

SUNDAY, SEPTEMBER 25TH 2011

---

## 108. Smoking rate: smoking cessation interventions

---

**P1090**

**Results in a tobacco consulting room in 2008**

Francisco Javier Callejas Gonzalez, Sergio Garcia Castillo, Javier Cruz Ruiz, Mariela Silvana Plenc Ziegler, Raúl Godoy Mayoral, Ana Isabel Tornero Molina, Jesus Jimenez Lopez, Rafaela Sánchez Simon-Talero, Ana Nunez Ares, Fernando Munoz Rino. *Pulmonology, University Hospital Albacete, Albacete, Spain*

**Material and methods:** Retrospective descriptive analysis of the results obtained from patients who were attended in a Tobacco Consulting Room from 1 January to 31 December 2008 and subsequent follow-up to complete a year.

**Results:** 268 of 410 patients (56.3% male), mean age 46 years and mean cigarettes/day 27.1. Statistical significance between cigarettes smoked and sex, higher in males. Respiratory comorbidity: 15.7% COPD, 9% asthma, 10.8% OSAHS and 1.9% OCD. Cardiac comorbidity, 7.83%, and psychiatric, 32.46%. 44.4% without treatment, 22.8% NRT, 6.3% bupropion and 26.5% varenicline. Overall of the 268 patients, treatment success in 45 (16.8%), 29 men and 16 women. Percentage rises to 29.6% if we don't consider those who didn't attend the second consultation. Success among respiratory patients was statistically significantly longer compared with cardiac (27.1% vs. 4.7%,  $p < 0.03$ ) and among non-psychiatric compared with psychiatric ones (19.8% vs. 10.3%,  $p < 0.05$ ). Those who were treated pharmacologically, statistically significant greater success among who used varenicline than NRT or bupropion (35.2% vs. 21.5%,  $p < 0.001$ ). **Conclusions:** 1. 62.92% didn't start treatment (34.64% and 28.28%, first and second appointment respectively). 2. Cigarette consumption by males was significantly higher than women (28.51 vs. 25.08,  $p < 0.02$ ). 3. Overall treatment success 16.8%, amounting to 29.6% excluding those who don't attend the second consultation. 4. Greater success among respiratory than cardiac patients (27.1% vs. 4.7%) and among non-psychiatric than psychiatric ones (19.8% vs. 10.3%). 5. Greater success among varenicline than NRT or bupropion-treated (35.2% vs. 21.5%).

**P1091**

**Special characteristics of smoking cessation program participants in a large municipal hospital in Greece**

Georgia Makrantonii, Marios Kougiaris, Evangelos Balis, Kostas Kotsifas, Stavroula Bouliou, Maroussa Kouvela, George Tatsis. *Department of Pulmonary Medicine, Evangelismos Hospital, Athens, Attiki, Greece*

**Introduction:** Greece is the European Union country with the highest rate of tobacco consumption (more than 40%). Enforcement of laws forbidding consumption of tobacco products, combined with public awareness of the adverse effects of smoking, result in the need for efficient smoking cessation centers.

**Aims:** The aim of the present study is to demonstrate special characteristics of smokers addressing to the smoking cessation center of Evangelismos hospital, in Athens Greece, including dependence, motivation profile, special characteristics such as depression profile and pulmonary function testing values.

**Methods:** Three hundred (300) smokers of mean age of  $48.47 \pm 11.42$  years, smoking  $38.97 \pm 22.87$  packyears participated in Evangelismos Hospital smoking cessation program during the last two years. A thorough medical history was obtained focusing on dependence and motivation for quitting. Pulmonary function testing, including spirometry was performed in all individuals. Statistical analysis was performed using the non parametric test for sign values.

**Results:** Men smoke more than women ( $47.52 \pm 26.61$  vs  $35.33 \pm 22.05$ ). On the other hand Greek women present more motivated to quit smoking than men ( $16.26 \pm 11.32$  vs  $10.08 \pm 12.08$ ). In addition pulmonary function testing reveals high percentage of abnormalities caused by smoking, such as small airway disease. Abandoning the cessation program is significantly related ( $p < 0.05$ ) with a depressive profile of the participant.

**Conclusions:** Smoking cessation programs reveal interesting profiles of the Greek population, concerning the smoking habit, pulmonary function testing abnormalities and factors related to abandoning a smoking cessation program.

