2 and IV, 3.
Results: Twenty-three patients received neoadjuvant chemotherapy, 2 refused the induction treatment and 2 had impaired their status. The neoadjuvant chemotherapy regimen was gemcitabine-cisplatin in 17 patients and vinorelbine-cisplatin in 6. Only 5 patients underwent complete surgical treatment after induction: stage IIB, 1; IIIAN0, 1; IIIB, 1 and IV, 2 (operated brain metastasis in one patient and operated adrenal metastasis in one other). Surgical treatment was not achieved after neoadjuvant chemotherapy in 18 patients because of progressive disease.
Conclusion: Neoadjuvant chemotherapy offers several potential benefits. But, it may delay surgery or eliminate eligibility as a surgical candidate. A patient's rigorous selection for this type of multimodal treatment is essential.

P2819

Effect of cardiovascular comorbidities on the survival patients with stage I and II non-small-cell lung cancer

Daliborka Bursac[1], Nevena Secen[1], Danica Sazdanic-Velikic[1], Goran Stojanovic[1], Aleksandar Tepavac[1], Zagorka Lozanov-Crvenkovic[2]. *[1]Department for Chemotherapy, The Clinic for Pulmonary Oncology, The Institute for Pulmonary Diseases of Vojvodina, Sremska Kamenica, Serbia; [2]The Faculty of Sciences, University of Novi Sad, Novi Sad, Serbia*

Introduction: Comorbid conditions may affect survival by influencing treatment decisions and prognosis.
Aim of this study was to determine the impact of cardiovascular comorbidity on the survival of patients in the first and second stage of NSCLC.
Methods: The study included 140 patients with NSCLC, in the first and second stage who were treated in the period from January 2004 December 2006. 60 patients (30 in the first and 30 in the second stage) were treated surgically, and 80 patients (40 in the first and 40 in the second stage) is due to the presence of cardiovascular comorbidity treated with chemotherapy and/or radiotherapy and these patients received standard chemotherapy with cisplatin (60mg/m^2, 1st day) and etoposide (100mg/m^2, 1-3. day), and radiotherapy (40 Gy).
Results: In 43 patients (30.71%) was established cardiovascular comorbidity. The most frequent comorbidities were chronic cardiomyopathy (22 or 15.71%), ischemic heart disease (19 or 13.57%) and hypertension (19 or 13.57%). Cardiovascular comorbidities were higher in smokers (p=0.0916) and patients with low Karnofsky status (p=0.001).
Median survival for all patients was 19.82 months (in the first stage 20.33, and in the second stage 19.31). Kaplan-Meier survival curves were used to compare survival time among patients with a presence or absence cardiovascular comorbidities. There was not a statistically significant relationship between shorter survival time and a history of cardiovascular comorbidity (p=0.1040).
Conclusions: This study did not show a statistically significant effect of the presence of cardiovascular comorbidity on survival of patients in the first and second stage of the disease.

P2820

Metastatic bronchopulmonary carcinoid

Filip Triest, Kristiaan Nackaerts, Christophe Dooms. *Internal Medicine, UZ Leuven, Leuven, Belgium Pneumology, UZ Leuven, Leuven, Belgium Pneumology, UZ Leuven, Leuven, Belgium*

Background: Bronchopulmonary carcinoids (BPCs) are rare neuroendocrine tumors. Metastatic BPC (M-BPC) represents less than 10% of all BPCs.
Aims: A retrospective study of a 5 years' consecutive series of M-BPC patients, treated in a tertiary referral center.
Methods: Demographics, symptoms, staging, pathology, therapy and survival were compared for non-metastatic (NM-) and M-BPC.
Results: Of 57 BPC patients, 12 (21%) had metastases. Five were truly metastatic at diagnosis. No differences were observed for age, smoking status and gender. Hemoptysis was mostly found in M-BPC (4/12); infection and absence of symptoms in NM-BPC (both 16/45). Somatostatin receptor imaging was performed in respectively 20% and 92%, FDG-PET in 67% and 75%, Ki-67 staining in 24% and 75%, chromogranin A staining in 64% and 83% of NM- and M-BPC patients. M-BPC was predominantly treated with chemotherapy (42%) and somatostatin analogues (58%), NM-BPC with surgery (91%). Median survival was 52 months for M-BPC, while not yet reached for NM-BPC patients (p=0.01).
Conclusions: In our center, a larger proportion of M-BPC patients was treated compared to literature. Major differences between NM-BPC and M-BPC were observed for treatment choices. Survival was significantly worse for M-BPC, although much better compared to more common lung cancer types.