**P1092**

**Factors associated with smoking cessation in a smoking cessation unit**

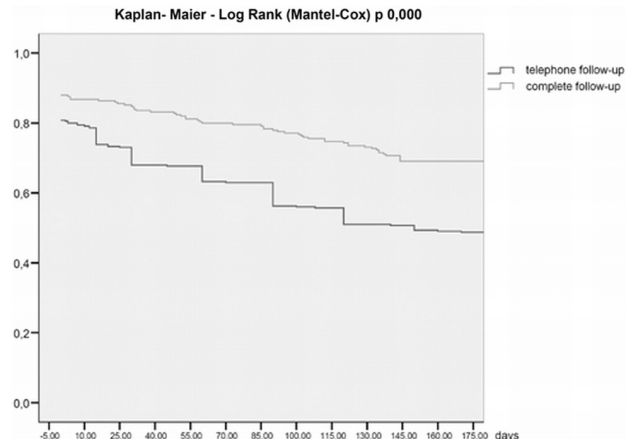
Carlos Almonacid Sanchez, Ignacio Sanchez Hernandez, Jose Gallardo Carrasco, Juan Pablo Rodriguez Gallego, Elizabeth Guzman Robles, Saray Quiros Fernandez, Jesus Fernandez Frances, Jorge Castelao Naval, Jose Luis Izquierdo Alonso. *Pulmonary Medicine, Guadalajara University Hospital, Guadalajara, Spain*

**Objective:** To assess what factors are associated with a higher rate of smoking cessation.

**Material and methods:** Cross-sectional study of a sample of smokers. Of a total of 1545 patients were analyzed those patients on whom information is available smoking within 6 months of follow-up. We defined 2 groups: group 1, people who do not attend all visits but answer phone calls to complete a period of 6 months of treatment; group 2, patients attending all follow-up visits.

Variable	Group 1 - N 359	Group 2 - N 249	P	Crude OR	OR
Age	45.79 +/- 12.06	47.67 +/- 11.07	<b>0.047</b>	1.245 (0.980-1.583)	1.036 (1.005-1.069)
CO levels (ppb)	15.89 +/- 13.81	15.62 +/- 12.59	0.814	0.430 (0.128-1.442)	1.004 (0.981-1.027)
Richmond test - high	253 (70.7%)	174 (71.3%)	0.865	1.032 (0.721-1.477)	0.645 (0.241-1.726)
Fagerstrom test - high	150 (41.8%)	112 (45.2%)	0.409	1.147 (0.828-1.590)	1.210 (0.512-2.856)
Abstinent at 6 months	177 (49.3%)	172 (69.1%)	<b>0.000</b>	2.297 (1.636-3.224)	<b>3.983 (2.411-6.580)</b>
Complete the treatment	182 (50.7%)	241 (96.8%)	<b>0.000</b>	29.29 (14.061-61.045)	<b>3.983 (2.411-6.580)</b>
Previous relapses	42 (11.7%)	47 (18.9%)	<b>0.014</b>	1.756 (1.117-2.760)	<b>3.456 (2.115-5.647)</b>
Cardiovascular diseases	41 (11.4%)	38 (15.3%)	0.166	1.397 (0.869-2.425)	0.946 (0.381-2.346)
Diabetes Mellitus	13 (3.6%)	19 (7.6%)	<b>0.029</b>	2.199 (1.064-4.539)	0.692 (0.180-2.670)
COPD	37 (10.3%)	39 (15.7%)	<b>0.05</b>	1.616 (0.998-2.618)	0.444 (0.167-1.177)
Gastropathy	8 (2.2%)	14 (5.6%)	<b>0.028</b>	2.614 (1.080-6.328)	0.218 (0.038-1.268)
Psychiatric comorbidity	1.06 (29.5%)	48 (19.3%)	<b>0.004</b>	0.570 (0.387-0.840)	0.903 (0.302-2.698)
Smoking at work	228 (63.5%)	179 (71.9%)	<b>0.031</b>	1.469 (1.035-2.085)	1.128 (0.653-2.310)

**Results:** See table. The results of the quantitative variables are expressed as mean and standard deviation. The results of the qualitative variables are described as the absolute value and percentage.



**Conclusions:** Patients who attend all appointments (complete follow-up) have better results than those who do not. Age, number of previous relapses, the presence of comorbidities such as diabetes mellitus, gastric ulcer and COPD, associated psychiatric disorders and the presence of smokers in their work environment are related to outcomes. On multivariate analysis, only those who have completed the full course and those who have made previous attempts to quit get a much higher percentage of abstinence.

**P1093**

**Research of smoking in health workers in Hospital Cacak-Serbia**

Nada Lazovic<sup>1</sup>, Sladjana Majstorovic<sup>2</sup>, Julijana Antonovic<sup>3</sup>, Ika Pesic<sup>4</sup>, Dusko Suluburic<sup>5</sup>. <sup>1</sup>Department for Smoking Cessation, Hospital, Cacak, Serbia; <sup>2</sup>Department for Otorinolaringology, Hospital, Cacak, Serbia; <sup>3</sup>Department for Pulmonary Diseases and Tb, Hospital, Cacak, Serbia; <sup>4</sup>Department for Smoking Cessation, Clinical Center, Belgrade, Serbia; <sup>5</sup>Department for Pulmonary Disease, Medical Centre, Guca, Serbia

**Background:** Explore Health inhabitants of Serbia 2006 adult smoking prevalence was 33.6%, exposure to tobacco smoke (TS) in the workplaces is 50%.

**Objectives:** Quantitative goals of tobacco control strategies predict increase in the number of jobs without the tobacco smoke of 5% a year and reducing exposure to TS in public places for 1% a year.

**Methods:** We surveyed 462 health workers of 626 total employees in the City Hospital in Cacak: physicians (MD) 115 (24.9%), 326 medical technicians (MT) (70, 6%) and other 21 (4.5%); male (M) 90 (19.5%) and female (F) 372 (79.2%).

**Results:** The average age of employees is 42.6 years. Smokers (S) 218 (47.16%), Non-S 185 (40%), Ex-S 59 (12.84%). Questionary: 1) Do you have: a- complete ban on smoking in the hospital 31.8%, b-smoking separation zone 56.1%, c-free smoking 12.1%. 2) Is smoking: a- risk for the health of 68.8%, b-moderate risk 24.5%. 3) Increase knowledge about the risk of smoking: a-yes 60.8%, b-not 39.2%. S: M=15.13%, F=84.86%, MD=17.43%, MT=82.56%. It average 19 cigarettes per day. Willingness to stop smoking: ready-66.5%. Earlier experience in leaving smoking: yes 64.7%. To sustain a few days without smoking 56%. Respondents 64,2% believe that it is difficult to leave smoking without professional help. Ex-S are often left smoking for health reasons.

**Conclusions:** It is necessary to establish counseling for giving up smoking, it's need antitobacco Continuing medical education of employees in the health organisations, legal protection non-S. Smoking is a significant health hazard, there is no safe exposure to secondhand smoke and all workers have the right to work in smoke free workplaces.

**References:**

[1] Tobacco control strategy of the Republic of Serbia, 2007.

**P1094**

**Abundance of smoking cessation reasons in participants of smoking cessation clinic**

Zahra Hessami, Mahshid Aryanpur, Gholamreza Heydari, MohamadReza Masjedi, Shabnam Eslampanah. *National Research Institute Tuberculosis and Lung Disease Tobacco Prevention and Control Research Center, Shahid Beheshti University, Tehran, Islamic Republic of Iran*

**Introduction:** Cigarette smoking is an important cause of respiratory and other health problems around the world. Stop Smoking at any age could be decreasing these problems. Smokers finally think about smoking cessation. Having Strong reasons to quit is important factor for attempt to quit.

**Objectives:** We aimed to investigate what their motivations to quit are?

**Method:** This cross-sectional study was done on the volunteers of smoking cessation clinic of tobacco prevention and control research center. Data from (345)

SUNDAY, SEPTEMBER 25TH 2011

subjects who fulfilled these criteria were collected with the use of questionnaire, the question were related to demographic information, smoking status and reasons to quit.

**Results:** The most important reason for quitting smoking was general health concern. (89.6%), another main reason was about their children's health for (72.6%). 51.6% of them were worry about lung cancer and 31.1% were worry about chronic bronchitis.

**Conclusion:** These results indicate that smokers should be better encouraged to quit before health problem occur. Furthermore efforts should be undertaken to give them professional aid in smoking cessation. Concern about lung cancer is one of the major reasons to their quit. So lung specialists are the most effective groups to create motivation for quit in their patients.

#### P1095

##### Low-income is a predictive factor of failure associated with smoking cessation at a public clinic in Brazil

Rafaela F. Xavier, Dionei Ramos, Giovana N.B. Ferrari, Juliana T. Ito, Fernanda M.M. Rodrigues, Alessandra C. Toledo, Ercy M.C. Ramos. *Physiotherapy, UNESP- Sao Paulo State University, Presidente Prudente, São Paulo, Brazil*

Smoking cessation programs (SCP) are the main way to reduce tobacco related mortality and morbidity. The search for predictors of failure or success specific to a population with special characteristics, such as Brazilians, should be the first step in the development of SCP national. We evaluated the demographic characteristics and factors influencing the failure or success of quitting among participants in a SCP. This retrospective study was conducted from 2005-2009 in a SCP based on cognitive behavioral treatment associated or not with medication therapy consisted in 20 meetings during 12 months. After that the individuals were invited to answer a socio-economic questionnaire by telephone. A total of 158 individuals were included in this study and 65 agreed to answer a socio-economic questionnaire (aged=49±10, pack-years index=35±24, women=63%). Regarding education level: 50% had primary education, 29% had high school and 21% had university education. Accordance with socio-economic questionnaire 14% of the individuals were at class A2, 21% at class B2, 54% at class C and 11% at class D. After the fourth meeting 47,7% of individuals attempt to quit but only 32% of this group remained abstinent after the end of the SCP. Thereby the total quit rate at 12 months was 15%. The failure in smoking cessation at the end of 12 months was increased in individuals from social class C ( $p<0.05$ ) and in individual with higher attempts to quit before start the program ( $p<0.05$ ). Quitting smoking was significantly associated with the outcome and previous attempts to quit. Socio-economic factors should be considerate in the development of smoking cessation intervention in national programs.