P2821

Primary posterior mediastinum epithelioid angiosarcoma complicated with pulmonary thromboembolism: A case report

Yiliang Su[1], Beilan Gao[1], Jinming Liu[1], Huikang Xie[2]. *[1]Respiratory Medicine, Shanghai Pulmonary Hospital, TongJi University School of Medicine, Shanghai, China; [2]Pathology, Shanghai Pulmonary Hospital, TongJi University School of Medicine, Shanghai, China*

Epithelioid angiosarcoma is a rare subtype of angiosarcoma. We find that no case of primary posterior mediastinum epithelioid angiosarcoma has been reported till now through review of literature. We reported the first case of primary posterior mediastinum epithelioid angiosarcoma complicated with pulmonary thromboembolism. A 77-year-old man was hospitalized with cough and repeated haemoptysis for almost one month. A CT pulmonary angiograpy revealed posterior mediastinal mass and a filling defect in lateral-posterior basal pulmonary artery.
The patient underwent posterior mediastinum tylectomy, and the histopathological examination results revealed an epitheliod angiosarcoma (figure 2A). Immunohistochemical studies were positive for CD31 (figure 2B) and Factor VIII (figure 2C) and negative for CD34 (figure 2D).

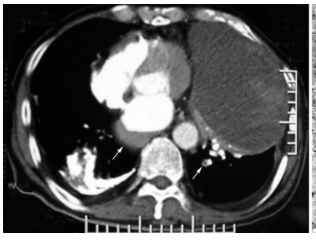


Figure 1

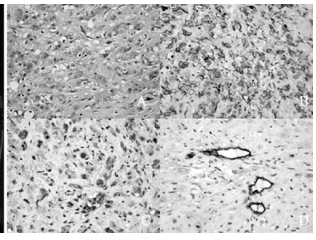


Figure 2

Though our patient endured tylectomy, he died within 6 months from presentation of cough and haemoptysis.

P2822

A 55 year old man with bilateral pulmonary nodules, neuropathy and renal nodules

Vikas Pathak[1], Govinda Aryal[1], Lawrence Clouse[2]. [1]*Internal Medicine,* [2]*Hematology/Oncology, Marshfield Clinic, Marshfield, WI, United States*

Case description: A 55-year-old previously healthy male presented with complaints of bilateral chest wall pain for the last 4 weeks. Patient denied any history of cough, fever, dyspnea, hoarseness, or any rash. He had smoked a half pack per day for about 30 years. Physical examination was normal as were laboratory studies. Chest CT scan demonstrated a 2.5 cm mass adjacent to the left diaphragm with small satellite nodules. Open lung biopsy did not yield any definite diagnosis. Further workup with MRI of spine, CSF analysis and a para-neoplastic antibody panel were negative. A nerve conduction study demonstrated an axonal polyradiculoneuropathy. Almost a year later a repeat chest and abdominal CT scan showed innumerable bilateral lung nodules and masses. It also showed peculiar mottling of the kidneys. A repeat thoracotomy and lung biopsy showed finding consistent with pulmonary lymphomatoid granulomatosis (EBV positive diffuse large B-cell lymphoma of the lungs).

Discussion: Pulmonary lymphomatoid granulomatosis is an uncommon multi-organ systemic disease with predilection to lungs and characterized by multiple pulmonary nodular lesions with lymphocytic invasion of vascular walls on biopsy. The skin, kidney, and neurologic system may be affected concurrently or independently. Cough and dyspnea are the most common presenting symptoms in patients with lung involvement. Physical examination and laboratory studies are generally non-diagnostic. Chest radiography typically reveals multiple poorly defined nodules and/or masses in the mid- and lower-lung zones; diffuse reticular abnormalities may also be present. Therapy ranges from observation to treatment with prednisone or chemotherapy.