#### P1096

##### Knowledge about tobacco according to smoking habit and level of formal education

Paulo Gregorio, Bruno Lemos, Aline Moraes, Felipe Mattos, Marina Sampaio, Priscila Viveiros, Irma de Godoy. *Clinical Medicine, Botucatu Medical School, Botucatu, Sao Paulo, Brazil*

Tobacco related illnesses are important public health issues worldwide. Population's knowledge about smoking and awareness about health risks are keys for cessation. We aimed to analyze the knowledge about tobacco and how this is influenced by smoking habit and level of formal education. We interviewed citizens who took part in an event of preventive health in a town of the State of São Paulo, Brazil. We interviewed 190 subjects, with age 49.5 + 18y, 59% males, 26,3% smokers, 49% non-smokers and 24,7% former smokers. A standard questionnaire was applied with the following main questions: 1) Is tobacco dependence a disease?; 2) Is low level of consumption safe?; 3) Do you receive any information about tobacco? The level of formal education was classified: IE (incomplete elementary), CE (complete elementary), HS (high school) and G (graduated).

About 87% of the subjects interviewed received some kind of information about tobacco. However, 27% of them did not considered smoking a disease and 32% considered that a low level of smoking would not represent a damage or risk to their health.

In conclusion, the percentage of smokers in our sample is consistent with the prevalence of tobacco smoking in our country. The percentage of former smokers reflects the impact of Brazilian policies for tobacco control. Although anti-smoking campaigns are designed to reach all social layers through an accessible language, we find that the knowledge about tobacco are still incomplete among general population.

#### P1097

##### Smoking prevalence and smoking behaviour among Portuguese physicians: A cross-sectional study

Sofia Belo Ravara, Miguel Castelo Branco, Jose Manuel Calheiros. *Health Sciences Research Centre (CICS), Faculty of Health Sciences (FCS), University of Beira Interior (UBI), Covilhã, Portugal*

**Background:** Studies evaluating Portuguese physicians' smoking behaviour are limited and applied different methodologies. Studies from the 70' and 80's show high prevalence rates, higher than the general population. Recent studies had reported decreasing smoking prevalence trends. However, it is not clear if physicians

are smoking less than the general population and whether this decreasing trend has continued thereafter. In 2009, a survey was carried out to evaluate smoking prevalence trends and smoking behaviour among Portuguese physicians.

**Methods:** Questionnaire-based cross-sectional study, conducted during two main national medical conferences, using a convenience-sample methodology. Physician smoking behaviour was self-reported.

**Results:** Participants: 607 physicians: 57.6% primary care; 33.1% hospital-based specialists; 9.3% undergraduate students; 62.7% females; median age 34. Smoking prevalence was 29.6% in males, 15.3% in females ( $p < 0.001$ ). Smoking prevalence was not related to medical specialty; 53.3% of the smokers reported being daily smokers, smoking in average 10 cigarettes a day; median of regular smoking age was 18 years. 46% of the smokers reported desire to stop smoking, 56.7% had already tried to quit but only 33.8% reported needing assistance on their quit attempt. Age-gender specific analyses revealed that the majority of younger physicians (aged $\leq$ 44) reported being never smokers (males: 62.7%; females: 77.6%), in contrast to older smokers ( $p < 0.001$ ).

**Conclusions:** Smoking prevalence among Portuguese physicians is decreasing and is lower than in general population. Physicians smoke less cigarettes and reported more occasional smoking than the general population.

#### P1098

##### The achievements of the "Quit Smoking Kocaeli" campaign

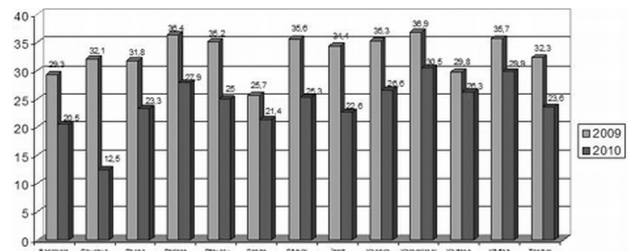
Füsün Yıldız<sup>1</sup>, İlknur Basyigit<sup>1</sup>, Serap Argun Baris<sup>2</sup>, Hasim Boyacı<sup>1</sup>.

<sup>1</sup>*Pulmonary Disease, Kocaeli University Medical Faculty, Kocaeli, Turkey;* <sup>2</sup>*Pulmonary Disease, M. Kazım Dinç Kandira Government Hospital, Kocaeli, Turkey*

**Aim:** The aim of this study was to determine the effect of legislation of smoke-free areas and social responsibility project which was initiated to increase the smoking cessation rates in Kocaeli on smoking rates.

**Material and method:** The sample selection was made based on population numbers in towns of Kocaeli city and smoking habits of population over the age of 18 were evaluated by a questionnaire survey by phone before and after smoking cessation activities that carried out in 9 towns of the city in a year. These results were compared with the data of previous year.

**Results:** Totally 2441 subjects included the study. The percentage of the current smokers was 31.7% in male population which was significantly higher than females (14.2%). The overall smoking prevalence was decreased to 24% which was found as 32% in 2009.



There was a statistically significant decrease of smoking rates in all educational levels. It was found that one-third of current smokers had at least one attempt for quitting smoking. One of every ten person remembers the regional activities for quit smoking without significant difference between gender and education level.

**Conclusion:** Smoking cessation rates are increased with effect of the legislation of smoke-free areas. In addition to the effect of this law, it was suggested that regional activities about quitting smoking have an important role for the rapid increase of smoking cessation rates in Kocaeli on 2010.

#### P1099

##### Oxidative stress, obesity and chronic inflammation in smokers according to smoking duration and heaviness

Velin Startev, Mariana Jordanova, Jordan Petev. *Department of Internal Diseases, Naval Hospital Varna, Varna, Bulgaria*

**Background:** Smoking and obesity are rising worldwide in an epidemic manner being common risk factors associated with the increase in the overall mortality. Smoking generates oxidative stress and chronic inflammation in the lungs, and the same mechanisms are involved in the pathogenesis of obesity.

**Aim:** To assess the relationship between cigarette smoking, spirometry parameters and some anthropometric and inflammatory variables, as well as their association with the levels of antioxidant enzymes superoxide dismutase (SOD) and glutathione peroxidase (GPx).

**Methods:** We performed a cross-sectional study of 94 smokers without any chronic diseases (mean age 52.7±6.4 years), divided into four groups according to their pack years. We performed a questionnaire, anthropometry, spirometry and biochemical tests. The erythrocyte activities of cellular SOD and GPx were measured.

**Results:** We found that pack years correlated positively with body mass index (BMI) ( $p=0.002$ ,  $r=0.323$ ), waist circumference (WC) ( $p<0.0001$ ,  $r=0.418$ ), C-reactive protein (CRP) ( $p=0.023$ ,  $r=0.242$ ) and negatively with FEV<sub>1</sub> ( $p=0.047$ ,  $r=-0.205$ ). BMI and WC were significantly associated with CRP. GPx concentrations

SUNDAY, SEPTEMBER 25TH 2011

were influenced by BMI ( $p=0.017$ ,  $\beta=-0.358$ ) and the number of cigarettes smoked per day ( $p=0.025$ ,  $\beta=-0.398$ ). SOD was also negatively influenced by BMI and WC ( $p<0.05$  for both). FEV<sub>1</sub> was related negatively with WC ( $p=0.047$ ,  $\beta=-0.31$ ). **Conclusion:** There is an increased oxidative stress and chronic inflammation in heavy smokers with long smoking history. These processes are closely linked with obesity, which along with smoking increase the risk of early decline in lung function.

**P1100****Predictors of lung function improvement following smoking cessation**

Daiana Stolz<sup>1</sup>, Rebecca Finger<sup>1</sup>, Bruno Seiffert<sup>2</sup>, Martin Kuster<sup>3</sup>, Anja Meyer<sup>1</sup>, Michael Tamm<sup>1</sup>. <sup>1</sup>*Clinical of Pulmonary Medicine and Respiratory Cell Research, University Hospital of Basel, Basel, Switzerland;* <sup>2</sup>*Industrial Health Service, F.Hoffmann-La Roche AG, Basel, Switzerland;* <sup>3</sup>*Industrial Health Service, Novartis Pharma AG, Basel, Switzerland*

Smoking cessation is associated with substantial health benefits. Nevertheless outcome of smoking cessation was often investigated on strongly selected populations. We aimed to assess the influence of our smoking cessation programme on lung function under real life conditions.

703 smoking employees from University Hospital Basel, Switzerland, and two local health industry companies (Novartis Pharma AG, F.Hoffmann-La Roche AG) participated on a structured smoking cessation programme. The programme consisted of 10 visits with counselling and motivational support within 2 years of follow-up. Various modalities of both nicotine replacement therapy and/or bupropion could be offered. The impact of several factors on FEV<sub>1</sub> was analyzed by a linear mixed effect model (fixed effects with 95% confidence intervals are shown in parentheses)

**Results:** Successful smoking cessation at 24 months was associated with an increase of FEV<sub>1</sub> of 2.75% (95% CI [0.64;0.76]  $p=0.045$ ). Improvement in lung function was observed independently from age (-0.01 95% CI [-0.20;0.01]  $p=0.067$ ) and gender (1.84 95% CI [-0.22; 3.91]  $p=0.08$ ). Changes in FEV<sub>1</sub> varied between study centres (6.55 95% CI [3.22; 9.88]  $p<0.001$ ). Participants with higher FEV<sub>1</sub> values at baseline showed a greater improvement of lung function after 2 years (0.70 95% CI [0.64; 0.76]  $p<0.001$ ). FEV<sub>1</sub> values of successful quitters were additionally influenced by chosen pharmacological support. The outcome of a smoking cessation attempt as well as baseline lung function and medication significantly influenced FEV<sub>1</sub> within 2 years of a quit attempt. These observations could be important in encouraging smokers to stop smoking.

**P1101****Active smoking negatively affects recovery of patients hospitalized due to acute exacerbation of chronic obstructive pulmonary disease (COPD)**

Andrea Schäfer, Noémi Eszes, Zsuzsanna Kovács, Veronika Müller. *Pulmonology, Semmelweis University, Budapest, Hungary*

COPD is a progressive inflammatory airway disease most often caused by smoking. Significant proportion of COPD patients continues to smoke even in advanced stages, mainly as the result of severe tobacco dependence. COPD predisposes to depression making symptoms worse. Frequency and effects of active smoking and depression in patients hospitalized due to acute exacerbation of COPD is unknown. One hundred patients admitted to the Department of Pulmonology Semmelweis University with the diagnosis of COPD acute exacerbation were analyzed (men: women = 46:54). Detailed history, Fagerström nicotine dependence test (FNNDT) and Beck depression inventory scale were registered, expiratory CO was measured. Spirometry at admission and release, length of hospital stay and data on medications were collected.

Current smoker (S group, N=45) were compared to former (N=44) and never smoker (N=9) patients (non-S group). FNNDT confirmed low dependence (3.9±0.4 points). Beck test results showed significantly higher scores for possible depression in S patients (S:12.7±1.3 vs. non-S: 9.4±1.0  $p<0.05$ ). GOLD stage distribution did not differ between groups. Spirometry confirmed no change in FEV<sub>1</sub> predicted in smokers, while significant improvement was noted among non-S patients ( $\Delta$ FEV<sub>1</sub>: S:0.50±11.65 vs. non-S: 7.45±14.90;  $p<0.05$ ). S was associated with significantly longer hospital stay (S: 19.1±2.7 vs. non-S: 14.7±1.1 days  $p<0.05$ ). Our results indicate that in patients hospitalized due to acute exacerbation of COPD treatment of smoking dependence is absolutely indicated as active smoking decreased improvement in health status and significantly increased hospital stay.

**P1102****Exhaled carbon monoxide according to daily cigarette consumption in healthy smokers**

Juliana Zabotero<sup>1</sup>, Demétria Kovelis<sup>1</sup>, Mahara Proença<sup>1</sup>, Karina Furlanetto<sup>1</sup>, Leandro Mantoani<sup>1</sup>, Ercy Ramos<sup>2</sup>, Fábio Pitta<sup>1</sup>. <sup>1</sup>*Laboratório de Pesquisa em Fisioterapia Pulmonar (LFIP), Universidade Estadual de Londrina (UEL), Londrina, Brazil;* <sup>2</sup>*Programa de Mestrado em Fisioterapia, Universidade Estadual Paulista Júlio de Mesquita Filho (UNESP), Presidente Prudente, Brazil*

**Objectives:** To compare the exhaled carbon monoxide (CO) levels in apparently healthy smokers according to the intensity of cigarette consumption and verify its relationship with smoking habits and nicotine dependence.

**Methods:** Forty-four healthy smokers (20 male, 48±12 years, BMI: 27±4 kg/m<sup>2</sup>,

32±24 pack/years), without lung function impairment (FEV<sub>1</sub>/FVC: 80±6; FEV<sub>1</sub>: 82±20%pred) were divided into 3 groups according to their consumption of cigarettes/day: light smokers (G1): 1-15; moderate smokers (G2): 16-25 and heavy smokers (G3): over 25. The CO was assessed using a CO monitor (MicroCO<sup>®</sup>) after 10±1.2 hours of cigarette abstinence. In addition, smokers answered a questionnaire of smoking habits and the Fagerström Tolerance Questionnaire (FTQ) for nicotine dependence.

**Results:** Median [interquartile range] levels of CO were 10 [6-11], 10 [6-17] and 20 [12-24] ppm for G1, G2 and G3, respectively. There was significant difference in CO levels between G1 and G3 ( $p=0.001$ ), G2 and G3 ( $p=0.013$ ) but not between G1 and G2 ( $p=0.138$ ). When analyzing the relationship between CO levels of smokers as a whole with smoking habits and nicotine dependence, modest correlations were found with number of cigarettes smoked in the last 24h ( $r=0.54$ ,  $p<0.001$ ), cigarettes/day ( $r=0.53$ ,  $p<0.001$ ), FTQ ( $r=0.33$ ,  $p=0.02$ ), pack-years ( $r=0.32$ ,  $p=0.03$ ) and time since last cigarette smoked ( $r=-0.31$ ,  $p=0.04$ ). These relationships were not found when assessing each group separately.

**Conclusions:** Exhaled CO levels are higher in heavy smokers in comparison to moderate and light smokers, whereas no difference was found between moderate and light smokers. Moreover, CO levels are related with smoking habits and nicotine dependence.

**P1103****Effects of paternal tobacco use on different parameters of a newborn child**

Syed Ali Arsalan<sup>1</sup>, Aneel Roy Bhagwani<sup>2</sup>, Imroz Arif Farhan<sup>2</sup>, Sadaf Kanwal<sup>2</sup>, Haleema Hashmi<sup>3</sup>, Syed Ali Abbas<sup>1</sup>, Syed Arshad Husain<sup>4</sup>. <sup>1</sup>*Pulmonology, Liaquat National Hospital and Medical College, Karachi, Sindh, Pakistan;* <sup>2</sup>*Medical College, Liaquat National Hospital and Medical College, Karachi, Sindh, Pakistan;* <sup>3</sup>*Gynaecology and Obstetrics, Liaquat National Hospital and Medical College, Karachi, Sindh, Pakistan;* <sup>4</sup>*Pulmonology, NHS Trust Tunswell Bridge, Kent, United Kingdom*

**Introduction:** There has been significant research done on the effects of maternal smoking on pregnancy but not much data is available regarding the role of paternal smoking and its effect on the vitals of a newborn child. We therefore tried to evaluate the effects of paternal tobacco use on newborn child.

**Methods:** A prospective study carried out in gynecology and obstetrics department of our hospital. A questionnaire based interview was conducted with the delivering females in the month of October 2010 in terms of tobacco use of their spouse during pregnancy. The neonatal vitals were assessed and previous abortion history was also inquired.

**Results:** Age of the delivering females was 28.34 years ±4.095 S.D. Females delivered was n=100. Tobacco use was found among spouses of n=25 females. Out of them n=14 were smokers and n=11 chewed tobacco. Among females whose husbands smoked (n=14) previous abortion history was found in n=6 (42.85%) females out of which n=2 females were exposed to tobacco smoke during their earlier pregnancies, as compared to females with non smoking husbands (n=86) previous abortion was noted in n=19 (20.09%). Among females whose husbands chewed tobacco (n=11) previous abortion history was found in n=3 females. Among n=2 preterm neonates n=1 had paternal smoking history. Out of n=7 neonates with respiratory distress n=2 had paternal smoking history, n=1 (out of n=2) had delayed sucking and n=1 had delayed micturition.

**Conclusion:** Our results suggest that paternal tobacco consumption might have risks to the newborn child & ongoing pregnancy. Paternal smoking may have a biological correlation with such outcomes. Further research should be carried out in this aspect.

**P1104****Smoking cessation in tuberculosis and COPD patients**

N.V. Yahorava, H.L. Hurevich, A.A. Rimga, A.M. Skrahina, T.M. Krytskaya. *Clinical, RSPC for Pulmonology and Tuberculosis, Minsk, Belarus*

The aim of this study was to investigate clinical, nicotine dependence status in smoking tuberculosis (TB) and COPD pts, efficacy of treatment of nicotine dependence by nicotinic acetylcholine receptor agonist (cytisine), mexidol, behavioural intervention in TB and COPD pts.

**Methods:** 91 smoking TB and COPD pts (74m, 17w, age 41±1) were examined before and after 3 months of treatment. 50 Pts have been treated with 4-5 antituberculosis drugs, basic course of COPD ( $\beta_2$ -agonist, anticholinergic, corticoids, O2), cytisine (1,5-6mg/day-25days), mexidol (100mg/day-25days), behavioural intervention. 41 Pts have received 4-5 antituberculosis drugs and basic course of COPD only (Gr2). Examination of clinical status, blood gases, pulmonary function tests, quiz pts about their smoking status had been performed in all pts.

**Results:** In TB and COPD pts was found low nicotine dependence, low motivation to quit. After 3 months of treatment in TB and COPD pts clinical status was improved. Smoking cessation was achieved in 16% pts of Gr1, decrease of nicotine consumption-in 60% pts of Gr1. In 76% pts of Gr1, in 71% pts of Gr2 was found improvement of chest X-ray. Sputum conversion was found in 80% pts of Gr1, in 73% pts of Gr2. In Gr1 was found increase of forced expiratory volume in 1 second for predicted on 14%,  $p<0.05$ , peak expiratory flow for predicted-on 13%,  $p<0.05$ , decrease of PCO<sub>2</sub>, on 14%,  $p<0.01$ , HCO<sub>3</sub><sup>-</sup> on 8%,  $p<0.05$ . In Gr2 significant changes were not found.

**Conclusion:** In TB and COPD pts adding cytisine, mexidol, behavioural intervention to antituberculosis and basic course of COPD leads to decrease of level



SUNDAY, SEPTEMBER 25TH 2011

of nicotine consumption, improvement of clinical, blood gases exchange status, pulmonary function.

**P1105****Association between dopamine transporter, monoamine oxidases genotypes and tobacco smoking**

Maria Smirnova<sup>1</sup>, Natalia Mitushkina<sup>2</sup>, Olga Suhovskaya<sup>1</sup>, Evgeniy Imyanitov<sup>2</sup>.  
<sup>1</sup>*Pulmonology, State Medical University, St. Petersburg, Russian Federation;*  
<sup>2</sup>*Oncology, N.N. Petrov Institute of Oncology, St. Petersburg, Russian Federation*

There are many polymorphisms of genes involved in metabolism of compounds contained in tobacco smoke (MAOA, MAOB, DAT1 and DRD2). Dopamine (DA) is critical for reward and its predictive signals, genetically driven variation in DA transmission may account for the observed differences.

The aim of study was to examine interactions between DAT1 and MAOA polymorphisms and nicotine dependence, number of cigarettes and successful quit smoking in healthy smokers, patients with COPD and asthma.

**Methods:** 99 smokers-males (36-78 years) were genotyped for polymorphisms of DAT1, MAOA. CO breath testing has been made for cigarette consumption. Information about current tobacco consumption was obtained using self-report measures and structured interviews.

**Results:** Age at initiation of smoking was assessed at age 12 and 22 years. Results suggest that age at onset of intensive consumption and nicotine dependence (ND) moderated the association of the DAT1 gene. Individuals with DAT1 40 bp (6R, 7R, 8R, 9R) and DAT1 30bp (5R) had lower nicotine dependence and they quit smoking more successful than smokers with DAT1 40 bp (10R, 11R;  $p=0.038$ ) and DAT1 30bp (6R, 7R;  $p=0.029$ ). ND patients with COPD =5.24+0.36 (from 4 to 10), asthma = 3.15+0.44 (from 3 to 8). Patients with COPD more often had DAT1 40 bp (10R, 11R) than patients with asthma ( $p=0.039$ ).

Have been revealed association between the MAOA polymorphism and smoking ( $r=0.48$ ). Smokers with COPD and smokers with several nicotine withdrawal more often had 3R 4R MAOA.

**Conclusion:** These results support the hypothesis that the DAT1 and MAOA polymorphisms are associated with smoking cessation and can influence on smoking cessation in patients with COPD.

**P1106****Smoking induced satellite associations in a rural population of south India**

Ranganadin Pajanivel<sup>1</sup>, Uma Natarajan<sup>2</sup>. <sup>1</sup>*Department of Respiratory Medicine, Indira Gandhi Medical College & Research Institute, Kadirkamam, Puducherry, India;* <sup>2</sup>*Department of Anatomy, Cytogenetics Division, Mahatma Gandhi Medical College & Research Institute, Puducherry, India*

A smoker is exposed to a variety of carcinogenic constituents present in cigarettes, making it necessary to analyze the cells at metaphase as these can be a health hazard to the future generations. Cytogenetic assay in peripheral blood lymphocytes was done to assess the incidence of Satellite Associations among 30 smokers and 30 non-smokers in a rural population of South India. Smokers were divided into three groups based on their Smoking Index (SI): I - SI less than 150, II - SI 150 to 300, III - SI more than 300. An equal number of matched control individuals were selected and Lymphocyte cultures were set up from heparinised blood. The mean frequency of satellite association in smokers belonging to group I, II and III were 45 (44.25±3.30), 53 (53±3.46) and 67 (67±6.22) respectively, whereas the mean frequency of satellite association in non smokers was 29.83% (29.83±1.00). The frequency of Satellite Associations in smokers I, II and III increased with the increase in the frequency of their smoking index than their non smoking counterpart. The students' "t" test ("SSP" software) for satellite association was found to be highly significant at  $p<0.01$  in all the three Smoker Group viz. I, II and III. These findings confirm the genotoxic effect of cigarette smoke on the chromosomes and can be used as a Smoking Cessation Intervention tool.

**References:**

- [1] Falk HL. Chemical agents in cigarette smoke, In: Handbook of Physiology: Reaction to Environmental Agents, DHK Lee (Ed.). Baltimore, MD: Waverly, 1977, pp 199-211.